Outline of Supply Plan for FY2011

March 2011

Kyushu Electric Power Company Inc.

[Actual electricity sales and outlook]

FY	2009 (Actual)	2010 (Estimate)	2011	2012	2013	2014	2015	2020	Av. annual growth 2020/2009 (%)
Electric power sold (100 million kWh)	834 (832)	866 (853)	864	870	877	885	893	933	1.0 (1.0)
Peak demand (10,000 kW)	1,601 (1,627)	1,676 (1,655)	1,669	1,684	1,699	1,714	1,728	1,801	1.1 (0.9)

Note1: ( ) after compensation for air temperature
Note2: Peak demand is the August figure

[Peak demand and supply balance]

FY		2010 (Actual)	2011	2012	2013	2014	2015	2020
Demand	(10,000kW)	1,676	1,669	1,684	1,699	1,714	1,728	1,801
Supply capacity	(10,000kW)	1,843	1,978	1,908	1,884	1,884	1,897	2,081
Reserve capacity	(10,000kW)	167	309	224	185	170	169	280
Reserve margin	(%)	10.0	18.5	13.3	10.9	9.9	9.8	15.5

[Development Plan]

Classification	Type	Power plant & unit	Output	Construction schedule	
				Commencement of work	Commencement of work
Under construction	Hydro power	Omarugawa unit2	300,000 kW	February 1999	July 2011
		Kasegawa	2,800 kW	June 2008	March 2012
		Kawabaru※1	150 kW	September 2010	May 2011
	Thermal power (coal)	Matsuura unit 2	1,000,000 kW	March 2001	FY2023 or later
In preparation for construction	Hydro power	Kamishiiba※1	330 kW	August 2011	March 2013
		Hitotsuse※1	270 kW	June 2012	October 2013
		Shin-Kosa※2	7,200 kW	June 2012	October 2014
		Ryugudaki	190 kW	June 2013	March 2015
		Shin-Naongawa※3	390 kW	October 2014	June 2016
	Thermal power (LNG)	Shin-Oita unit 3-4	Approx. 400,000 kW	July 2013	July 2016
	Nuclear	Sendai unit 3	1,590,000 kW	March 2014	December 2019
	Solar	Mega-solar Omura	3,000 kW	FY 2012	FY2013

※1. River dam maintenance flows
※2. Existing Kosa power station is planned to be discontinued (3,900 kW) with the new construction of Shin-Kosa power station (October 2012)
※3. Existing Naongawa power station is planned to be discontinued (65 kW) with the new construction of Shin-Naongawa power station (October 2014)

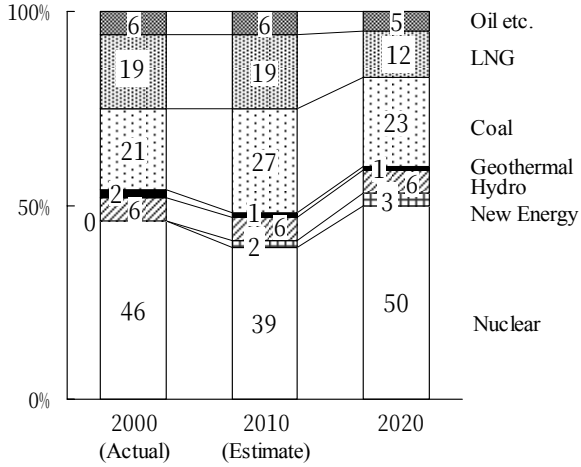
[Decommission Plan]

	Type	Power plant & unit	Output(kW)	Schedule
Decommission	Thermal power (petroleum)	Karita unit New 2	375,000	FY2011
		Oita unit 1&2	250,000 , 250,000	FY2012

