

Operating and Financial Data

Operating Data

- 48 ■ Company Data
- Electric Power Generation
- 49 ■ Electric Power Consumption
- Energy Sales by the EPCos
- Number of Customers by Type of Contract
- Energy Sales by the EPCos by Industrial Category
- 50 ■ Installed generating Capacity
- Installed Generating Capacity and Electric Power Generation by Electric Utilities
- 51 ■ Fossil Fuel Consumed for Power Generation by Electric Utilities
- Transmission, Transformation and Distribution Facilities of the EPCos
- Network Loss, Total Loss and Thermal Efficiency
- 52 ■ Principal Thermal Power Plants Owned by Electric Utilities
- 54 ■ Geothermal Power Plants
- 55 ■ Nuclear Power Plants
- 56 ■ Principal Hydroelectric Power Plants Owned by Electric Utilities
- 57 ■ Peak Capacity, Peak Load, Energy Requirement, Reserve Margin and Load Factor
- Balance of Electricity Supply and Demand

Financial Data

- 58 ■ Revenues and Expenditures for the EPCos
- Balance Sheet for the EPCos
- 59 ■ Uses and Sources of Funds for the EPCos

- 59 **Summarized Comparative Table Classified by Country for the Year 2013**

Operating Data

Company Data (As of March 31, 2015)

Company	Capital Stock (Million yen)	Energy Sales for the Year* (GWh)				Revenues from Energy Sales for the Year* (Million yen)	Installed Generating Capacity (MW)	Service Area (km ²)	Employees
		Residential	Commercial & Industrial	Deregulated Customers	Total				
Hokkaido EPCo	114,291	11,236	2,429	16,145	29,810	663,418	7,751	78,421	5,727
Tohoku EPCo	251,441	24,266	3,745	48,612	76,623	1,935,225	17,806	79,531	12,696
Tokyo EPCo	1,400,975	90,683	9,865	156,498	257,046	6,497,627	66,057	39,576	33,765
Chubu EPCo	430,777	33,858	5,667	84,550	124,075	2,800,866	34,058	39,272	17,789
Hokuriku EPCo	117,641	8,325	1,237	18,323	27,884	511,490	8,068	12,302	4,899
Kansai EPCo	489,320	45,858	5,478	83,155	134,490	2,950,506	37,442	28,704	21,700
Chugoku EPCo	185,527	18,203	2,214	37,452	57,868	1,170,805	11,995	32,283	9,737
Shikoku EPCo	145,551	9,239	1,615	15,538	26,392	580,166	6,967	18,451	5,864
Kyushu EPCo	237,304	28,518	4,867	47,894	81,279	1,721,869	20,135	42,233	13,133
Okinawa EPCo	7,586	2,918	3,357	1,257	7,531	177,350	2,136	2,281	1,604
Subtotal	3,380,413	273,105	40,472	509,425	822,999	19,009,322	212,414	373,054	126,914
J-POWER	180,502						16,384		2,366
JAPC	120,000						2,617		1,192
Others							2,612		
Total	3,680,913	273,105	40,472	509,425	822,999	19,009,322	234,027	373,054	130,472

* Figures are for fiscal 2014
Source: FEPC

Electric Power Generation

(TWh)

FY	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Thermal	745.5	747.1	761.8	755.0	839.0	798.9	742.5	771.3	906.9	986.8	987.6	955.3
Electric Utilities	580.8	565.7	581.6	577.6	661.0	621.3	568.4	553.3	678.5	735.9	743.4	717.8
Industry-owned	164.7	181.4	180.3	177.5	180.2	177.6	174.1	218.1	228.4	250.8	244.2	237.6
Nuclear	240.0	282.4	304.8	303.4	263.8	258.1	279.8	288.2	101.8	15.9	9.3	–
Electric Utilities	240.0	282.4	304.8	303.4	263.8	258.1	279.8	288.2	101.8	15.9	9.3	–
Industry-owned	–	–	–	–	–	–	–	–	–	–	–	–
Hydroelectric	104.1	103.1	86.4	97.3	84.2	83.5	83.9	90.7	91.7	83.7	84.9	86.9
Electric Utilities	96.1	95.5	79.8	89.0	76.8	75.9	74.5	74.2	74.4	67.4	68.6	70.3
Industry-owned	8.1	7.6	6.6	8.3	7.3	7.6	9.3	16.5	17.3	16.3	16.3	16.7
Wind Power	0.8	1.3	1.8	2.2	2.6	2.9	3.6	4.0	4.7	4.8	5.2	5.0
Electric Utilities	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.2	0.2	0.2	0.0*
Industry-owned	0.8	1.3	1.7	2.2	2.6	2.9	3.6	3.9	4.5	4.7	5.0	5.0
Solar	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.2	1.2	3.8
Electric Utilities	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.1	0.1	0.1
Industry-owned	–	–	–	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.1	1.1	3.7
Geothermal	3.5	3.4	3.2	3.1	3.0	2.8	2.9	2.6	2.7	2.6	2.6	2.6
Electric Utilities	3.2	3.1	3.0	2.9	2.8	2.6	2.7	2.4	2.5	2.5	2.4	2.4
Industry-owned	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2
Fuel Cell	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*
Electric Utilities	–	–	–	–	–	–	–	–	–	–	–	–
Industry-owned	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.1*
Total	1,094.0	1,137.3	1,157.9	1,161.1	1,195.0	1,146.3	1,112.6	1,156.9	1,107.8	1,094.0	1,090.5	1,053.7
Electric Utilities	920.1	946.8	969.1	972.9	1,004.6	957.9	925.4	918.2	857.4	822.0	823.9	790.6
Industry-owned	173.8	190.6	188.8	188.2	190.4	188.4	187.2	238.7	250.4	272.0	266.8	263.1

* less than a unit
Source: FEPC

Electric Power Consumption

(TWh)

