



**DIRECTORATE FOR SCIENCE, TECHNOLOGY AND INDUSTRY
STEEL COMMITTEE**

DSTI/SU/SC(2006)29
For Official Use

INDIA

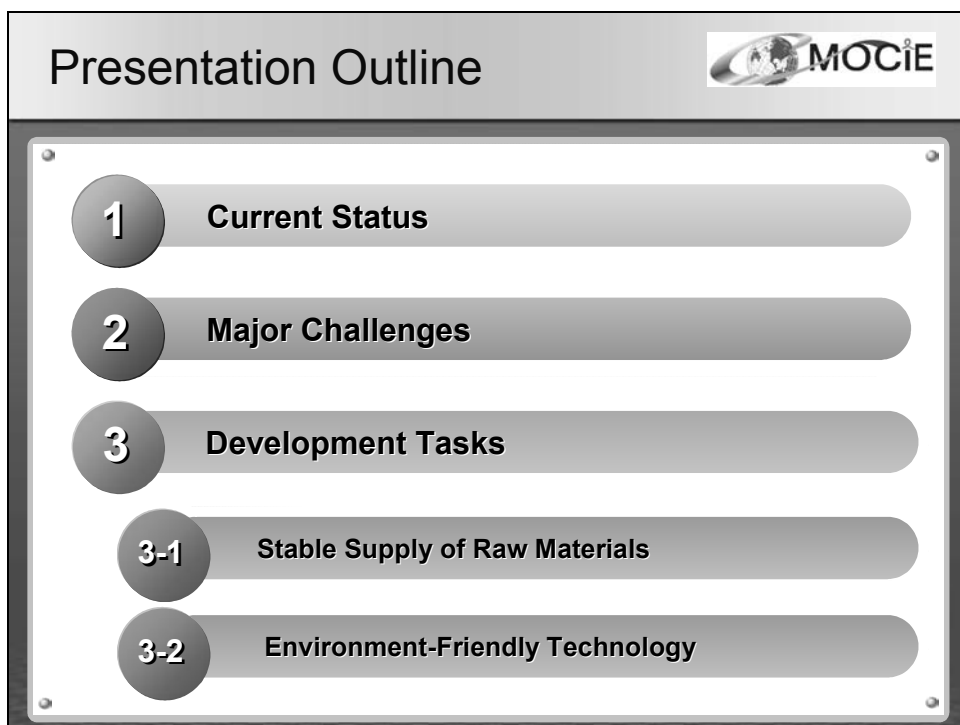
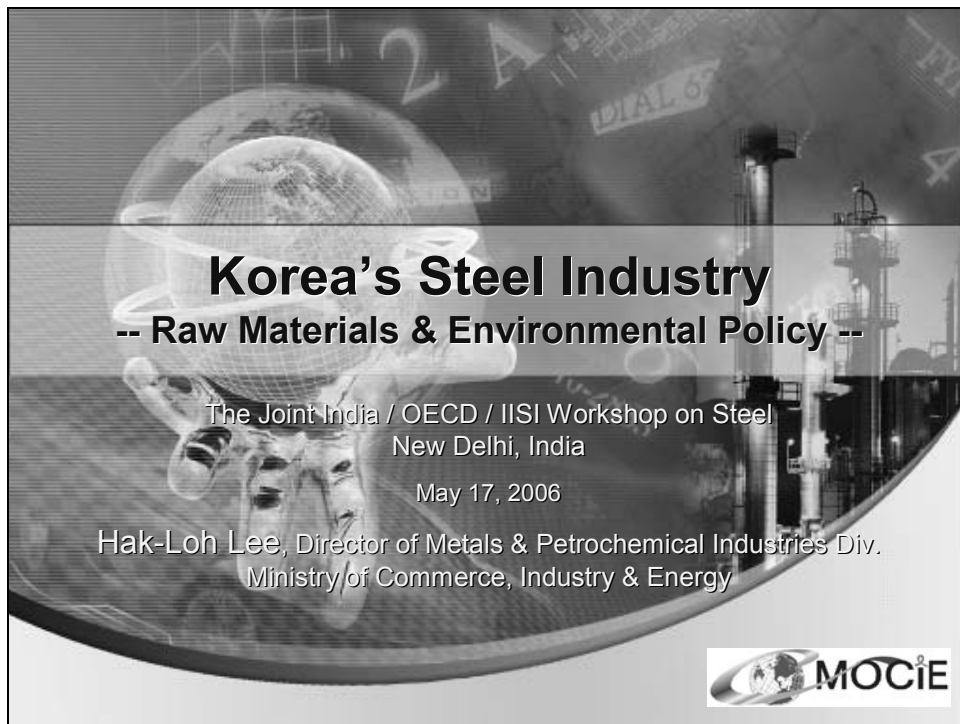
KOREA'S STEEL INDUSTRY -- RAW MATERIALS & ENVIRONMENTAL POLICY --


