

APPENDIX

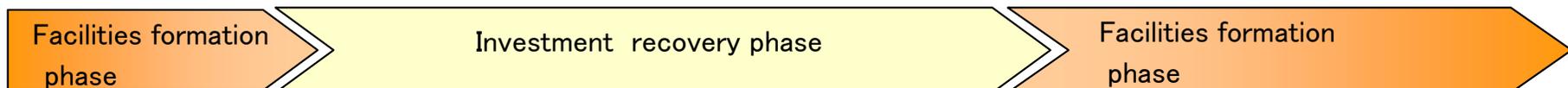
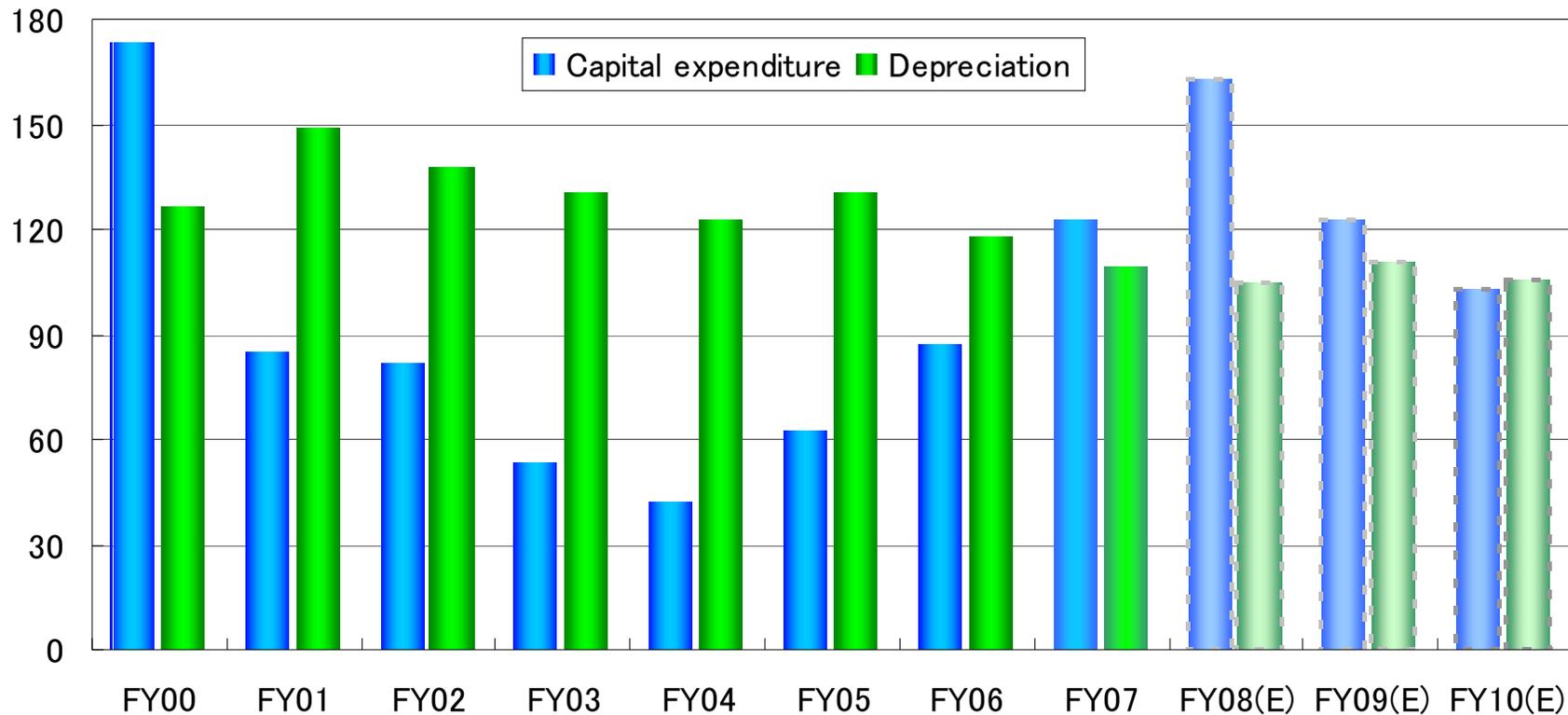
Capital Expenditure Plan for the Wholesale Power Business (Non-consolidated)



(Unit: Billion yen)

	FY2008(E)	FY2009(E)	FY2010(E)
Generation Assets	90.4	83.0	70.5
Transmission /Substation	19.5	20.2	12.2
Other	52.9	19.6	19.9
Total	162.9	122.8	102.8

(billion yen)



- ✓ Tachibanawan Thermal (2,100MW)
- ✓ Isogo New No.1 Thermal (600MW)

- ✓ Isogo New No.2 Thermal (600MW)
- ✓ Ohma Nuclear (1,383MW)

Overseas Power Generation Business: Update



- ▶ J-POWER is steadily promoting overseas power generation business in the key markets of Southeast Asia, particularly Thailand, USA and China

Major Business Achievements in FY2008

▪ United States

- May 2008: Acquisition of equity interest in Birchwood, a coal-fired IPP (in operation) [242MW, 49.5%]
- Dec. 2008: Acquisition of equity interest in Three Gas-fired Power Plants in the US East Coast (in operation):
 - Pinelawn [80MW, 50%]
 - Equus [48MW, 50%]
 - Fluvanna [885MW, 15%]