	FY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Residential		281.3	278.3	289.7	285.3	285.0	304.2	289.0	286.2	284.3	273.1
Commercial and Industrial		52.8	49.4	49.7	46.8	45.2	47.5	44.9	43.7	42.8	40.5
Deregulated Customers		559.7	575.5	595.5	571.7	544.0	574.9	545.6	541.0	544.4	537.8
Customers in Designated Service Districts		17.4	16.3	16.8	12.1	9.9	0.0	0.0	0.0	0.0	0.0
Consumption of Power for Station Operation		7.1	7.7	7.8	9.6	12.6	4.4	4.3	4.4	4.5	3.9
Supplied by Electric Utilities		918.3	927.1	959.7	925.5	896.7	931.1	883.8	875.2	876.0	855.4
Consumption of Independently Generated Power		125.5	121.2	117.8	110.0	106.2	125.4	118.7	116.3	116.6	114.0
Total Consumption		1,043.8	1,048.3	1,077.5	1,035.5	1,008.8	1,056.4	1,002.4	991.6	992.6	969.4

Source : FEPC

Energy Sales by the EPCos

(TWh)

	FY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Customers in Regulated Fields		334.1	327.7	339.5	332.0	330.1	351.7	333.9	329.9	327.1	313.6
Residential		281.3	278.3	289.7	285.3	285.0	304.2	288.9	286.2	284.3	273.1
Commercial and Industrial		52.8	49.4	49.7	46.8	45.1	47.5	44.9	43.7	42.8	40.5
Deregulated Customers		548.4	561.7	580.1	556.9	528.4	554.7	525.9	521.7	521.4	509.4
Total		882.6	889.4	919.5	888.9	858.5	906.4	859.8	851.6	848.5	823.0

Source: FEPC

Number of Customers by Type of Contract (10 EPCos)

(1,000 customers)

	FY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Residential		73,349	74,228	74,772	75,240	75,629	75,765	76,320	76,785	77,372	77,950
Commercial and Industrial		8,499	8,365	8,212	8,044	7,885	7,714	7,571	7,419	7,291	7,184
Total		81,848	82,592	82,983	83,284	83,514	83,479	83,891	84,204	84,663	85,134

Note: All figures exclude demand in deregulated fields.

Source: FEPC

Energy Sales by the EPCos by Industrial Category

(TWh)

	FY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Mining		1.0	1.0	0.9	0.9	0.8	0.9	0.9	0.9	0.9	1.0
Foodstuffs		15.4	16.1	17.2	17.3	17.2	17.7	17.4	17.5	17.9	17.8
Textiles		3.1	3.2	3.2	2.8	4.0	4.5	4.3	4.0	4.0	4.0
Pulp and Paper		10.3	10.5	11.0	10.6	9.4	9.9	9.2	8.5	8.5	8.1
Chemicals		27.7	29.3	31.3	29.4	26.1	27.9	27.0	26.2	26.4	26.1
Oil and Coal Products		1.5	1.6	1.7	1.9	1.8	2.1	2.1	2.2	2.2	2.3
Rubber		3.4	3.3	3.3	3.1	2.8	3.1	3.0	2.9	2.9	2.9
Clay and Stone		11.0	11.8	12.1	11.4	10.3	11.5	11.5	11.1	10.7	10.4
Iron and Steel		36.2	38.9	39.6	35.4	29.7	36.3	36.4	35.9	37.3	36.6
Nonferrous Metals		14.1	15.1	16.8	15.7	14.7	16.0	15.7	15.1	14.3	14.6
Machinery		74.0	78.6	82.6	75.7	69.0	74.0	71.1	68.5	68.8	68.5
Other Manufacturing		27.6	29.3	30.5	28.7	27.4	29.0	27.9	27.1	27.5	26.8
Railways		19.0	18.7	18.7	18.7	18.1	18.1	17.2	17.3	17.3	17.1
Others		29.6	29.7	30.3	30.0	29.6	29.4	27.9	28.0	27.8	27.1
Total		273.8	287.2	299.3	281.6	260.9	280.4	271.5	265.1	266.5	263.2

Note: "Industrial" refers to customers with a contracted demand of 500kW or above.

Source: FEPC

Installed generating Capacity

(MW)

	FY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Thermal		175,779	176,339	176,412	179,324	181,736	182,381	185,309	188,903	191,258	193,356
Electric Utilities		139,216	138,890	138,127	140,023	142,574	135,070	136,132	139,794	141,901	143,777
Industry-owned		36,563	37,449	38,285	39,302	39,162	47,312	49,177	49,109	49,357	49,579
Nuclear		49,580	49,467	49,467	47,935	48,847	48,960	48,960	46,148	44,264	44,264
Electric Utilities		49,580	49,467	49,467	47,935	48,847	48,960	48,960	46,148	44,264	44,264
Industry-owned		–	–	–	–	–	–	–	–	–	–
Hydroelectric		47,357	47,375	47,637	47,949	47,966	48,111	48,419	48,934	48,932	49,597
Electric Utilities		45,665	45,685	45,977	46,252	45,221	43,849	44,168	44,651	44,676	45,403
Industry-owned		1,692	1,689	1,660	1,697	2,745	4,262	4,250	4,282	4,256	4,194
Wind Power		1,227	1,805	1,527	1,756	1,997	2,294	2,419	2,562	2,646	2,750
Electric Utilities		4	4	4	4	12	85	85	83	82	30
Industry-owned		1,223	1,801	1,523	1,752	1,985	2,209	2,334	2,479	2,563	2,720
Solar		2	9	10	13	16	32	85	267	1,559	4,085
Electric Utilities		0	0	0	0	0	13	61	65	67	81
Industry-owned		1	9	10	13	16	19	24	202	1,492	4,005
Geothermal		535	532	532	532	535	537	537	512	512	508
Electric Utilities		497	497	497	497	500	502	502	477	477	473
Industry-owned		38	35	35	35	35	35	35	35	35	35
Fuel Cell		0	3	3	1	1	–	–	–	–	–
Electric Utilities		–	–	–	–	–	–	–	–	–	–
Industry-owned		0	3	3	1	1	–	–	–	–	–
Total		274,183	275,529	275,588	277,511	281,099	282,315	285,729	287,327	289,171	294,560
Electric Utilities		234,963	234,544	234,073	234,711	237,153	228,479	229,908	231,219	231,468	234,028
Industry-owned		39,220	40,985	41,516	42,800	43,946	53,836	55,821	56,107	57,703	60,532

Note: Figures for industry-owned generation represent the total amount generated by power plants with a generating capacity of 1,000kW or above.