Joint India/OECD/IISI Workshop, New Delhi (India), 16-17 May 2006

Presentation by Mr. Hak-Loh Lee, Director of Metals & Petrochemical Industries Division, Ministry of Commerce, Industry & Energy

Contact : Mr. Wolfgang Hübner, Head of Structural Policy Division and Steel Unit
Tel: +33 1 45 24 91 32; Fax: +33 1 44 30 62 63; E-mail: wolfgang.hubner@oecd.org


JT03208731





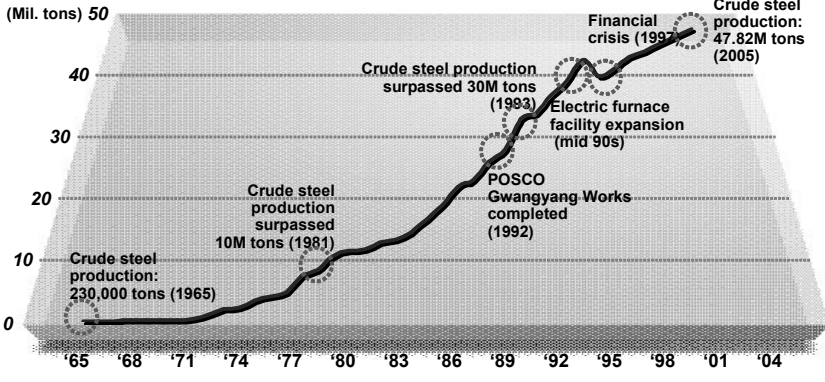
1

Current Status



Production

- Korea's Crude Steel Production: 4.2% of global share
- Since 1965, crude steel production has increased 209 fold.
 - 1981: Production reached 10M tons and maintained avg. annual growth of 7%
 - 1998: Financial crisis temporarily slowed production

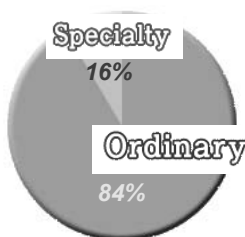


Year	Production (Million tons)	Event
1965	0.23	Crude steel production: 230,000 tons
1981	10	Crude steel production surpassed 10M tons
1992	~20	POSCO Gwangyang Works completed
1993	30	Crude steel production surpassed 30M tons
Mid-90s	~35	Electric furnace facility expansion
1997	~40	Financial crisis
2005	47.82	Crude steel production: 47.82M tons

Demand & Supply



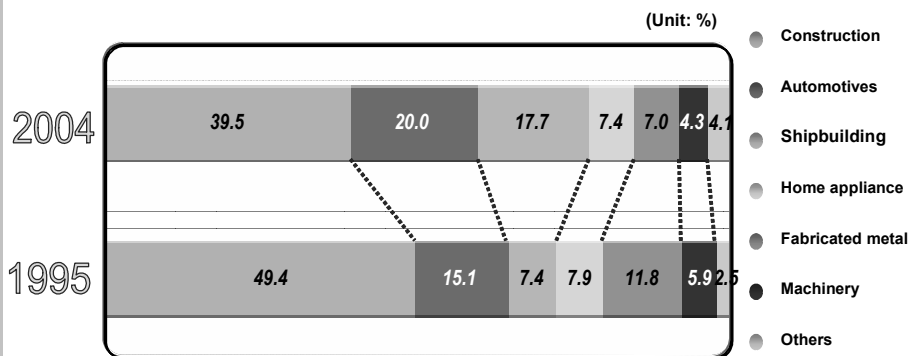
- Crude steel production: total 47,820 (in thousand tons)
 - 26,728 converters; 21,092 electric furnaces
 - 7,468 specialty steel; 40,351 ordinary (carbon) steel
- Demand of steel products: total 63,385 (in thousand tons, including semi-finished)
 - 16,261 export; 47,124 domestic consumption
- Steel products production: total 55,065 (in thousand tons)
 - 18,589 long products; 30,715 flat products; 4,072 steel pipes; 1,083 castings & forgings