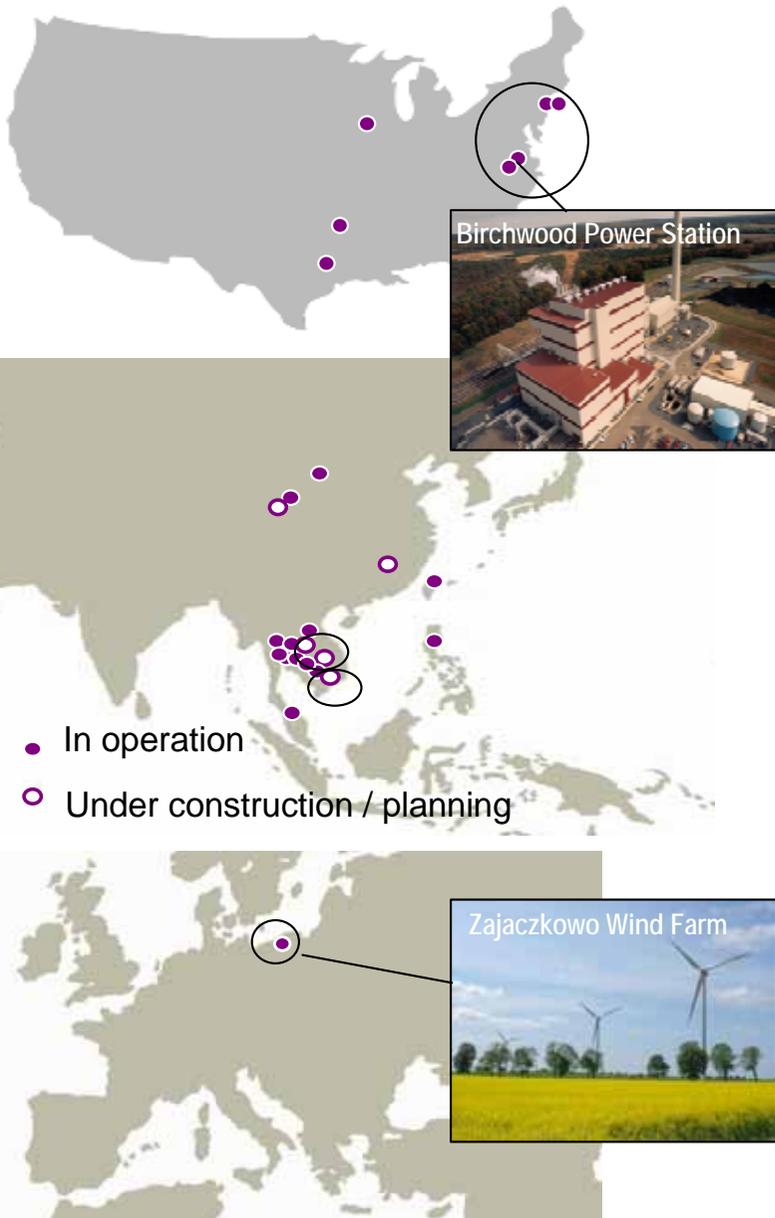
▪ Thailand

- Oct. 2008: Signed Power Purchase Agreement with Electricity Generating Authority of Thailand for Samet Tai and Nong Saeng Projects (planning) [total 3,200MW, We plan to own the majority stake]

▪ Other Countries

- Mar. 2009: Acquisition of equity interest in Nhon Trach 2 Power Plant, Vietnam (Under construction) [750MW, 5%]
- Sep. 2008: Operation commenced at Zajaczkowo Wind Farm, Poland [48MW, 45%]

*Figures in Parentheses: [Output capacity, J-POWER's equity stake]



Overseas Power Generation Business: List of Projects



As of Mar.31, 2009

■ In Operation

Country / Region	Project Name	Type of Power Generation	Output Capacity (MW)	Equity Stake	Owned Capacity (MW)	Participation Year	Start of Operation	Power Purchaser	Validity of purchase agreement
USA	Tenaska Frontier	Gas (Combined Cycle)	830	31.0%	257	FY2006	FY2000	Exelon Generation Company, LLC	20 years
	Elwood Energy	Gas (Simple Cycle)	1,350	25.0%	338	FY2006	FY1999, FY2001	Exelon Generation Company, LLC / Constellation	valid to 2012 / 2016 / 2017
	Green Country	Gas (Combined Cycle)	795	50.0%	398	FY2007	FY2001	Exelon Generation Company, LLC	20 years
	Birchwood	Coal	242	49.5%	120	FY2008	FY1996	Virginia Electric and Power Company	25 years
	Pinelawn	Gas (Combined Cycle)	80	50.0%	40	FY2008	FY2005	Long Island Power Authority	valid to 2025
	Equus	Gas (Simple Cycle)	48	50.0%	24	FY2008	FY2004	Long Island Power Authority	valid to 2017
	Fluvanna	Gas (Combined Cycle)	885	15.0%	133	FY2008	FY2004	Shell Energy North America	valid to 2024
Philippines	CBK	Hydroelectric	728	50.0%	364	FY2004	FY2001 ~2003	National Power Corporation	25 years
China	Tianshi	Coal Waste	50	24.0%	12	FY2000	FY2001	Shanxi Province Power Corporation	Renewed for 1 year
	Hanjiang (Xihe)	Hydroelectric	180	27.0%	49	FY2007	FY2006	Shaanxi Electric Power Company	Renewed for 1 year
Thailand	Roi-Et	Biomass (Chaff)	10	24.7%	2	FY2000	FY2003	EGAT	21 years
	Rayong	Gas (Combined Cycle)	112	20.0%	22	FY2000	FY2002	EGAT / Companies in the industrial park	21 years
	Thaioil Power	Gas (Combined Cycle)	113	19.0%	21	FY2001	FY1998	EGAT / Companies within the Thai Oil Refinery	25 years
	Independent Power	Gas (Combined Cycle)	700	10.6%	74	FY2001	FY2000	EGAT	25 years
	Gulf Cogeneration (Kaeng Khoi)	Gas (Combined Cycle)	110	49.0%	54	FY2001	FY1998	EGAT / Companies in the industrial park	21 years
	Samutprakarn	Gas (Combined Cycle)	117	49.0%	57	FY2002	FY1999	EGAT / Companies in the industrial park	21 years
	Nong Khae	Gas (Combined Cycle)	120	49.0%	59	FY2002	FY2000	EGAT / Companies in the industrial park	21 years
	Yala	Biomass (Rubber Wood Waste)	20	49.0%	10	FY2003	FY2006	EGAT	25 years
	Kaeng Khoi #2	Gas (Combined Cycle)	1,468	49.0%	719	FY2004	FY2007	EGAT	25 years
Taiwan	Chiahui	Gas (Combined Cycle)	670	40.0%	268	FY2002	FY2003	Taiwan Power Company	25 years
Poland	Zajaczkowo	Wind Power	48	45.0%	22	FY2006	FY2008	ENERGA OBROT S.A.	15 years
21 projects in 6 countries/regions			8,676		3,042				

■ Under Construction / Planning

(Blank: informations that cannot be disclosed at the moment)