Source: FEPC

Installed Generating Capacity and Electric Power Generation by Electric Utilities (As of March, 2015)

Company	Thermal		Nuclear		Hydroelectric		Wind		Solar		Geothermal		Total	
	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh	MW	GWh
Hokkaido EPCo	4,214	22,804	2,070	–	1,441	3,394	–	–	1	1	25	161	7,751	26,360
Tohoku EPCo	11,863	56,599	3,274	–	2,440	8,235	–	–	5	5	224	933	17,806	65,772
Tokyo EPCo	43,555	211,791	12,612	–	9,857	10,531	–	–	30	38	3	11	66,057	222,371
Chubu EPCo	25,082	117,412	3,617	–	5,320	8,718	22	29	17	16	–	–	34,058	126,175
Hokuriku EPCo	4,400	23,793	1,746	–	1,914	6,326	4	1	4	5	–	–	8,068	30,125
Kansai EPCo	19,441	95,233	9,768	–	8,222	13,570	–	–	11	11	–	–	37,442	108,814
Chugoku EPCo	7,801	38,769	1,280	–	2,909	3,401	–	–	6	6	–	–	11,995	42,175
Shikoku EPCo	3,797	17,023	2,022	–	1,146	2,324	0*	–	2	3	–	–	6,967	19,350
Kyushu EPCo	11,081	59,028	5,258	–	3,584	4,121	3	4	3	4	206	1,286	20,135	64,442
Okinawa EPCo	2,135	6,762	–	–	–	–	1	–	–	–	–	–	2,136	6,762
Subtotal	133,370	649,214	41,647	0	36,832	60,620	30	34	78	89	458	2,391	212,414	712,347
J-POWER	7,799	56,185	–	–	8,570	9,628	–	–	–	–	15	28	16,384	65,841
JAPC	–	–	2,617	–	–	–	–	–	–	–	–	–	2,617	–
Others	2,608	12,366	–	–	1	7	–	–	3	–	–	–	2,612	17,597
Total	173,777	717,764	44,264	0	45,403	70,255	30	34	81	89	473	2,419	234,027	790,561

* less than a unit

Source: FEPC

Fossil Fuel Consumed for Power Generation by Electric Utilities

	FY	2006	2007	2008	2009	2010	2011	2012	2013	2014
Heavy Oil (thousand kl)		8,978	14,239	12,566	721	6,318	11,846	16,090	12,697	9,434
Crude Oil (thousand kl)		6,120	11,301	7,978	3,643	4,759	11,567	13,477	11,576	6,758
Naphtha (thousand kl)		—	—	—	—	—	—	—	—	—
LNG (thousand t)		38,178	42,105	41,034	40,671	41,743	52,870	55,626	56,092	56,610
Coal* (thousand t)		79,523	84,205	80,992	76,805	72,153	69,934	71,084	80,884	80,230
Total (thousand kl heavy oil equivalent)**		122,753	140,503	131,112	118,577	113,573	139,925	151,676	151,993	145,334

*Coal refers to wet coal.

** Total includes small amounts of NGL, gas oil, LPG, natural gas and other gases.

Source: FEPC

Transmission, Transformation and Distribution Facilities of the EPCOs (As of March 31, 2015)

Voltage (kV)	Transmission Lines (km)				Transformers	
	Route length		Circuit length		Number	Maximum Output (MVA)
	Overhead	Underground	Overhead	Underground		
500	7,811	89	15,237	177	82	221,350
275	7,447	625	14,732	1,547	154	169,822
220	2,658	56	5,032	123	60	37,710
187	2,736	15	5,230	35	39	16,725
110–154	15,593	985	28,337	1,903	671	153,179
66–77	38,211	7,246	68,296	13,113	4,444	221,767
<55	13,210	6,020	14,500	9,895	1,212	9,350
	Distribution Lines (thousand km)				Distribution Transformers (MVA)	
	943	42	400	70	320,869 (Overhead)	33,632 (Underground)

Source: FEPC

Network Loss, Total Loss and Thermal Efficiency (10 EPCOs)

	FY	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Network Loss (%)		5.2	5.1	5.0	4.9	5.1	5.2	4.8	5.0	4.7	5.0	4.9
Total Loss (%)		8.7	8.5	8.5	8.4	8.5	8.6	8.2	8.3	7.8	8.1	7.9
Thermal Efficiency (Gross, %)		40.90	40.90	41.09	41.01	41.35	41.78	41.86	41.74	41.81	42.20	42.80

Source: FEPC

Principal Thermal Power Plants Owned by Electric Utilities (1,000 MW or Above) (As of March 31, 2015)