Demand by Industry



- Demand in construction has been decreasing since 1995 while demand in the automotive and shipbuilding sectors has increased
- 2004 Steel consumption by industry (%)
 - Construction 40; Automotive 20; Shipbuilding 18; Home appliance 7.4
 - Fabricated metal products 7; and Machinery 4

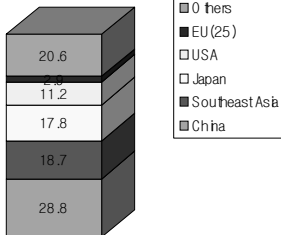


Trade



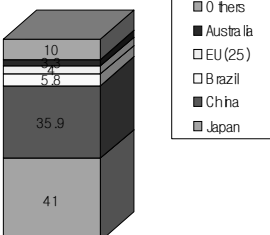
- 2002: Shift to a net steel importer
 - 2005: export 16.3; import 18.9 (in million tons)
- Import-export structure by region
 - Korea's trade concentrated on China, Japan, and Southeast Asia
 - Sharp increase in bilateral trade with China since mid 1990s

Korea's Steel Exports



Region	Value (million tons)
Others	20.6
EU (25)	2.0
USA	11.2
Japan	17.8
Southeast Asia	18.7
China	28.8

Korea's Steel Imports

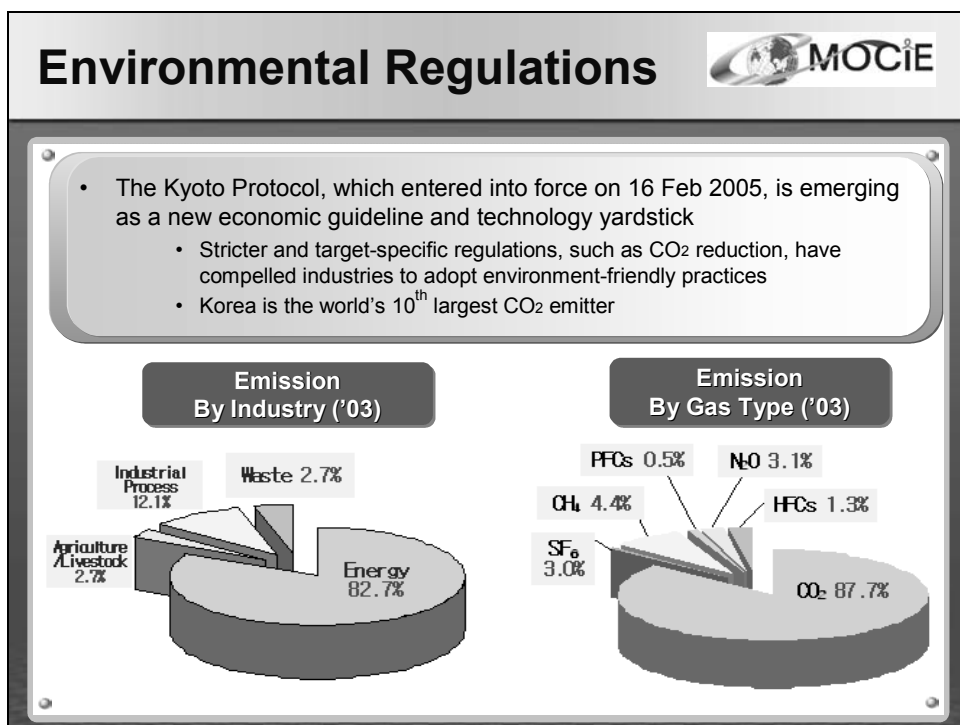
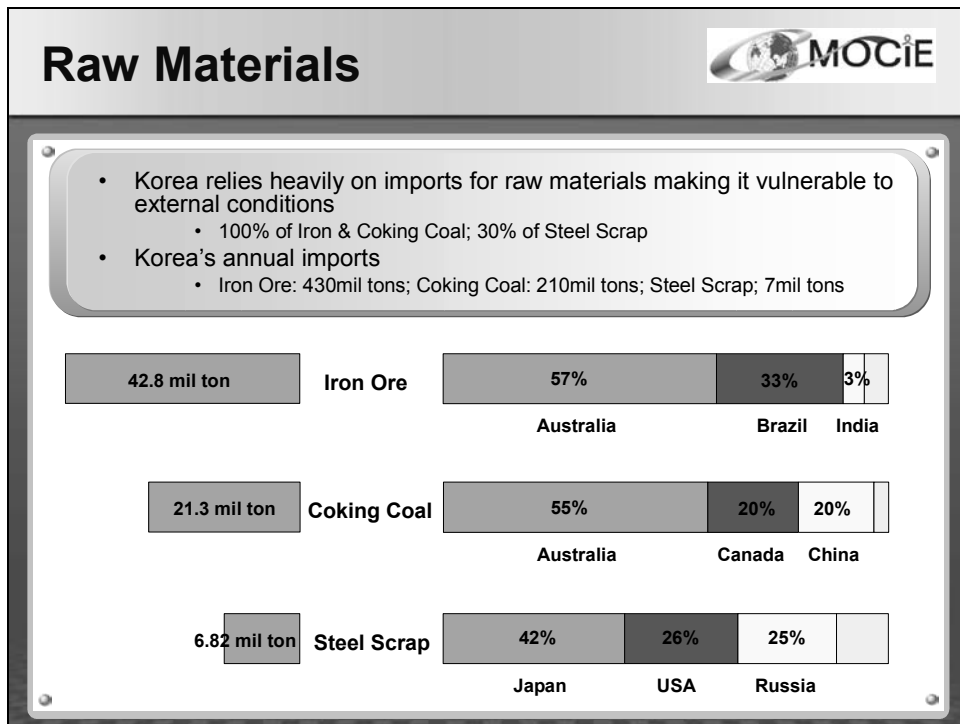