Contry / Region	Project Name	Type of Power Generation	Output Capacity (MW)	Equity Stake	Owned Capacity (MW)	Participation Year	Start of Operation (Planned)	Power Purchaser	Validity of purchase agreement
Thailand	Samet Tai	Gas (Combined Cycle)	1,600	*We plan to own		FY2007	FY2013	EGAT	25 years
	Nong Saeng	Gas (Combined Cycle)	1,600	the majority stake		FY2007	FY2014	EGAT	25 years
China	Hanjiang(Shuhe)	Hydroelectric	270	27.0%	73	FY2007	FY2009	Shaanxi Electric Power Company	Renewed for 1 year
	Xinchang	Coal	1,320	10.0%	132	FY2007	FY2009 FY2010	Jiangxi Electric Power Company	Renewed for 1 year
Vietnam	Nhon Trach 2	Gas (Combined Cycle)	750	5.0%	38	FY2008	FY2010	Vietnam Electricity	
5 projects in 3 countries/regions			5,540						

Wind Power Business (Domestic): Update



- ▶ J-POWER promotes electric power generation using clean, renewable wind power. J-POWER has the second largest domestic share in owned capacity

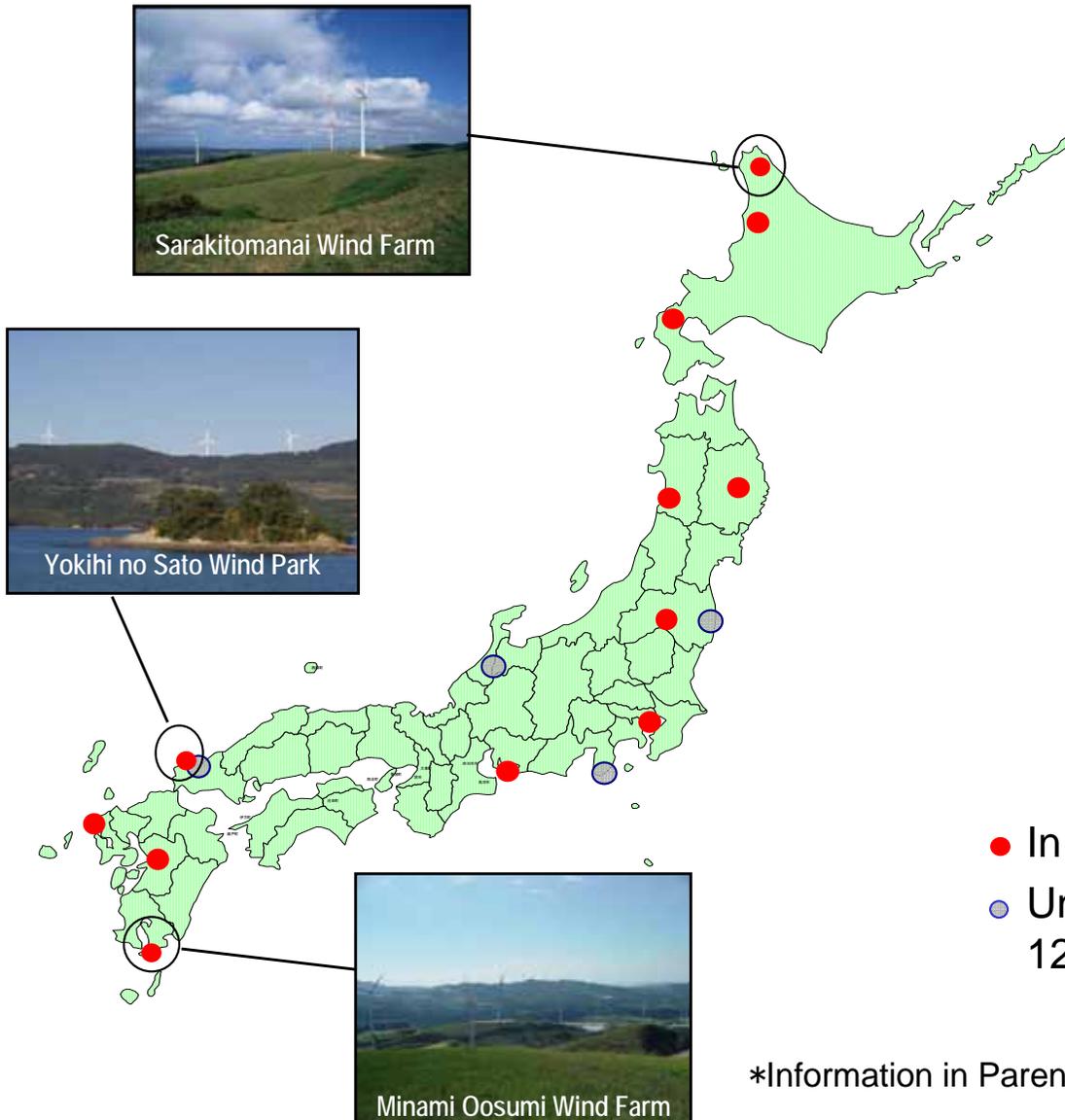
Major Business Achievements in FY2008

- Feb. 2009: Acquisition of equity interests in three wind power companies in operation (total: 45,350kW)

- Sarakitomanai Wind Farm [Hokkaido, 14,850kW, 49%]
- Yokihi no Sato Wind Park [Yamaguchi, 4,500kW, 90%]
- Minami Oosumi Wind Farm [Kagoshima, 26,000kW, 80%]

- In operation (Domestic: 12 locations) 255,880kW
- Under construction / Planning (Domestic: 4 locations) 120,000kW

*Information in Parentheses: [Location, Output capacity, J-POWER's equity stake]



Wind Power Business (Domestic): List of Projects

■ In Operation

Location	Name	Output Capacity (kW)	Equity Stake	Owned Capacity (kW)	Business Partners [Equity Stake]	Start of Operation	Power Purchaser
Hokkaido	Tomamae Winvilla Wind Farm	30,600	100%	30,600	—	FY2000	Hokkaido EPCO
Akita	Nikaho Kogen Wind Farm	24,750	67%	16,583	ORIX Corporation [20%] Eco Material Corporation [10%] KYOWA OIL Co Ltd [3%]	FY2001	Tohoku EPCO
Tokyo	Tokyo Bayside Wind Power Plant	1,700	50%	850	Toyota Tsusho Corporation [50%]	FY2002	Tokyo EPCO
Iwate	Green Power Kuzumaki Wind Farm	21,000	100%	21,000	-	FY2003	Tohoku EPCO
Nagasaki	Nagasaki-Shikamachi Wind Farm	15,000	70%	10,500	New Energy Planning Co Ltd [30%]	FY2004	Kyusyu EPCO
Kumamoto	Aso-Nishihara Wind Farm	17,500	81%	14,175	Asahi Breweries, Ltd [19%]	FY2004	Kyusyu EPCO
Aichi	Tahara Bayside Wind Farm	22,000	66%	14,520	Toyota Tsusho Corporation [34%]	FY2004	Chubu EPCO
Hokkaido	Setana Seaside Wind Power Farm	12,000	100%	12,000	-	FY2005	Hokkaido EPCO
Fukushima	Koriyama-Nunobiki Kogen Wind Farm	65,980	100%	65,980	—	FY2006	Tokyo EPCO
Hokkaido	Sarakitomanai Wind Farm	14,850	49%	7,277	KITA KOUDENSHA Corporation [19%] and three other companies	FY2001	Hokkaido EPCO
Yamaguchi	Yokihi no Sato Wind Park	4,500	90%	4,050	Community Energy Research Corporation Ltd.[10%]	FY2003	Chugoku EPCO
Kagoshima	Minami Oosumi Wind Farm	26,000	80%	20,800	TOYOSHIMA MEC [20%]	FY2002	Kyusyu EPCO
Domestic: 12 projects		255,880		218,334			

