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1. Business Overview

- 2. Market Environment
- 3. Business Policy and Strategy
- 4. Thermal Power Business
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1. Business Overview





IGCC:Integrated Gasification Combined Cycle AQCS:Air Quality Control System ABWR: Advanced Boiling Water Reactor ESBWR: Economic and Simplified Boiling Water Reactor PET: Positron Emission Tomography



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2-1. Worldwide Trends toward a Low-Carbon Society



Increasing role of power sector to reduce CO₂ emissions

Accelerate realization of a low-carbon society (nuclear power, CCS and renewable energy are projected to increase)



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2-2. Japanese Market Trends



Capital expenditure of around ¥2.4 trillion

Source: Management plan presentation materials of utility companies

Power Capacity Development Plans

	Under Construction (MW)	No. of Plants	Planned (MW)	No. of Plants
Nuclear	2,760	2	16,550	12
BWR*	(2,760)	(2)	(11,890)	(9)
Thermal	9130	23	14,210	44
Renewable energy, etc.	60	7	40	13
Total	11,950	32	30,800	69

Plans and construction are proceeding steadily

Source: Agency for Natural Resources and Energy, Summary of Electricity Supply Plan, FY2010

Nuclear power

Continuous construction plans, mainly of BWR, as core power source

Thermal power

Demand for Highly efficient new plants
 Increasing efficiency of existing plants

Renewable energy, etc.

Accelerate testing and commercialization of mega-solar systems, and smart grids

Government institution initiatives

Industrial Structure Vision 2010, Basic Energy Plan

Public-private partnership approach for infrastructure projects in emerging nations

(Nuclear, "clean coal" thermal power, etc.)

Promoting construction of next-generation energy systems (Smart grids, etc.)

***** BWR: Boiling Water Reactor

2-3. Global Trends Emerging Markets Expansion and Combating Climate Change



World Electricity Generation by Type



- World electricity generation is expected to grow by 1.8 times (from 2005 to 2030)
- Coal-fired generation is to continue to play a significant role in power sector
- Nuclear power plants introduction plan

Facility Demand by Region



Capacity demand in emerging markets to grow by 1.6 times (Asia, etc.)	\$
Accelerate realization of a low-carbon society	
 Increased expectations on "clean coal" technologies Nuclear power use Increase in renewable energy use (Wind solar) 	
Strengthening and expanding power transmission network (Large capacity, stabilization, high quality)	



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3-1. Focus on Growth Regions and Fields



Expand revenues focusing on emerging markets (Asia, etc.)

Focusing on growth fields with high contribution to the environment



A-USC: Advanced Ultra Super Critical IGCC: Integrated Gasification Combined Cycle AQCS: Air Quality Control System **CCS: Carbon Dioxide Capture and Storage** © Hitachi, Ltd. 2010. All rights reserved.

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3-2. Promoting Globalization (1)





HEU:Hitachi Europe Ltd. HAL:Hitachi America, Ltd. HCH:Hitachi (China) Ltd. HAS:Hitac HAUL:Hitachi Australia Pty Ltd. CAGR: Compound Average Growth Rate

HAS: Hitachi Asia Ltd.

3-3. Promoting Globalization (2)



3-4. Strengthen Business Competitiveness



Production and Procurement

- Global production optimization Share production among subsidiaries, utilize partners
- Strengthen procurement ability through cooperation among subsidiaries Worldwide lowest cost procurement, manage exchange rate fluctuations

Promote cost reductions (Standardization, joint VEC)

Strengthen MONOZUKURI (Manufacturing capabilities) and HR development

Project Management

Bolster overseas project management capabilities

- Strengthen overseas project management (HR and organizational structure)
- Expand local partners
- Rigorous risk management (Utilize experience in EPC worldwide)

Services

- Promote globalization of services Expand and enhance local service bases
- Nuclear power advanced maintenance (Cooperate with GE)
- Strengthen gas turbine service business
 - Increase output of high-temperature components (Nearly double present capacity)

R&D

- Strengthen global R&D Network
 Establish cooperative structure between
 - three core regional bases (Japan, Europe and U.S.) and universities in the regions
- Propose and participate in national projects to promote development of future technologies
- Hitachi's corporate R&D focus on Social Innovation Business