Region	Value (million tons)
Others	10
Australia	0.2
EU (25)	0.2
Brazil	5.8
China	35.9
Japan	41



2

Major Challenges

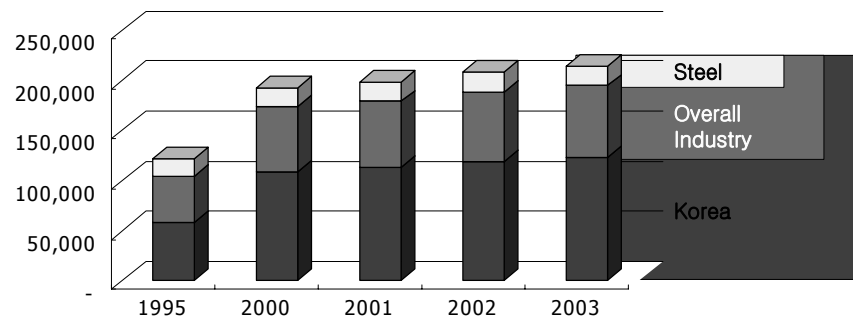


Energy Consumption



- As an energy-intensive industry, steel production costs may rise with stricter international environmental regulations
 - The steel industry consumes 10.5% of energy in Korea, but the proportion is declining: 12.8% ('90) → 11.0% (2000) → 10.5% (2004)

Domestic Energy Consumption (Unit: thousand TOE)



3

Development Tasks

3-1

Stable Supply of Raw Materials

Raw Materials Supply

Steel Scrap

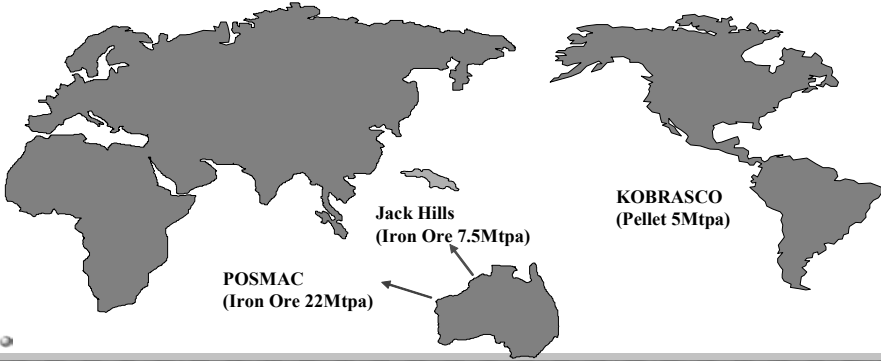
- Korea is the world's 3rd largest steel scrap importer
- Steel Scrap the only raw material obtainable domestically
- Systematic scrap management and improvement of scrap recovering and processing technology


Mine Development & Overseas Steel Mill Construction

- Partnering with international raw materials suppliers
 - Investments in coal, iron ore mines or joint ventures with firms in Australia, Canada, Brazil
 - Overseas steel mills with India, Brazil, among others

Overseas Mines Investment

	Projects	Start-up	Ownership	Investment (\$M)	Offtake (Mt)
Australia	POS-MAC	2003	20%	12.2	3.2
	Jack Hills	2010	5.5%	2.4	-
Brazil	Kobrasco	1998	50%	38.5	2.7