Name of Plant (A-Z)	Company	Installed Capacity (MW)	Unit Capacity (MW) × No. of Units	Fuel	Year Commissioned
Aioi	Kansai EPCo	1,125	375 × 3	Heavy, crude oil	1982-83
Akita	Tohoku EPCo	1,633	350 × 2	Heavy, crude oil	1972-74
			600 × 1	Heavy, crude oil	1980
			333 × 1	Light oil (Gas turbine)	2012
Ako	Kansai EPCo	1,200	600 × 2	Heavy, crude oil	1987
Anan	Shikoku EPCo	1,245	125 × 1	Heavy oil	1963
			220 × 1	Heavy, crude oil	1969
			450 × 2	Heavy, crude oil	1975-76
Anegasaki	Tokyo EPCo	3,600	600 × 2	LNG, heavy, crude oil	1967-69
			600 × 2	LNG, LPG, heavy, crude oil	1971-72
			600 × 2	LNG, LPG	1977-79
Atsumi	Chubu EPCo	1,900	500 × 1	Heavy, crude oil	1971
			700 × 2	Heavy, crude oil	1981
Buzen	Kyushu EPCo	1,000	500 × 2	Heavy, crude oil	1977-80
Chiba	Tokyo EPCo	4,380	1,440 × 2	LNG (Combined-cycle)	1998-00
			1,500 × 1	LNG (Combined-cycle)	2014
Chita	Chubu EPCo	3,966	375 × 2	LNG	1966-67
			500 × 1	Heavy, crude oil, LNG	1968
			700 × 1	Heavy, crude oil, LNG	1974
			700 × 2	LNG	1978
			154 × 4	LNG (Gas turbine)	1994-96
Chita No. 2	Chubu EPCo	1,708	700 × 2	LNG	1983
			154 × 2	LNG (Gas turbine)	1994-96
Futtsu	Tokyo EPCo	5,040	1,000 × 2	LNG (Combined-cycle)	1986-88
			1,520 × 1	LNG (Combined-cycle)	2003
			1,520 × 1	LNG (Combined-cycle)	2010
Gobo	Kansai EPCo	1,800	600 × 3	Heavy, crude oil	1984-85
Goi	Tokyo EPCo	1,886	265 × 2	LNG	1963-65
			265 × 2	LNG	1964-66
			350 × 2	LNG	1968
			126 × 1	LNG (Gas turbine)	1994
Haramachi	Tohoku EPCo	2,000	1,000 × 2	Coal	1997-98
Hekinan	Chubu EPCo	4,100	700 × 3	Coal	1991-93
			1,000 × 2	Coal	2001-02
Higashi Ohgishima	Tokyo EPCo	2,000	1,000 × 2	LNG	1987-91
Higashi-Niigata	Tohoku EPCo	5,149	600 × 2	LNG, NG, heavy, crude oil	1977-83
			1,210 × 1	LNG (Combined-cycle)	1985
			1,700 × 1	LNG (Combined-cycle)	2006
			350 × 2	LNG, heavy oil	1972-75
			339 × 1	LNG (Gas turbine)	2012
Himeji No. 1	Kansai EPCo	1,507.4	729 × 1	LNG (Combined-cycle)	1995
			713 × 1	LNG (Combined-cycle)	1996
			32.7 × 2	LNG (Gas turbine)	2012
Himeji No. 2	Kansai EPCo	4,119	486.5 × 6	LNG	2013
			600 × 2	LNG	1973
Hirono	Tokyo EPCo	4,400	600 × 2	Heavy, crude oil	1980
			1,000 × 2	Heavy, crude oil	1989-93
			600 × 2	Coal	2004-2013
Hitachinaka	Tokyo EPCo	2,000	1,000 × 2	Coal	2003-2013
Isogo	J-POWER	1,162	600 × 1	Coal	2002
			562 × 1	Coal	2013
Joetsu*	Chubu EPCo	2,302.72	576 × 4	LNG (Combined-cycle)	2012-2014
Kainan	Kansai EPCo	2,100	450 × 2	Heavy, crude oil	1970
			600 × 2	Heavy, crude oil	1973-74
Kashima	Tokyo EPCo	5,204	600 × 4	Heavy, crude oil	1971-72
			1,000 × 2	Heavy, crude oil	1974-75
			1,260 × 1	City gas (Combined-cycle)	2014
Kashima Kyodo	Kashima Kyodo Electric Power Co.	1,400	350 × 3	Heavy oil, BFG, COG	1973-82
			350 × 1	Heavy oil, BFG	1973
Kawagoe	Chubu EPCo	4,802	700 × 2	LNG	1989-90
			1,701 × 2	LNG (Combined-cycle)	1996-97