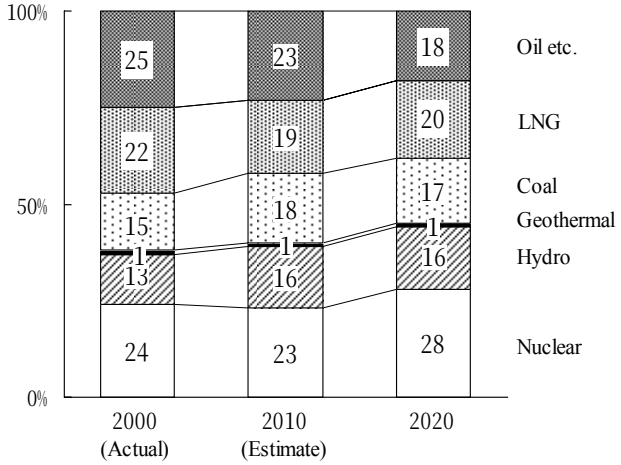
[Reference] Plans under suspension	Thermal power (petroleum)	Karatsu unit 2 & 3	375,000 , 500,000	FY2004-2020

[Power Source Diversification Plan (Including Purchases from Other Companies)]

(Electricity Generated)



(Power generation facility)



※Shares of Electricity Generated are calculated except pumped-storage.

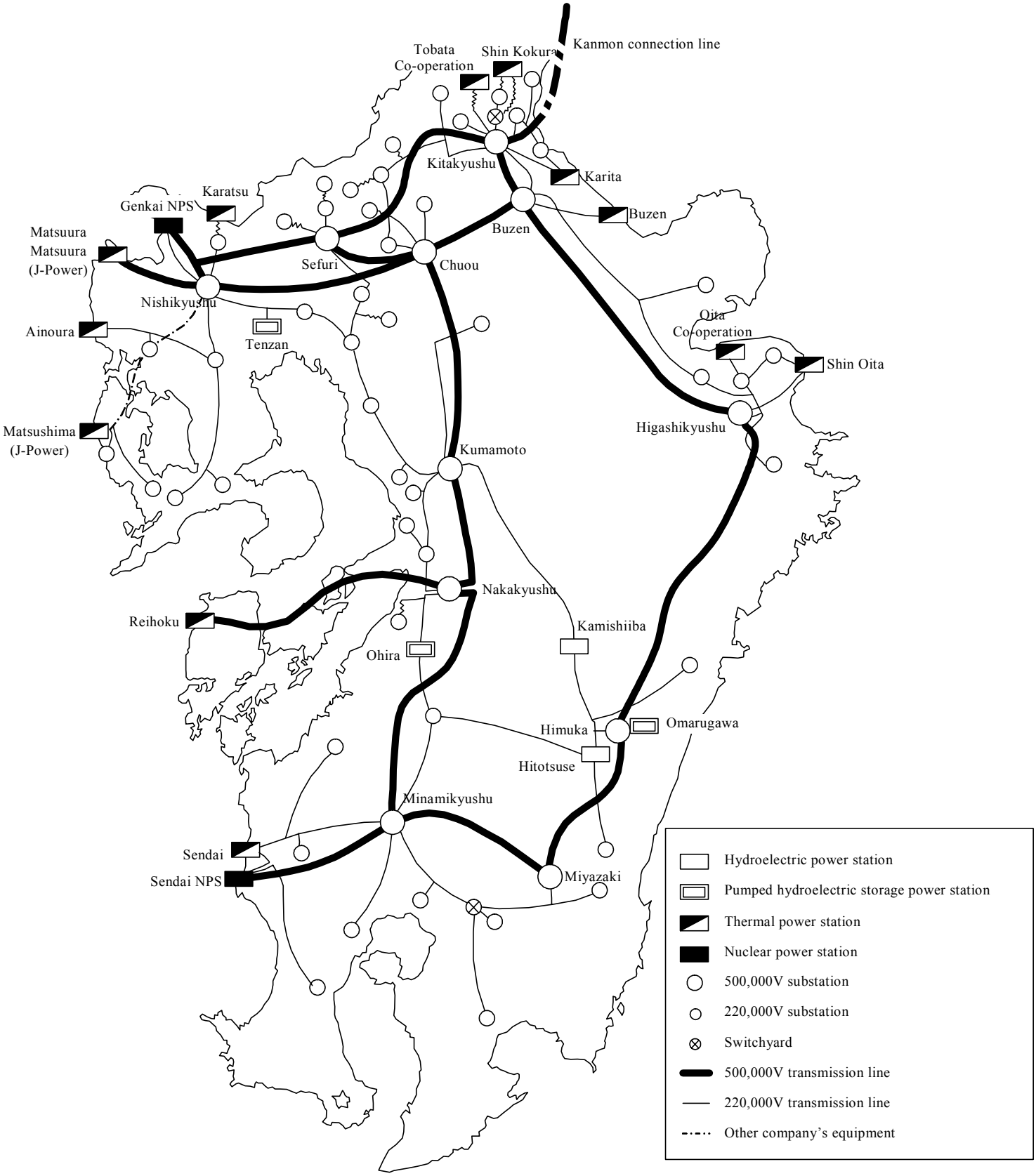
[Main Transmission Facility Construction Plan]