VEC: Value Engineering for Customers Integrated activities designed to improve products and services in line with customers' expectations. EPC: Engineering, Procurement, Construction © Hitachi, Ltd. 2010. All rights re

3-5. Fusion of Power Systems and ICT





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4-1. Basic Policy





Expand eco-friendly coal-fired thermal power business

Expand Hitachi-developed gas turbine business

Strengthen highly efficient coal-fired thermal power business

- Step up global development
- Expand EPC business

Accelerate development of "clean coal" technology

Develop A-USC, IGCC technology
Field test carbon capture technology

Expand medium-capacity gas turbine business

Accelerate business development centered on Hitachi-developed gas turbine

EPC: Engineering, Procurement, Construction A-USC: Advanced Ultra Super Critical IGCC: Integrated Gasification Combined Cycle







4-2. Strengthen Highly Efficient Coal-fired Thermal Power Business (Step Up Global Development)



Global business development based on the three core regional bases



4-3. Strengthen Highly Efficient Coal-fired Thermal Power Business (Expand EPC Business[1])



Expand business by drawing on Hitachi's superior technologies and EPC capabilities



AQCS: Air Quality Control System

4-4. Strengthen Highly Efficient Coal-fired Thermal Power Business (Expand EPC Business[2])



Recent Construction Achievements and Progress (Major Plants)



4-5. Accelerate Development of Clean Coal Technologies (Develop A-USC/ IGCC Technology)



Accelerate development of A-USC, IGCC and CCS technologies

A-USC



EAGLE: Coal Energy Application for Gas, Liquid and Electricity (Multi-purpose coal gasification technology development project run by NEDO and Electric Power Development Co., Ltd.) NEDO: New Energy and Industrial Technology Development Organization

IGCC + CCS

Technology development in EAGLE project (Since 2002)

- ~2006: Confirmed plant performance in approx. 6,000 hours of test operations
- ~2009: CCS test (World's first with coal gas for power generation)

ltem	Target	Result
CO ₂ capture ratio	90%	>90%
CO ₂ purity	99%	>99%



Osaki CoolGen Project (NEDO Feasibility Study: 2010 to 2011)

Operator: Osaki CoolGen Corporation
 Details: Scale-up testing of oxygen-blown IGCC and CCS

separation and capture technologies

THE PARTY CANADA		
	Gasifier	1,100t/day
	Gas refinery	Wet chemical absorption type
Site	Combined cycle	170MW

4-6. Accelerate Development of Clean Coal Technologies (Carbon Capture Technology[1])

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CCS: Carbon Dioxide Capture and Storage

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4-7. Accelerate Development of Clean Coal Technologies (Carbon Capture Technology[2])



Hitachi-Saskatchewan Province (Canada)

"May 2010—Joint Declaration for Collaboration on Energy and Environmental Technology Development"

Areas of Collaboration

- CCS technology
- AQCS
- Boilers, Steam Turbines, Generators
 Renewable Energy Technologies
 Smart Grid Technologies





Hitachi-SaskPower (Saskatchewan Power Corporation)

"February 2010—Comprehensive Collaborative Agreement on Low-Carbon Energy Technologies"

Participate in CCS demonstration project (Carbon capture technology for coal-fired thermal power plants)



4-8. Expand the Medium-Capacity Gas Turbine Business



Expand business of Hitachi-developed equipment

H-25

Top-class performance in heavy-duty gas turbines
 Highly reliable and compatible with various types of fuels
 Target order: At least 20 units/year



H-80 (Newly developed 80MW class GT)

World's largest capacity as a two-axle heavy-duty type gas turbine

H-80 specifications		
Output	89,000kW (Natural gas)	
Efficiency	38%(LHV)	



Replaced gas turbines of Unit 1 at Shin-Oita thermal power plant^{*1} at Kyushu Electric Power Co., Inc. with H-80 (Operation in January 2010)



Explore replacement demand for highly efficient combined-cycle gas turbines in Japan



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5-1. Basic Policy





Implement ABWR projects in Japan

Strengthen global business development

Deploy new nuclear power plants in the global market

Maintain No.1 share of ABWR plants in Japan

Accelerate global deployment under "One Team" framework with GE

Provide one stop service through the total nuclear fuel cycle

Hitachi expand nuclear fuel cycle business together with GE



5-2. Maintain No.1 share of ABWR plants in Japan











Develop with Hitachi-GE Alliance and Partners

Cooperate with GNF, GLE and Cameco Corp.
Enter interim storage market (facilities and casks)
Develop reprocessing technologies
GLE is conducting tests toward commercialization of the world's first laser enrichment system