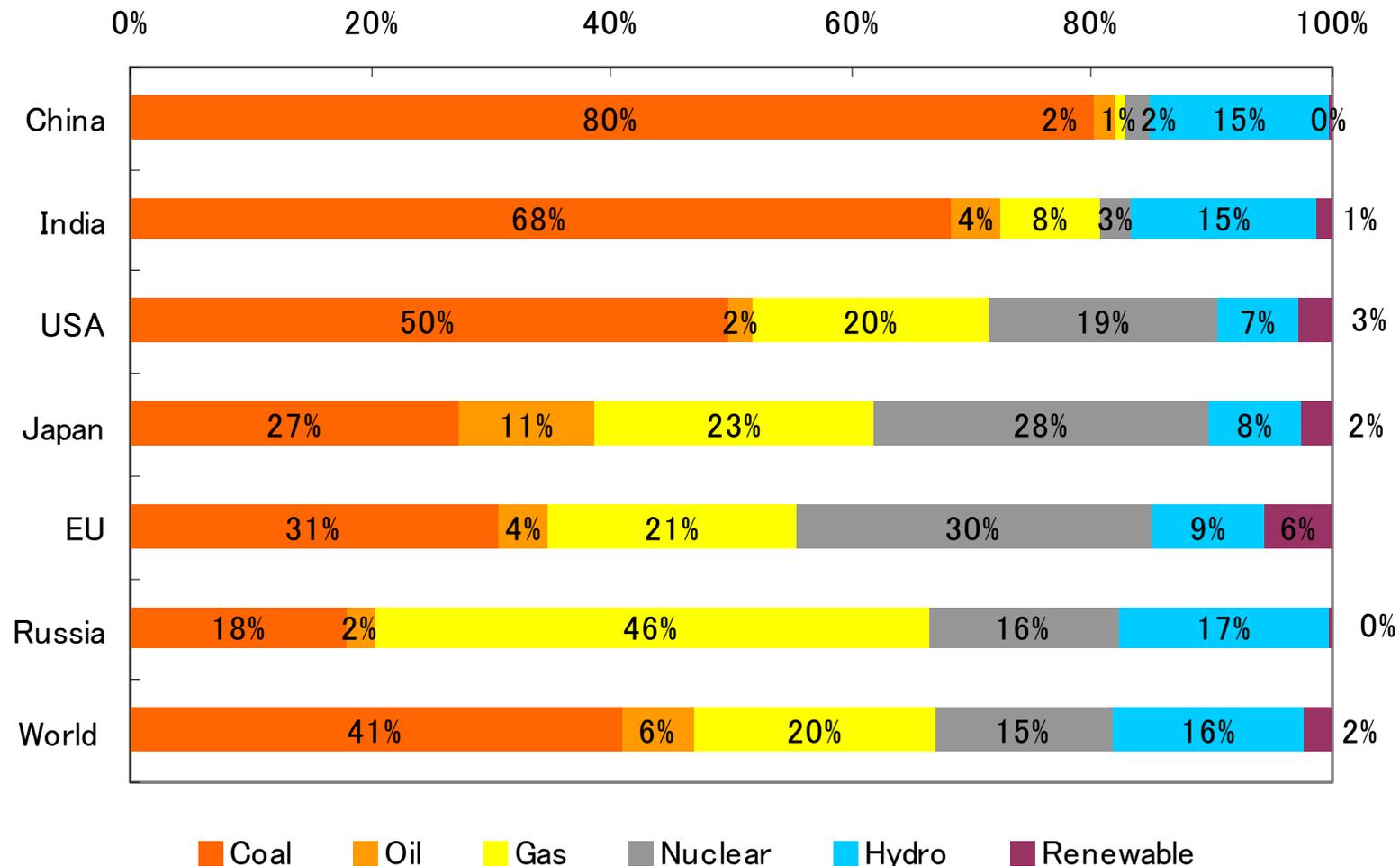
■ Under construction / Planning (Blank: informations that cannot be disclosed at the moment)

Location	Name	Output Capacity (kW)	Equity Stake	Owned capacity (kW)	Business Partners	Start of Operation (planned)	Power purchaser
Shizuoka	Irozaki Wind Farm	34,000				FY2010	
Fukushima	Hiyama Kogen Wind Farm	28,000				FY2010	
Yamaguchi	Nagato Wind Farm	38,000				FY2011	
Fukui	Awara Wind Farm	20,000				FY2011	
Domestic: 4 projects		120,000					

Electricity generation by fuel in major countries (2006)



- ▶ Approximately 40% of the world's power is generated by coal, the largest share.
- ▶ Coal's share of power generation is high in large energy-consuming countries such as China, India, and the U.S.
- ▶ Japan pursues the best mix of available power sources. 27% of all power generation is supplied by coal-fired power generation.