Name of Plant (A-Z)	Company	Installed Capacity (MW)	Unit Capacity (MW) × No. of Units	Fuel	Year Commissioned
Kawasaki	Tokyo EPCo	2,000	1,500 × 1	LNG (Combined-cycle)	2009
			500 × 1	LNG (Combined-cycle)	2013
Maizuru	Kansai EPCo	1,800	900 × 2	Coal	2004, 2010
Matsushima	J-POWER	1,000	500 × 2	Coal	1981
Matsuura	J-POWER	1,425	1,000 × 1	Coal	1990
			425 × 1	Coal	1997
Minami-Yokohama	Tokyo EPCo	1,150	350 × 2	LNG	1970
			450 × 1	LNG	1973
Misumi	Chugoku EPCo	1,000	1,000 × 1	Coal	1998
Nakoso	Joban Joint Power Co., Ltd.	1,625	175 × 1	Heavy oil	1966
			250 × 1	Coal, heavy oil	1970
			600 × 1	Coal, CWM, heavy oil	1983
			600 × 1	Coal, heavy oil	1983
Nanao Ohta	Hokuriku EPCo	1,200	500 × 1	Coal	1995
			700 × 1	Coal	1998
Nanko	Kansai EPCo	1,800	600 × 3	LNG	1990-91
Noshiro	Tohoku EPCo	1,200	600 × 2	Coal, biomass	1993-94
Ohi	Tokyo EPCo	1,050	350 × 3	Crude oil	1971-73
Reihoku	Kyushu EPCo	1,400	700 × 2	Coal	1995-2003
Sakaide	Shikoku EPCo	1,446	296 × 1	LNG	2010
			350 × 1	COG, heavy oil	1972
			450 × 1	COG, heavy, crude oil	1973
			350 × 1	COG, LNG	1974
Sakaiko	Kansai EPCo	2,000	400 × 5	LNG (Combined-cycle)	2009, 2010
Sendai	Kyushu EPCo	1,000	500 × 2	Heavy, crude oil	1974-85
Shin Kokura	Kyushu EPCo	1,800	600 × 3	LNG	1978-83
Shin Nagoya	Chubu EPCo	3,058	1,458 × 1	LNG (Combined-cycle)	1998
			1,600 × 1	LNG (Combined-cycle)	2008
Shin Oita	Kyushu EPCo	2,295	690 × 1	LNG (Combined-cycle)	1990-91
			870 × 1	LNG (Combined-cycle)	1994-95
			735 × 1	LNG (Combined-cycle)	1998
Shin Onoda	Chugoku EPCo	1,000	500 × 2	Coal	1986-87
Shinagawa	Tokyo EPCo	1,140	1,140 × 1	City Gas (Combined-cycle)	2003
Shinchi	Soma Joint Power Co.	2,000	1,000 × 2	Coal	1994-95
Sodegaura	Tokyo EPCo	3,600	600 × 1	LNG	1974
			1,000 × 3	LNG	1975-79
Tachibanawan	J-POWER	2,100	1,050 × 2	Coal	2000
Takehara	J-POWER	1,300	250 × 1	Coal	1967
			350 × 1	Coal	1995
			700 × 1	Coal	1983
Taketoyo	Chubu EPCo	1,125	375 × 3	Heavy, crude oil	1972
Tamashima	Chugoku EPCo	1,200	350 × 1	Heavy, crude oil, LNG	1971
			350 × 1	Heavy, crude oil	1972
			500 × 1	Heavy, crude oil	1974
Tanagawa No. 2	Kansai EPCo	1,200	600 × 2	Heavy, crude oil	1977
Tomato-Atsuma	Hokkaido EPCo	1,650	350 × 1	Coal	1980
			600 × 1	Coal	1985
			700 × 1	Coal	2002
Toyama Shinko	Hokuriku EPCo	1,500	500 × 2	Heavy, crude oil	1974-81
			250 × 2	Coal, heavy oil	1971-72
Tsuruga	Hokuriku EPCo	1,200	500 × 1	Coal	1991
			700 × 1	Coal	2000
Yanai	Chugoku EPCo	1,400	125 × 6	LNG (Combined-cycle)	1992-96
			198 × 4		
Yokkaichi	Chubu EPCo	1,245	220 × 3	LNG	1963
			585 × 1	LNG, LPG (Combined-cycle)	1988
Yokohama	Tokyo EPCo	3,325	175 × 1	LNG, heavy, crude oil	1964
			350 × 1	LNG, heavy, crude oil	1968
			1,400 × 2	LNG (Combined-cycle)	1996-98
Yokosuka	Tokyo EPCo	2,274	350 × 6	Heavy, crude oil	1964-70
			30 × 1	Light oil (Gas turbine)	1971
			144 × 1	Light oil, city gas (Gas turbine)	2007

Note: Plants are listed in alphabetic order.

* Output value by the provisional emergency measures of steam turbine failure.

Source: 10 EPCos, J-POWER, METI

Under Construction (500MW or Above) (As of March 31, 2015)

Name of Plant	Company	Fuel	Unit Capacity (MW)	Year Commissioned
Kawasaki	Tokyo EPCo	LNG (Combined-cycle)	1,420 (710×2)	2016-17
Shin Sendai	Tohoku EPCo	LNG (Combined-cycle)	980 (490×2)	2015-2016
Matsuura	Kyushu EPCo	Coal	1,000	2020
Nishi Nagoya	Chubu EPCo	LNG (Combined-cycle)	2,376 (1,188×2)	2017-18

Note: Plants are listed in order of the year that the first generator will commission.
Source: 10 EPCos, J-POWER

Geothermal Power Plants (5 MW or Above) (As of March 31, 2015)

Name of Plant	Company	Installed Capacity (MW)	Generation Type (MW)	Year Commissioned
Hatchoubaru	Kyushu EPCo	55	Double-flush	1977
		55	Double-flush	1990
Kakkonda	Tohoku EPCo	50	Single-flush	1978
	Tohoku Hydropower and Geothermal Energy Co.	30	Single-flush	1996
	Tohoku EPCo			
	Tohoku Hydropower and Geothermal Energy Co.			
Matsukawa	Tohoku Hydropower and Geothermal Energy Co.	24	Dry-steam	1966
Mori	Hokkaido EPCo	25	Double-flush	1982
Ogiri	Kyushu EPCo	30	Single-flush	1996
	Nittetsu Kagoshima Geothermal Co.			
Onikobe	J-POWER	15	Single-flush	1975
Onuma	Mitsubishi Material Co.	10	Single-flush	1974
Otake	Kyushu EPCo	13	Single-flush	1967
Sumikawa	Tohoku EPCo	50	Single-flush	1995
	Mitsubishi Material Co.			
Takigami	Kyushu EPCo	28	Single-flush	1996
	Idemitsu Oita Geothermal Co.			
Uenotai	Tohoku EPCo	29	Single-flush	1994
	Akita Geothermal Energy Co.			
Yamagawa	Kyushu EPCo	26	Single-flush	1995
Yanaizu-Nishiyama	Tohoku EPCo	65	Single-flush	1995
	Okuaizu Geothermal Co.			