Classification	Line	Construction Outline		Construction Schedule		Construction Reason
		Voltage (10,000V)	Length (km)	Commencement of work	Commencement of commercial operation	
Under construction	Kitakyushu main line	50	84	April 2006	June 2011	Fukuoka~Kitakyushu 500,000V route accident countermeasures (making to 2 routes)〔new〕
In preparation for construction	Hyuga main line	50	124	November 2014	June 2019	Northern Kyushu~Southern Kyushu 500,000V route accident countermeasures (making to 2 routes)〔new〕
	Hitotsuse main line Himuka substation π pull-in line	22	8	February 2012	June 2014	Northern / Central Miyazaki demand measures 〔new〕
	Sefuri-Ito line	22	19	July 2012	June 2015	Western Fukuoka / Itoshima area demand measures 〔new〕
	Kagoshima main line	22	44	April 2012	June 2015	Kagoshima area demand measures 〔expansion〕
	Yuge branch line	22	1	October 2014	June 2016	Eastern Kumamoto demand measures 〔new〕
	Shin-Kagoshima line Sendai NPS π pull-in line	22	5	February 2015	July 2017	Sendai Nuclear Power Station unit 3 transportation measures 〔new〕

[Main Transformation Facility Construction Plan]

Classification	Substation	Construction Outline		Construction schedule		Construction Reason
		Voltage (10,000V)	Capacity (10,000kVA)	Commencement of work	Commencement of commercial operation	
In preparation for construction	Himuka substation	50/22	100	January 2012	June 2014	Northern / Central Miyazaki demand measures 〔new〕
	Higashi Sasebo substation	22/6.6	30	July 2013	June 2014	Sasebo area demand measures 〔expansion〕
	Ito substation	22/6.6	60	November 2013	June 2015	Western Fukuoka / Itoshima area demand measures 〔new〕
	Kagoshima substation	22/6.6	30	March 2014	June 2015	Kagoshima area demand measures 〔expansion〕
	Yuge substation	22/11/6.6	30/15/25	August 2011	June 2016	Eastern Kumamoto demand measures 〔pressure rising〕

Trunk Electric Power System Plan (As of end of FY2020)



（Reference）Renewable Energy Power Generation Facilities

[Kyushu Electric Power and Group Facilities]

<Wind Power Generation> (kW)

	Existing Facilities					Plan	Total
	Koshikijima	Nomamisaki	Kuroshima	Nagashima※	Amami Oshima※	Washiodake※	
Location	Kagoshima	Kagoshima	Kagoshima	Kagoshima	Kagoshima	Nagasaki	
Output	250	3,000	10	50,400	1,990	12,000	67,650

Note: ※Developed by group companies
The Washiodake wind power plant's full operation is scheduled in November 2011.

<Solar Power Generation> (kW)

	Existing Facilities		Plan		Total
	Mega-solar Omuta	Installation at branch offices, sales offices etc	Mega-solar Omura	Installation at branch offices, sales offices etc	
Output	3,000	2,298	3,000	Approx.1,800	Approx. 10,100

Note: The Mega-solar Omura's full operation is scheduled in FY 2013.