3 Development Tasks

3-2 Environment-Friendly Technology

Overview of Gov't Measures

UNFCCC Task Force Committee

- Implementation of the 1st-3rd comprehensive action plan (CAP) ('99~'07) in line with UNFCCC
 - Future commitments: establishment of GHG emission statistics & statistical framework for policy building
 - Energy saving/efficiency improvements & GHG reduction efforts
- Results from the 1st-2nd CAP: annual GHG emission decreased from 5% to 3%
- Participation in APP on Clean Development and Climate including Steel Task Force

Overview of Gov't Measures

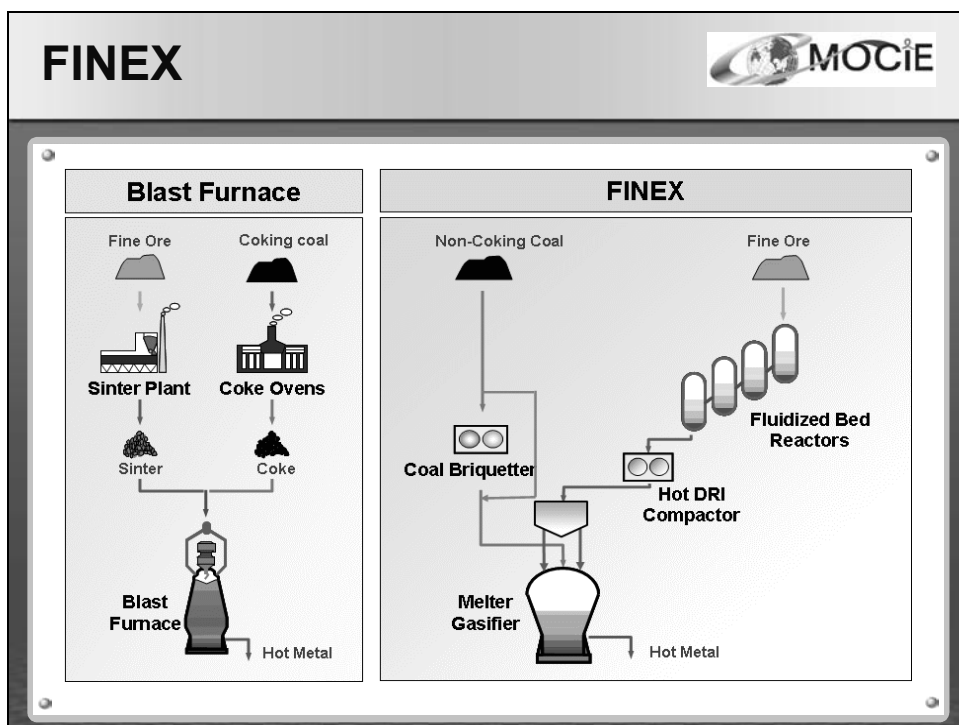
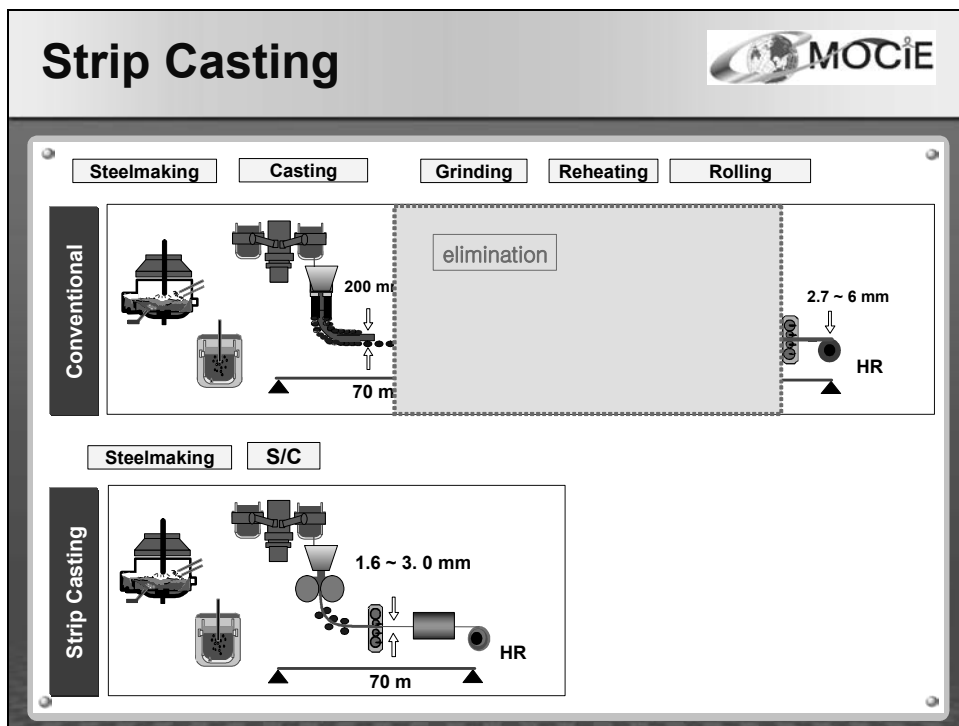
Government & Industry Information Exchange Network