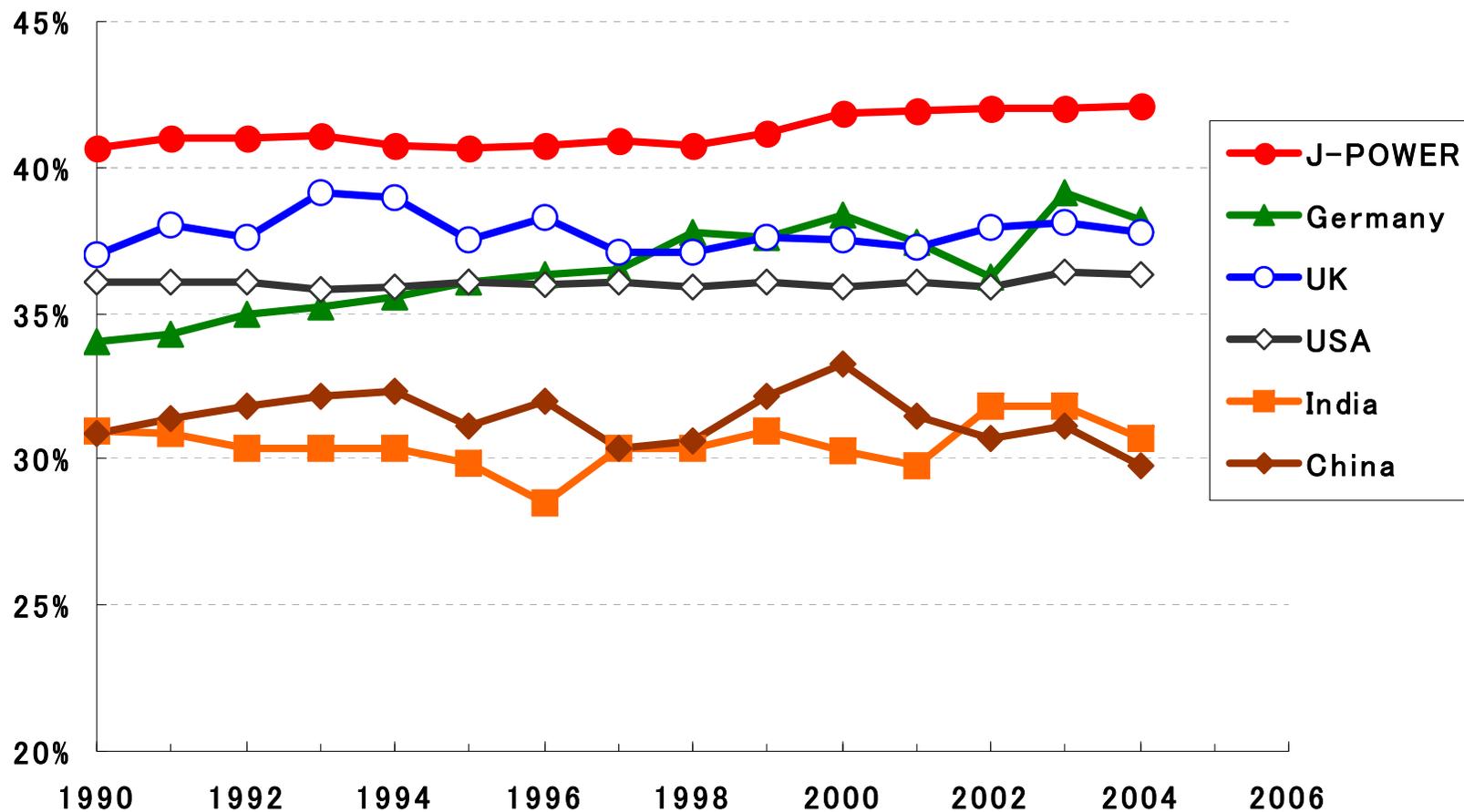


Trends of Thermal Efficiency in World's Coal-Fired Thermal Power Generation



- ▶ Japan's coal-fired power plants maintain world-leading generating efficiency.
- ▶ Generating efficiency by the U.S., China and India, the world's big CO2 emitters, is relatively low.

Generating Efficiency at generation end (LHV)



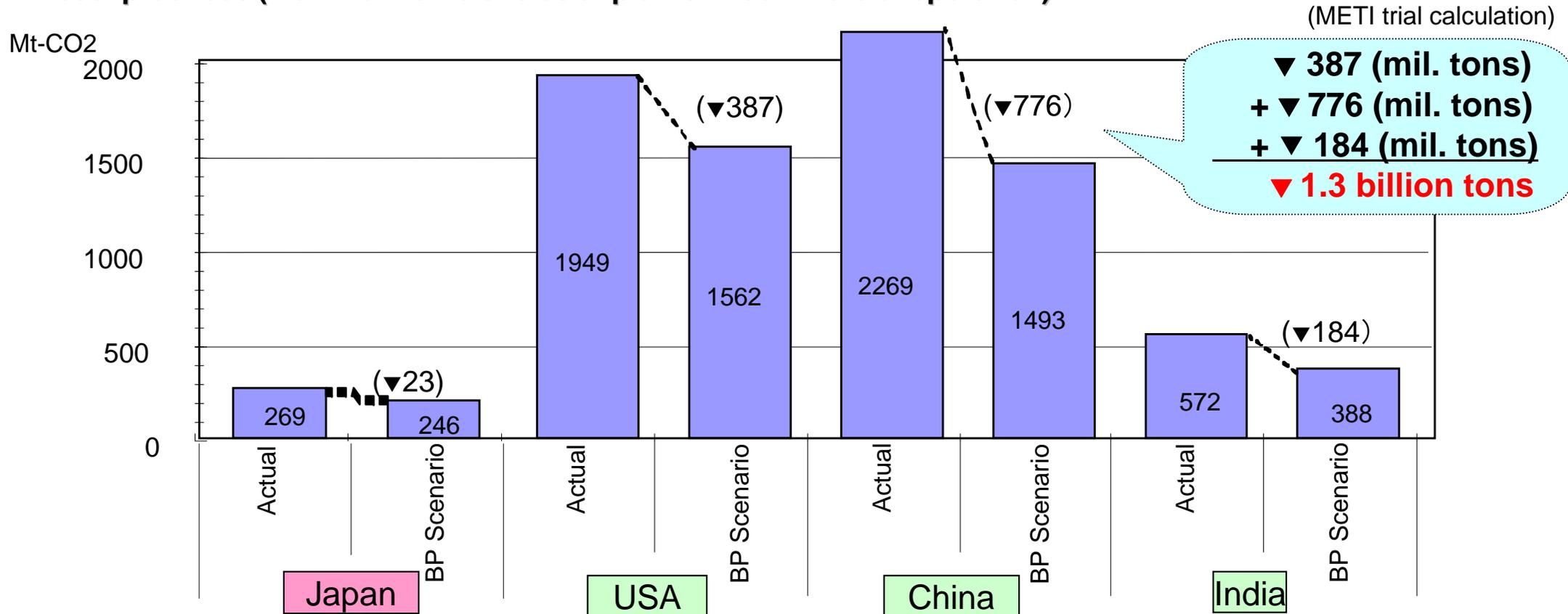
Source: Ecofys Comparison of Power Efficiency on Grid Level 2007

Applying the Maximum Efficiency of Japanese Coal-Fired Power to other Key Nations



- ▶ Applying current maximum efficiencies achievable in Japan to the U.S., Chinese, and Indian coal-fired power generation could reduce CO2 emissions by 1.3 billion tons.
 - ▶ This is equivalent to 17% of worldwide CO2 emissions from coal-fired power plants (7.6 bil. tons) based on 2004 levels, or 5% of worldwide CO2 emissions from all sources (26.1 bil. tons).
- It is also equivalent to 5 times the CO2 emitted by Japanese coal-fired plants (270 mil. tons), or 1.1 times the total CO2 emissions for Japan as a whole (1.21 bil. tons).