Note: Plants are listed in alphabetical order
Sources: FEPC, J-POWER, Thermal and Nuclear Power Engineering Society

Nuclear Power Plants (As of March 31, 2015)

Name of Plant	Company	Installed Capacity (MW)	Unit Number	Type of Reactor	Unit Capacity (MW)	Year Commissioned
Fukushima No. 2	Tokyo EPCo	4,400	No. 1	BWR	1,100	1982
			No. 2	BWR	1,100	1984
			No. 3	BWR	1,100	1985
			No. 4	BWR	1,100	1987
Genkai	Kyushu EPCo	3,478	No. 1	PWR	559	1975
			No. 2	PWR	559	1981
			No. 3	PWR	1,180	1994
			No. 4	PWR	1,180	1997
Hamaoka	Chubu EPCo	3,617	No. 3	BWR	1,100	1987
			No. 4	BWR	1,137	1993
			No. 5	ABWR	1,380	2005
Higashi-dori	Tohoku EPCo	1,100	No. 1	BWR	1,100	2005
Ikata	Shikoku EPCo	2,022	No. 1	PWR	566	1977
			No. 2	PWR	566	1982
			No. 3	PWR	890	1994
Kashiwazaki Kariwa	Tokyo EPCo	8,212	No. 1	BWR	1,100	1985
			No. 2	BWR	1,100	1990
			No. 3	BWR	1,100	1993
			No. 4	BWR	1,100	1994
			No. 5	BWR	1,100	1990
			No. 6	ABWR	1,356	1996
			No. 7	ABWR	1,356	1997
Mihama	Kansai EPCo	1,666	No. 1	PWR	340	1970
			No. 2	PWR	500	1972
			No. 3	PWR	826	1976
Ohi	Kansai EPCo	4,710	No. 1	PWR	1,175	1979
			No. 2	PWR	1,175	1979
			No. 3	PWR	1,180	1991
			No. 4	PWR	1,180	1993
Onagawa	Tohoku EPCo	2,174	No. 1	BWR	524	1984
			No. 2	BWR	825	1995
			No. 3	BWR	825	2002
Sendai	Kyushu EPCo	1,780	No. 1	PWR	890	1984
			No. 2	PWR	890	1985
Shika	Hokuriku EPCo	1,746	No. 1	BWR	540	1993
			No. 2	ABWR	1,206	2006
Shimane	Chugoku EPCo	1,280	No. 1	BWR	460	1974
			No. 2	BWR	820	1989
Takahama	Kansai EPCo	3,392	No. 1	PWR	826	1974
			No. 2	PWR	826	1975
			No. 3	PWR	870	1985
			No. 4	PWR	870	1985
Tokai No. 2	JAPC	1,100		BWR	1,100	1978
Tomari	Hokkaido EPCo	2,070	No. 1	PWR	579	1989
			No. 2	PWR	579	1991
			No. 3	PWR	912	2009
Tsuruga	JAPC	1,517	No. 1	BWR	357	1970
			No. 2	PWR	1,160	1987

Note: Plants are listed in alphabetical order.
Source: 10 EPCos, JAPC

Under Construction (As of March 31, 2015)

Name of Plant	Company	Unit Number	Type of Reactor	Unit Capacity (MW)	Year Commissioned
Shimane	Chugoku EPCo	No.3	ABWR	1,373	Undecided
Oma	J-POWER	No.1	ABWR	1,383	Undecided
Higashi-dori	Tokyo EPCo	No.1	ABWR	1,385	Undecided

Note: Plants are listed in order of the year that the first generator will commission.
Source: 10 EPCos, JAPC

Principal Hydroelectric Power Plants Owned by Electric Utilities (360 MW or Above) (As of March 31, 2015)

Name of Plant	Company	Type	Installed Capacity (MW)	Maximum Discharge (m ³ /sec)	Effective Head (m)	Year Commissioned
Azumi	Tokyo EPCo	Pumped-storage	623	540	136	1969
Hongawa	Shikoku EPCo	Pumped-storage	615	140	528	2003
Imaichi	Tokyo EPCo	Pumped-storage	1,050	240	524	1991
Kannagawa	Tokyo EPCo	Pumped-storage	940	510	653	2012
Kazunogawa	Tokyo EPCo	Pumped-storage	1,200	280	714	1999-2014
Kisenyama	Kansai EPCo	Pumped-storage	466	248	220	1970
Matanogawa	Chugoku EPCo	Pumped-storage	1,200	300	489	1996
Nabara	Chugoku EPCo	Pumped-storage	620	254	294	1976
Numappara	J-POWER	Pumped-storage	675	173	478	1973
Numazawa No. 2	Tohoku EPCo	Pumped-storage	460	250	214	1982
Ohira	Kyushu EPCo	Pumped-storage	500	118	508	1975
Okawachi	Kansai EPCo	Pumped-storage	1,280	382	395	1992
Okukiyotsu	J-POWER	Pumped-storage	1,000	260	470	1982
Okukiyotsu No. 2	J-POWER	Pumped-storage	600	154	470	1996
Okumino	Chubu EPCo	Pumped-storage	1,500	375	486	1995
Okutadami	J-POWER	Conventional	560	387	170	2003
Okutataragi	Kansai EPCo	Pumped-storage	1,932	594	388	1974
Okuyahagi No. 2	Chubu EPCo	Pumped-storage	780	234	404	1981
Okuyoshino	Kansai EPCo	Pumped-storage	1,206	288	505	1978
Omarugawa	Kyushu EPCo	Pumped-storage	1,200	211	672	2011
Shimogo	J-POWER	Pumped-storage	1,000	314	387	1981
Shin Takasegawa	Tokyo EPCo	Pumped-storage	1,280	644	229	1979
Shin Toyone	J-POWER	Pumped-storage	1,125	645	203	1973
Shiobara	Tokyo EPCo	Pumped-storage	900	324	338	1994
Tagokura	J-POWER	Conventional	400	420	107	2012
Tanbara	Tokyo EPCo	Pumped-storage	1,200	276	518	1986
Tenzan	Kyushu EPCo	Pumped-storage	600	129	560	1987

Notes: 1. Plants are listed in alphabetical order.