5-5. Continuous Development of Nuclear Power



Continue development of nuclear power to respond market needs



SC:Steel Plate Reinforced Concrete

5-6. Develop Advanced Technologies and Increase Capacity



IC chip

(0.4mm x 0.4mm)

Develop advanced maintenance technologies

Improve capacity factor and shorten periodical inspection time



Fusion of electric energy technologies and ICT

- RFID application technologies: Improve construction and maintenance efficiency Develop (world-first) cable fitted with RFID*1
- Condition monitoring (Integrate experience and knowledge as well as communications and other IT)



Reinforce systematic manufacturing and development capabilities

- Expanded design wing (2006), extended production building (2006, 2008)
- Introduced large turn-mill machine (2006)
- Hitachi Utility Steam Test Leading facility (2009)

Seismic behavior of FMCRD testing facility (2009)

[Planned]

Strengthen machine processing facilities, Additional extension of production building



Seismic behavior of FMCRD testing facility (2009)

U-Chip

Tag antenna

54mm



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6-1. Renewable Energy Business Basic Policy



Revenues	FY2015: ¥200.0 billion
	FY2009: ¥60.0 billion

Promote as a systems integrator

Expand business through establishment of Smart City Business Management Division

Strengthen business base as a systems integrator

- Increase in orders of 2MW-class downwind turbines
- Order intake of Japan's largest 13MW mega solar plant for electric providers
- Strengthen smart grids; fusion between technologies and deployment for smart city market

Differentiate through systems proposal capabilities based on advanced technologies

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Control technologies of output fluctuation due to natural energy (Control systems, storage batteries, etc.) Highly efficient, high-performance PCS (Power conditioners) Micro grid technologies control \rightarrow Apply to smart grids

6-2. Business Promotion (Wind Power)



Increase in orders of 2MW-class downwind type wind turbines





Wind Power Ibaraki Ltd. (Operation in 2010)

Proven mitigation technology for output fluctuation due to wind power with storage batteries



Stable interconnection with grids using storage batteries



Kuroshio Wind Power Ltd. (Operation in 2010)

6-3. Business Promotion (Mega-Solar Systems)

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Build grid-friendly systems as a systems integrator

Lump sum order intake of Japan's largest mega-solar systems for electric providers

PCS with harmonic suppression function



13MW-class Mega-Solar System for TEPCO, Ohgishima (Feb. 2011)



Suppresses "harmonic noise" emitted in PCS and maintains high-quality power



6-4. Business Promotion (Adjustable-Speed Pumped Hydro)

2009 Minister of Environment Award



Contribute to stable interconnection between main power grids and renewables

Adjustable speed pumped hydro

- Rapid adjustability of frequency
- Reduction of power loss during water pumping operation

Improvement of frequency adjustment







Generator motor

Pump turbine

KEPCO Okawachi (400MW)

Delivery record in Japan

Customer	Units	Year of operation
The Kansai Electric Power Co., Inc. Okouchi power station	2	93,95
Kyushu Electric Power Co., Inc. Omarugawa Power Station	2	07,10
The Kansai Electric Power Co., Inc. Okutataragi power station*	2	13,14

*Conversion of existing pumped hydro

6-5. Business Promotion (Smart Grid)



Contribute to optimization of energy infrastructures based on the fusion of power and information technologies

Realization of low-carbon society based on fusion of power and information technologies

- Best mix of large scale power generations and renewable energy.
- Stabilization and optimal design of power grids (Power stabilization equipment, adjustable speed pumped hydro, secondary battery)
- Development of advanced stabilization technologies

Accumulation of technologies and standardization through demonstration projects

Japan Wind Development Co., Ltd.(Rokkasho), NEDO (New Mexico state) etc.



CEMS: Community Energy Management System BEMS: Building and Energy Management System HEMS: Home Energy Management System © Hitachi, Ltd. 2010. All rights reserved.