CO2 emissions from coal-fired power generation: Actual results (2004) vs. Scenario applying Japanese best practices (maximum efficiencies at plants in commercial operation)



BP Scenario: Trial calculation applying Japanese best practices (maximum efficiencies at plants in commercial operation).

Source of actual results data: IEA "World Energy Outlook 2006"

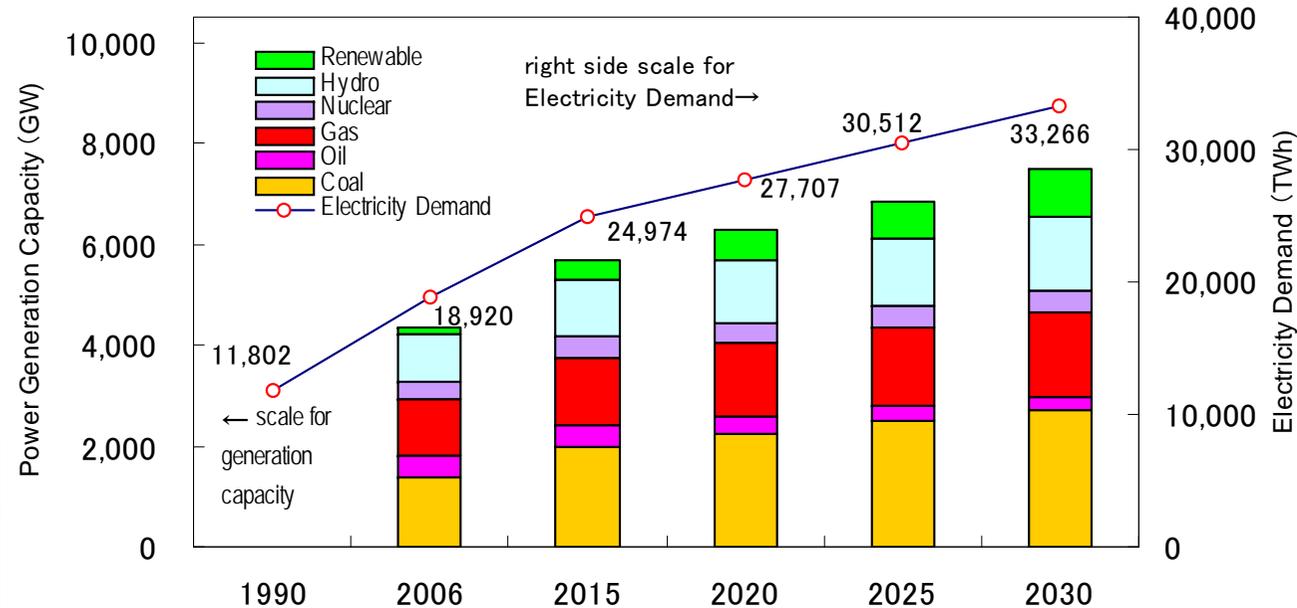
Outlook for Power Generation and CO2 Emissions: World



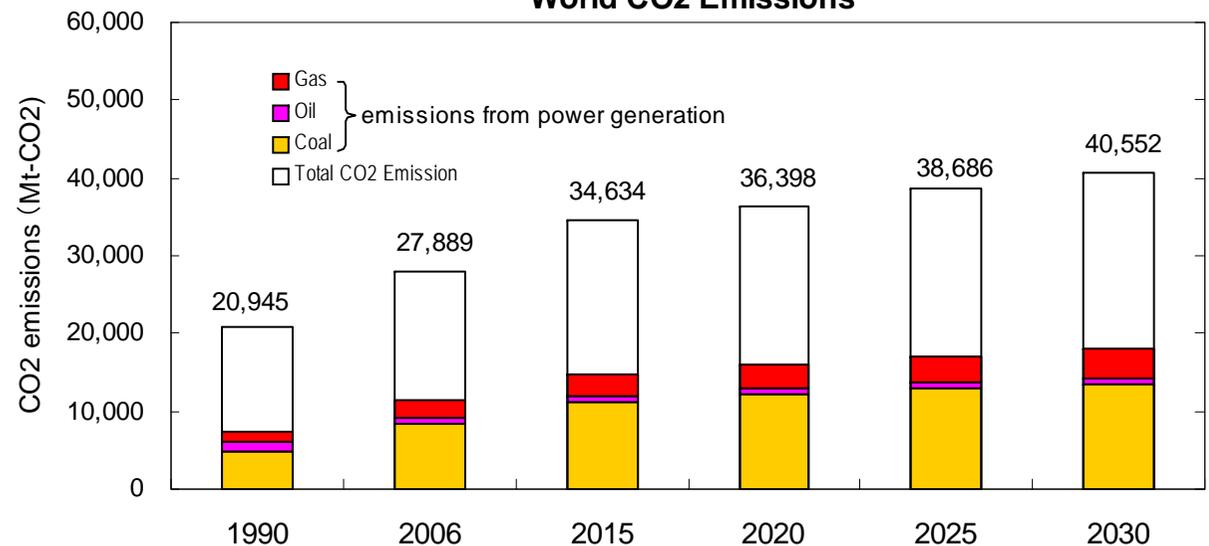
- ▶ Figure at right shows the outlook for worldwide electricity demand and power generation capacity.
- ▶ Demand for power generation will continue to increase worldwide, and power generation capacity will increase to meet that need.
- ▶ Coal-fired plants will represent the largest share of power generation facilities, increasing from 32% to 36% by the year 2030.

- ▶ In the reference case calculated by the IEA, worldwide energy-related CO2 emissions will increase from 28.0 bil. tons in 2006 to 41.0 bil. tons in 2030, an increase of about 45%.
- ▶ The proportion of CO2 emissions in the power generation sector will increase from 41% in 2006 to 45% in 2030.
- ▶ In 2006, approximately 30% of total worldwide CO2 emissions (about 8.3 bil. tons) came from coal-fired power generation.
- ▶ In 2030, approximately 33% of total worldwide CO2 emissions (about 13.5 bil. tons) will come from coal-fired power generation.