2. "Year Commissioned" refers to the date operation began with the installed capacity indicated in the chart.

Sources: 10 EPCos, J-POWER

Under Construction (360 MW or Above) (As of March 31, 2015)

Name of Plant	Company	Type	Unit Capacity (MW)		Maximum Discharge (m ³ /sec)	Effective Head (m)	Year Commissioned
Kannagawa Unit No. 3-6	Tokyo EPCo	Pumped-storage	1,880	470 × 4	510	653	2024-
Kyogoku Unit No.3, No.4	Hokkaido EPCo	Pumped-storage	600	200	190.5	369	2015
				200			2025-
Kazunogawa Unit No.3, No. 4	Tokyo EPCo	Pumped-storage	400	400	280	714	2024-

Note: Plants are listed in order of the year that the first generator will commission.

Source: 10 EPCos, J-POWER

Peak Capacity, Peak Load, Energy Requirement, Reserve Margin and Load Factor

FY	2006	2007	2008	2009	2010	2011	2012	2013	2014
Peak Capacity (GW)*	198.6	194.5	199.5	201.5	199.0	175.9	176.9	179.5	179.8
Peak Load (GW)*	175.5	181.3	181.0	160.8	178.9	156.4	157.2	161.6	154.3
Energy Requirement (TWh)**	970.8	1,004.5	971.4	941.8	974.3	926.8	914.7	917.5	898.9
Reserve (GW)***	23.2	13.2	18.5	40.7	20.1	19.5	19.7	17.9	25.6
Reserve Margin (%)***	13.2	7.3	10.2	25.3	11.2	12.5	12.6	11.1	16.6
Load Factor (%)****	63.2	63.1	61.3	66.9	62.2	67.4	66.4	64.8	66.5

* Peak capacity and peak load are for all electric utilities in Japan.

Peak capacity is the largest possible supply capacity; peak load is the average value of the three highest daily loads at the transmission end occurring during the month in which the annual peak is recorded.

** Energy requirement is the total annual demand for electric utilities in Japan.

*** Reserve = Peak Capacity – Peak Load

Reserve Margin = $\frac{\text{Reserve} \times 100}{\text{Peak Load}}$

**** Load Factor = $\frac{\text{Energy Requirement} \times 100}{\text{Peak Load} \times 365 (366) \times 24\text{hours}}$

Source: Japan Electric Power Survey Committee

Balance of Electricity Supply and Demand (Electric Utilities)

FY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Electric Energy Requirement (TWh)										
At Transmission End	961.9	970.8	1004.5	971.4	941.8	974.3	926.8	914.7	917.5	898.9
At Customer End	913.3	922.3	955.2	921.8	892.9	926.4	879.2	870.7	871.3	853.3
Annual Peak Balance (GW)										
Peak Capability										
Thermal Power Plants	124.4	123.9	124.9	127.7	129.6	126.1	123.8	133.3	134.6	131.7
Nuclear Power Plants	35.0	35.5	31.3	33.2	32.5	33.6	12.3	2.3	2.3	0.0
Hydroelectric Power Plants	36.3	35.9	34.9	34.3	35.4	35.3	34.0	33.7	34.1	35.6
Others	3.0	3.4	3.4	4.3	4.0	4.0	5.8	7.6	8.5	12.4
Total Peak Capacity	198.7	198.6	194.5	199.5	201.5	199.0	176.0	176.9	179.5	179.8
Peak Load	174.9	175.5	181.3	181.0	160.8	178.9	156.4	157.2	161.6	154.3
Reserve	23.8	23.2	13.2	18.5	40.7	20.1	19.5	19.7	17.9	25.6
Reserve Margin (%)	13.6	13.2	7.3	10.2	25.3	11.2	12.5	12.6	11.1	16.6
Total Generating Capacity										
Thermal Power Plants*	148.1	147.9	147.5	149.9	152.3	151.2	153.3	157.1	159.4	163.6
Nuclear Power Plants	49.6	49.5	49.5	47.9	48.8	49.0	49.0	46.1	44.3	44.3
Hydroelectric Power Plants	45.9	45.9	46.2	46.5	46.7	46.7	47.0	47.5	47.5	48.0
Total	243.6	243.3	243.2	244.4	247.6	247.8	249.2	250.7	251.1	255.8

* Includes geothermal power plants.

Source: Japan Electric Power Survey Committee

Financial Data

Revenues and Expenditures for the EPCOs

(Billion yen)

	FY	2009	2010	2011	2012	2013	2014
Revenues							
Residential		5,854	6,197	6,143	6,393	6,919	6,967
Commercial and Industrial		7,896	8,218	8,330	8,892	9,888	10,373
Intercompany Power Sales		424	459	521	501	490	462
Power Sales to Other Utilities		57	77	96	106	194	262
Others		598	670	3,318	1,843	3,146	2,471
Total		14,829	15,621	18,408	17,735	20,694	20,545
Expenditures							
Personnel		1,614	1,512	1,434	1,339	1,257	1,213
Fuel		3,054	3,662	5,949	7,080	7,731	7,292
Maintenance		1,568	1,574	1,422	1,354	1,151	1,369
Interest Charges		368	349	345	350	356	358
Depreciation		2,129	2,075	2,026	1,890	1,928	1,861
Taxes and Public Charges		939	966	922	923	934	947
Intercompany Power Purchases		424	460	521	501	490	462
Power Purchases		1,570	1,666	1,976	2,260	2,504	2,763
Provision for (Reversal of) Reserve for Fluctuations in Water Levels		-8	17	32	-14	-7	-6
Income Taxes		253	583	-106	-183	-47	1,833
Others		2,498	3,798	5,473	3,828	4,373	3,825
Total		14,409	16,662	19,993	19,327	20,560	20,269
Net Income		419	-1,041	-1,585	-1,592	134	276