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7-1. Business Performance Trends







FY2008 to FY2010 Results and Forecasts

	FY2008 (Actual) (Billion yen)	FY2009 (Actual) (Billion yen)	ΥοΥ	FY2010 (Forecast) (Billion yen)	YoY
Revenues	862.3	882.1	102%	880.0	100%
Operating income	3.4	22.0	633%	29.0	131%

Revenues	Maintain at existing level despite recent market slowdown Strong thermal power revenues in Europe and South Africa Strong nuclear power revenues from domestic new plant construction and preventive maintenance
Operating income	Higher earnings due to improved profitability in overseas businesses



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Leading company in creating global society's future with cutting-edge energy technologies

Contribute to creation of low-carbon society

FY2015 targets Revenues: ¥1.2 trillion Overseas revenue ratio: 50% Operating income ratio: 6%/

Promote globalization

Improve profitability

Cautionary Statement

Certain statements found in this document may constitute "forward-looking statements" as defined in the U.S. Private Securities Litigation Reform Act of 1995. Such "forward-looking statements" reflect management's current views with respect to certain future events and financial performance and include any statement that does not directly relate to any historical or current fact. Words such as "anticipate," "believe," "expect," "estimate," "forecast," "intend," "plan," "project" and similar expressions which indicate future events and trends may identify "forward-looking statements." Such statements are based on currently available information and are subject to various risks and uncertainties that could cause actual results to differ materially from those projected or implied in the "forward-looking statements" and from historical trends. Certain "forward-looking statements" are based upon current assumptions of future events which may not prove to be accurate. Undue reliance should not be placed on "forward-looking statements," as such statements speak only as of the date of this document.

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- exchange rate fluctuations for the yen and other currencies in which Hitachi makes significant sales or in which Hitachi's assets and liabilities are denominated, particularly against the U.S. dollar and the euro;
- uncertainty as to Hitachi's ability to access, or access on favorable terms, liquidity or long-term financing;
- uncertainty as to general market price levels for equity securities in Japan, declines in which may require Hitachi to write down equity securities that it holds;
- the potential for significant losses on Hitachi's investments in equity method affiliates;
- increased commoditization of information technology products and digital media-related products and intensifying price competition for such products, particularly in the Components & Devices and the Digital Media & Consumer Products segments;
- uncertainty as to Hitachi's ability to continue to develop and market products that incorporate new technology on a timely and cost-effective basis and to achieve market acceptance for such products;
- rapid technological innovation;
- the possibility of cost fluctuations during the lifetime of or cancellation of long-term contracts, for which Hitachi uses the percentage-of-completion method to recognize revenue from sales;
- fluctuations in the price of raw materials including, without limitation, petroleum and other materials, such as copper, steel, aluminum and synthetic resins;
- fluctuations in product demand and industry capacity;
- uncertainty as to Hitachi's ability to implement measures to reduce the potential negative impact of fluctuations in product demand, exchange rates and/or price of raw materials;
- uncertainty as to Hitachi's ability to achieve the anticipated benefits of its strategy to strengthen its Social Innovation Business;
- uncertainty as to the success of restructuring efforts to improve management efficiency by divesting or otherwise exiting underperforming businesses and to strengthen competitiveness and other cost reduction measures;
- general socio-economic and political conditions and the regulatory and trade environment of Hitachi's major markets, particularly Japan, Asia, the United States and Europe, including, without limitation, direct or Indirect restrictions by other nations on imports, or differences in commercial and business customs including, without limitation, contract terms and conditions and labor relations;
- uncertainty as to the success of alliances upon which Hitachi depends, some of which Hitachi may not control, with other corporations in the design and development of certain key products;
- uncertainty as to Hitachi's access to, or ability to protect, certain intellectual property rights, particularly those related to electronics and data processing technologies;
- uncertainty as to the outcome of litigation, regulatory investigations and other legal proceedings of which the Company, its subsidiaries or its equity method affiliates have become or may become parties;
- the possibility of incurring expenses resulting from any defects in products or services of Hitachi;
- the possibility of disruption of Hitachi's operations in Japan by earthquakes or other natural disasters;
- uncertainty as to Hitachi's ability to maintain the integrity of its information systems, as well as Hitachi's ability to protect its confidential information and that of its customers;
- uncertainty as to the accuracy of key assumptions Hitachi uses to valuate its significant employee benefit related costs; and
- uncertainty as to Hitachi's ability to attract and retain skilled personnel.

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