Electricity Demand and Power Generation Capacity in the World



World CO2 Emissions

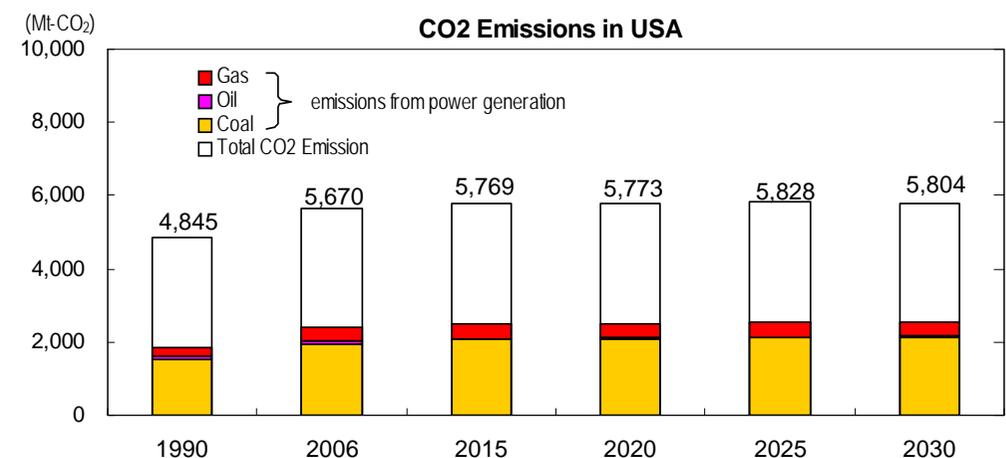
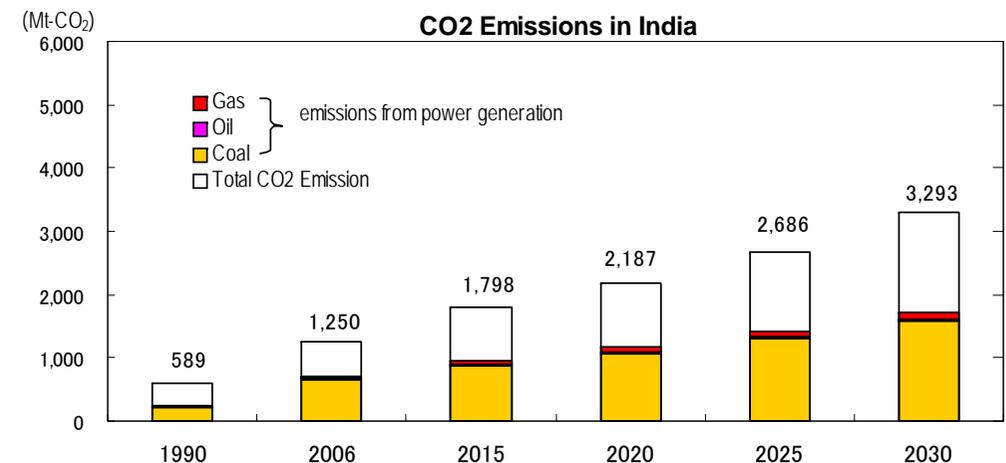
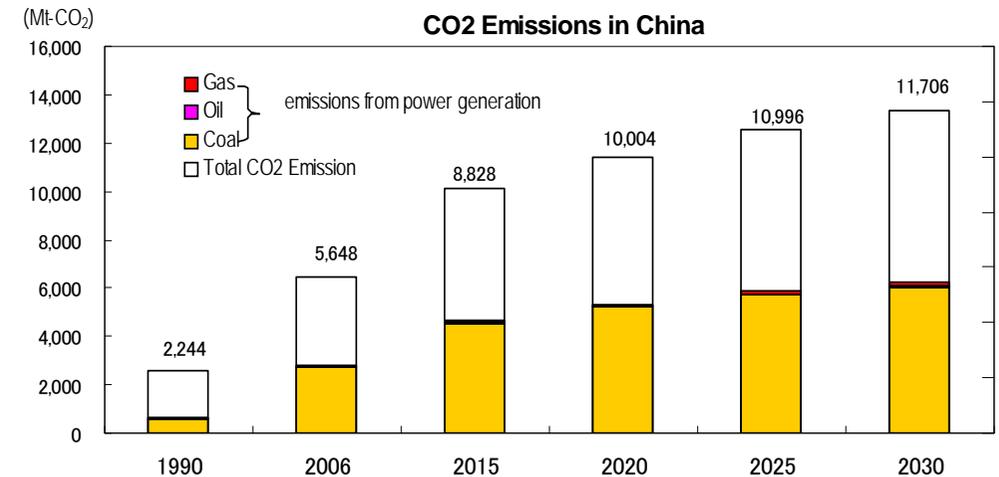


Outlook for CO2 Emissions: China • India • USA



- ▶ In the reference case calculated by the IEA, the change in CO2 emissions in China, India, and the U.S. are as shown at right.
- ▶ Total CO2 emissions in China, India, and the U.S. were about 45% of total worldwide emissions in 1990, about 49% in 2006, and will be about 51% (China 29%, India 8%, USA 14%) in 2030.
- ▶ In 2030, about 33% of worldwide total CO2 emissions will come from coal-fired power generation.