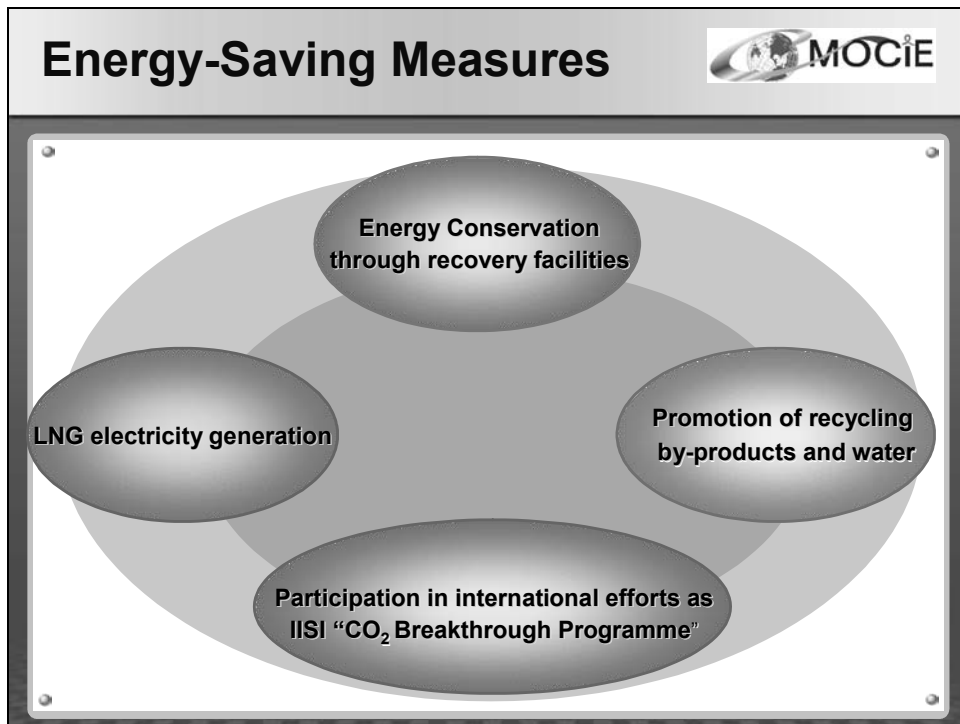
- **Establishment & Operation of Task Force for steel industry together with 7 other designated sectors**
 - UNFCCC promotion & education; reviewing GHG emission protocol & framework; case studies on successful UNFCCC measures in other countries
- **Increased participation rate of steel companies in VA (Voluntary Agreement): 2 in 1998 → 25 in 2005**
 - POSCO signed on a demo agreement in Dec. 1998 / the number of KOSA (Korea Iron & Steel Association) members : 34
 - Reduction of energy use in overall industry from 1998 to 2004: 9,427 thousand TOE (2.5 trillion won)
 - The number of VA participatory companies: 15 in 1998 → 1,288 in 2005

Sustainable Development

- **Development of environment-friendly and energy-saving technologies**
 - Commercializing next-generation iron-smelting process: FINEX is scheduled for completion in December 2006; strip-casting in June 2006
 - Extending production of environment-related products: automotive steel sheets (hydroforming, TWB); chrome-free steel sheets

	Improvements in Production Process	Cost cuts in facility & investment	Cost cuts in production	Eco-friendliness
FINEX	Eliminating pre-processing, such as sinter plant and coke ovens	19%	22%	Reducing emission of pollutants (SOx 100%→8% NOx 100%→4% Dust 100%→21%)
Strip Casting	Eliminating manufacturing process of semi-finished products	40%	1/3	Reducing energy consumption by 75~85%





Thank you for your attention!

Ministry of Commerce, Industry & Energy
Republic of Korea