Source: FEPC

Balance Sheet for the EPCOs

(Billion yen)

	FY	2009	2010	2011	2012	2013	2014
Assets							
Electric utility fixed assets		24,774	24,443	23,934	23,893	23,329	23,255
Investment and Other fixed Assets		11,343	11,804	13,781	13,094	13,279	12,846
Current Assets		2,314	4,340	4,751	5,604	5,924	5,652
Total		38,430	40,587	42,466	42,591	42,531	41,753
Liability and Net Assets							
Long-Term Liabilities		23,727	26,647	29,854	30,689	30,602	118,699
Current Liabilities		6,071	6,267	6,654	6,622	6,545	7,271
Reserves		67	98	139	128	125	121
Total Liabilities		29,865	33,012	36,648	37,439	37,272	36,093
Shareholders' Equity		8,490	7,542	5,759	5,048	5,154	5,513
Valuation, translation adjustments and others		76	34	59	103	105	146
Total Net Assets		8,565	7,576	5,818	5,151	5,259	5,660
Total		38,430	40,587	42,466	42,591	42,531	41,753

Note: The figures may not add up to the totals shown due to rounding.

Source: FEPC

Uses and Sources of Funds for the EPCos

(Billion yen)

	FY	2009	2010	2011	2012	2013	2014
Investments*		2,034	2,123	2,123	2,087	1,961	2,016
Debt Redemption		7,285	7,426	6,321	6,118	4,351	4,799
Total Required Funds		9,319	9,550	8,444	8,204	6,312	6,815
Source of Funds							
Bonds		877	1,002	70	1,434	1,302	880
Loans		5,432	8,000	7,511	5,957	3,484	2,958
Total Source of Funds		6,309	9,001	7,581	7,392	4,786	3,836

* Includes nuclear fuel.

Note: The figures may not add up to the total shown due to rounding.

Source: FEPC

Summarized Comparative Table Classified by Country for the Year 2013

	Canada	USA	UK	France	Germany	Italy	Russia	China	Korea
Total Installed Capacity (MW)	126,831	1,172,191	86,200	128,288	189,449	124,750	242,200	1,257,680	91,038
Hydroelectric	75,660	99,727	4,305	25,434	10,314	22,009	49,700	280,440	6,455
Thermal	33,093	887,880	63,344	25,707	81,919	75,050	167,100	870,090	60,348
Nuclear	13,370	104,223	9,906	63,130	12,068	–	25,300	14,660	20,716
Renewables and others	4,708	80,351	8,645	14,018	77,538	27,691	–	92,490	3,519
Total Energy Production (GWh)	620,444	4,058,209	359,168	550,660	633,157	1,059,092	1,070,734	5,372,100	539,174
Hydroelectric	387,981	264,712	7,606	75,432	28,782	182,654	167,319	892,100	8,394
Thermal	135,790	2,817,193	228,887	44,653	357,349	700,556	722,366	4,221,600	381,857
Nuclear	82,378	789,017	70,607	403,756	97,290	172,508	177,534	111,500	138,784
Renewables and others	14,295	187,287	48,576	26,819	123,874	3,374	3,515	146,900	10,139
Capacity Factor (%)	54.9	40.7	42.2	48.7	38.2	26.5	–	51.6	68.0
Total Energy Production per Capita (kWh)	17,646	12,678	5,621	8,632	7,851	4,811	7,380	3,948	10,543
Domestic Energy Supplies (GWh)	570,442	4,110,537	333,554	495,058	448,110	318,475	1,054,800	4,841,200	513,303
Energy Sales (GWh)	481,201	3,691,789	306,747	–	465,016	272,305	–	4,518,000	474,849
Number of Customers (At year-end; thousand)	–	146,229	29,925	–	–	37,913	–	–	21,018
Maximum Demand (MW)	115,443	777,015	53,420	92,600	79,849	53,942	147,100	775,360	76,522
Annual Load Factor (%)	66.4	60.0	68.0	61.0	64.1	58.3	78.4	78.9	77.1
Thermal Efficiency (%)	–	–	35.9	–	40.8	44.5	37.9	38.3	39.6
Loss Factor (Transmission and Distribution) (%)	5.8	6.8	8.0	7.7	5.5	6.7	9.7	6.7	3.7
Total Consumption per capita (kWh)	15,288	–	5,024	7,166	6,562	4,936	6,638	3,983	9,716

Source: JEPIC

JEPIC

Japan Electric Power Information Center, Inc. (JEPIC) was established in 1958 as a non-profit association of the electric utility industry in Japan in order to meet the increasing needs for a systematic and sustained exchange of information with the electric utility industries in the world. Soon after our establishment, JEPIC also initiated technical cooperation programs for developing countries in the field of electric power as one of its main activities in response to the government policies.

Research and Information Activities

JEPIC conducts research on the electric power industry in foreign countries in light of situations and issues facing the industry in Japan currently. We provide information from those studies in various ways to contribute to the industry worldwide. JEPIC also works to enhance cooperation with foreign electric utilities and other related organizations.

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JEPIC is promoting information exchanges with the foreign electric utilities and organizations in the electric utility industry by holding regular meetings, and taking part in international conferences and symposia.

International Cooperation

With the support of the member companies, JEPIC promotes integrated international cooperation programs for developing countries, mainly in Asia, for the purpose of improving power infrastructure and nuclear power safety in those countries and sharing of general information. These programs include human resource development efforts such as seminars that JEPIC coordinates. JEPIC both receives the participants of these seminars to Japan and dispatches experts to their countries. Including these seminar programs, JEPIC carries out the following tasks:

- Cooperation with electric utilities in ASEAN countries
- Technical cooperation under ODA programs
- Technical cooperation for nuclear power safety