<Biomass and Waste Product Power Generation> (kW)

	Existing Facilities			Plan	Total
	Miyazaki Biomass Recycling※1	Fukuoka Clean Energy※1	Reihoku※2 (1,400,000 kW)	Matsuura※3 (700,000 kW)	
Fuel	Biomass (Poultry manure)	Non-industrial waste	Biomass （Wood chips）	Biomass （Sewage sludge）	
Output	11,350	29,200	maximum co-firing ratio of 1% by weight	—	40,550

Note:※1 Developed by group companies
※2 Generating electric power with woody biomass mixed combustion at existing Reihoku Power Station (FY2010 - FY2014)
※3 Generating electric power with sewage sludge biomass mixed combustion at existing Matsuura Power Station (Start of operation in FY2013, approx.700t/year)

<Hydro Power Generation> (kW)

	Existing Facilities	Plan							Total
	136 locations	Kasegawa	Kawabaru※1	Kamishiiba※1	Hitotsuse※1	Shin-Kosa	Ryugudaki	Shin-Naongawa	
Output	1,278,696	2,800	150	330	270	7,200 (▲3,900)	190	390 (▲65)	1,286,061

Note: ※1 River dam maintenance flows
※2 General hydro power (excluding pumped storage)
※3 Negative figure of 3,900 kW in Shin-Kosa refers to the discontinued Kosa power plant
※4 Negative figure of 65 kW in Shin-Naongawa refers to the discontinued Naongawa power plant

<Geothermal Power Generation> (kW)

	Otake	Hatchoubaru	Yamakawa	Ogiri	Takigami	Hatchoubaru Binary	Total
Output	12,500	110,000	30,000	30,000	27,500	2,000	212,000

※Feasibility studies are under implementation on sites considered promising in terms of an abundance of geothermal resources for new development

（Reference）Capital Investment Breakdown

(Unit: ¥100 million)

		FY2010 (Estimate)	FY2011 (Plan)	FY2012 (Plan)
Power Source	Hydro	159	159	137
	Thermal	170	131	120
	Nuclear	423	541	512
	New Energy etc.	55	23	34
	Subtotal	807	854	803
Distribution	Transmission	475	392	513
	Transformation	185	175	244
	Distribution	335	329	327
	Subtotal	995	896	1,084
Other	General	268	242	231
	Nuclear fuel	261	270	281
	Incidental	84	43	36
	Subtotal	613	555	548
Total		2,415	2,305	2,435

（Reference）Iki-Kyushu Main Island Linkage Plan

o Construction is now planned to link the town of Gonoura (on the island of Iki, Nagasaki Prefecture) to the town of Hizen in Karatsu, Saga Prefecture. Linkage to the main Island of Kyushu will ensure a stable supply of electricity and have economic and other benefits.

[Overview of Construction]

Overview of Construction	Construction Schedule		
	Surveying	Commencement of Work	Commencement of Commercial Operation
Iki-Kyushu Main Island Link (new construction) and related work ・66 kV, two lines 〔Undersea cable segment: 38 km Overland segment: 12 km, and others〕	FY2011	FY2015	FY2017

（Reference）Smart Grid Pilot Program

o Preparations are underway for construction of smart grids: power supply systems that coordinate all power sources including nuclear, thermal, and renewable energy power plants to maintain optimal operating conditions. When solar power or other sources of distributed renewable energy for which output may not be constant become much more prevalent, smart grids will help ensure a highly reliable supply of high-quality electricity.

Toward this end, we will conduct a smart grid pilot program to identify supply- and demand-side issues and conduct technical tests.

[Pilot Program Overview]

Sites	・ Genkai, Saga Prefecture ・ Satsumasendai, Kagoshima Prefecture
Period	・April 2011–March 2015
Main Details	・ For efficient supply of electricity, coordinating optimization of specific areas (such as "smart communities") with optimization of the overall power system will be studied. ・ Potential effects on the power system (in terms of voltage and power flow) from a greater concentration of electricity from solar power and other distributed renewable energy sources into power lines will be determined and countermeasures investigated. ・ Customer services such as visualization of energy consumption will be explored.
Equipment, Facilities	・ Solar power facilities ・ Storage batteries ・ Display terminals indicating customer power consumption ・ New low-voltage electronic meters