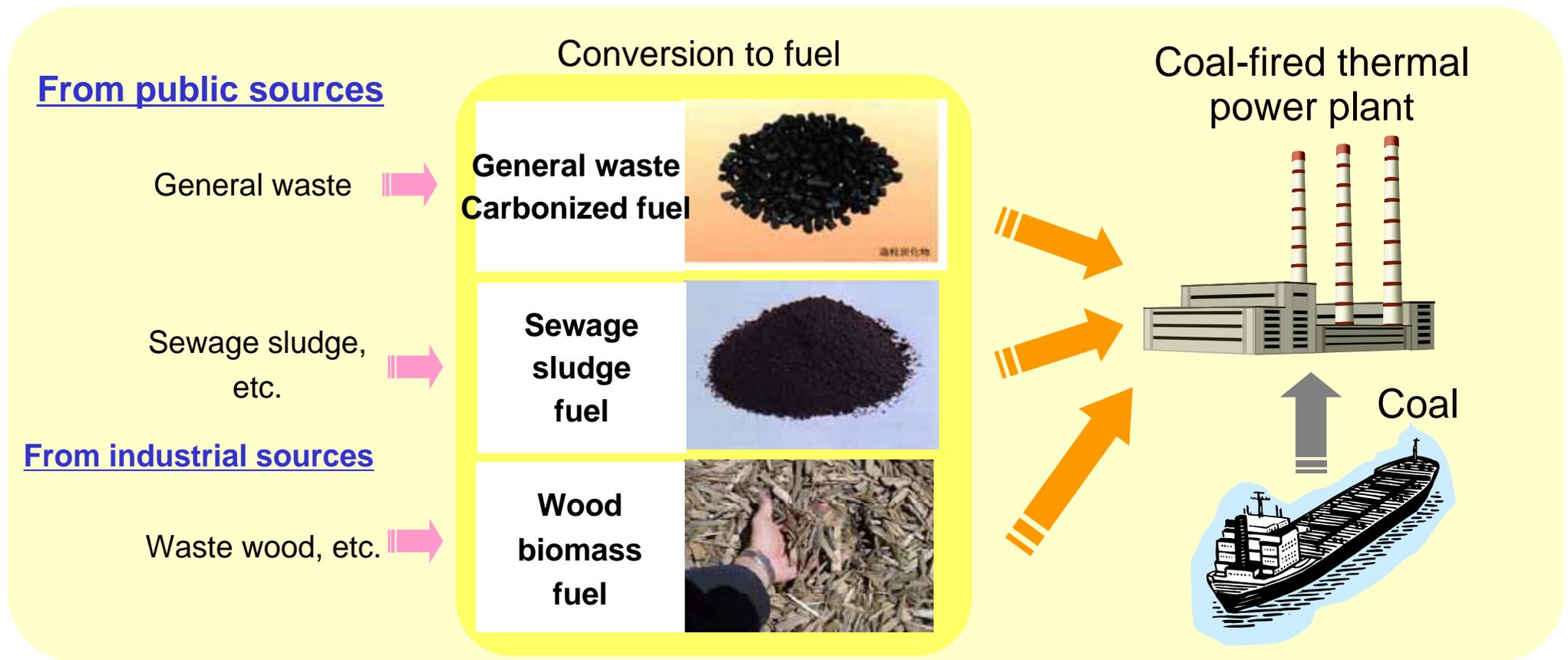
Of this, about 24% of total worldwide total CO2 emissions will come from coal-fired power in China, India, and the U.S. (China 15%, India 4%, USA 5%).



Use of Biomass Fuels in Coal-Fired Thermal Power Plants

– efficient utilization

- ▶ The utilization of biomass fuels mixed with coal enables the reduction of CO₂ emission per unit of electric power generation at coal-fired power plants.
- ▶ Biomass mixed combustion is more heat-efficient than mono-combustion, and the drop in CO₂ emissions is significant even compared to using the same amount of biomass fuels.
- ▶ Biomass fuels are also an effective method of waste recycling.



Biomass: a recyclable organic resource derived from living matter excluding fossil resources

Approach to Commercialization of Integrated Coal Gasification Combined Cycle Power Generation (IGCC)



- ▶ Plans for a joint large-scale demonstration by J-POWER and Chugoku Electric Power for the commercialization of oxygen-blown IGCC. Under this plan, we plan to establish **innovative zero-emission coal-fired power generation technology**.

IGCC pilot plant
Coal used: 150t per day

CO2 capture



J-POWER Wakamatsu Research Institute (Kita Kyushu)

Large-scale oxygen-blown coal gasification demonstration project

Scale: Coal feed: 1,100t/day class (output 170MW class)

Site: Osaki Power Station, The Chugoku Electric Power Co., Ltd.
(Osaki Kamijima-cho, Hiroshima Prefecture)

Commencement of test: FY2016 (planned)

Details of test: The demonstration test will verify a larger scale coal gasification combined cycle system and CO2 capture technology



Osaki Power Station (Hiroshima Prefecture), Chugoku Electric Power

Oxygen-blown IGCC commercial plant (500 – 600MW-class)

J-POWER Initiatives in the Development of CO2 Capture Technology



- ▶ J-POWER is currently focused on developing technology for three promising methods of recovering CO2 from coal-fired thermal generation.

Pulverized coal-fired generation

Method of capture after combustion

- Operation: J-POWER/Mitsubishi Heavy Industries
- Subject: emission gas from Pulverized coal-fired generation
- Volume of gas to be treated: 1,750Nm³/h
- Volume of CO₂ to be captured: 10 t-CO₂/ day
- Duration of test: FY2007 to FY2008



Pulverized coal-fired generation

Method of oxygen combustion

- Operation: Japan (J-POWER, IHI, etc.)/ Australia
- Subject: Pulverized coal-fired generation
- Scale of test: 30MW class
- Volume of CO₂ to be captured: 30,000t/year
Also CO₂ transport and storage will be demonstrated
- Duration of test: 2011 to 2015 (planned)



Coal gasification power generation

Method of capture prior to combustion

- Operation: J-POWER/NEDO
- Subject: Oxygen-blown coal-gasified gas
- Volume of gas to be treated: 1,000Nm³/h
- Volume of CO₂ to be captured: about 20 t-CO₂/day
- Duration of test: FY2008 to FY2009 (planned)



Major Financial Data : Consolidated



(Unit: ¥100 million)

	FY2004	FY2005	FY2006	FY2007	FY2008 3Q
Operating revenues	5,943	6,219	5,732	5,877	5,444
Operating income	1,118	1,014	771	507	650
Ordinary income	570	679	555	428	542
Net income	355	435	351	293	294
FCF ※1	1,120	1,016	18	-162	515
Depreciation	1,253	1,350	1,230	1,150	819
Capital expenditures	509	608	907	1,220	1,300

※1: FCF = Cash flow from operating activities + Cash flow from investing activities

【 Key ratios : Consolidated 】	FY2004	FY2005	FY2006	FY2007	FY2008 3Q
Shareholders' equity ratio(%)	19.4%	22.0%	23.1%	23.2%	19.9%
D/E ratio	3.8	3.3	3.1	3.1	3.6
ROE(%) ※2	9.5%	10.6%	7.9%	6.3%	-
ROA(%) ※3	2.8%	3.4%	2.8%	2.1%	-

※2: ROE = Consolidated current net income / The average of consolidated shareholders' equity at the beginning and the end of the period

※3: ROA = Consolidated ordinary income / The average of consolidated total assets at the beginning and the end of the period

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