

NEWS & RELEASE

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Electric Power Consumption by Office Tenants (September 2014)

Summer 2014: 18.5% lower than before the earthquake

Xymax Real Estate Institute has been studying the electric power consumption by tenants in office buildings in Japan and releasing the results on regular basis since June 2013. This is an update report covering the data up to September 2014.

Definition of Electric Power Consumption by Office Tenants

The electric power per *tsubo* (3.3 sqm) consumed by tenants in office buildings in one month.

Key Findings The areas covered by Tokyo Electric Power Company (TEPCO)

Electric power consumption by office tenants in the summer of 2014 (July-September) was 41.0 kWh/tsubo.

18.5% lower than the summer of 2010 before the earthquake, the rate of decrease is slightly larger than other years.

Outline

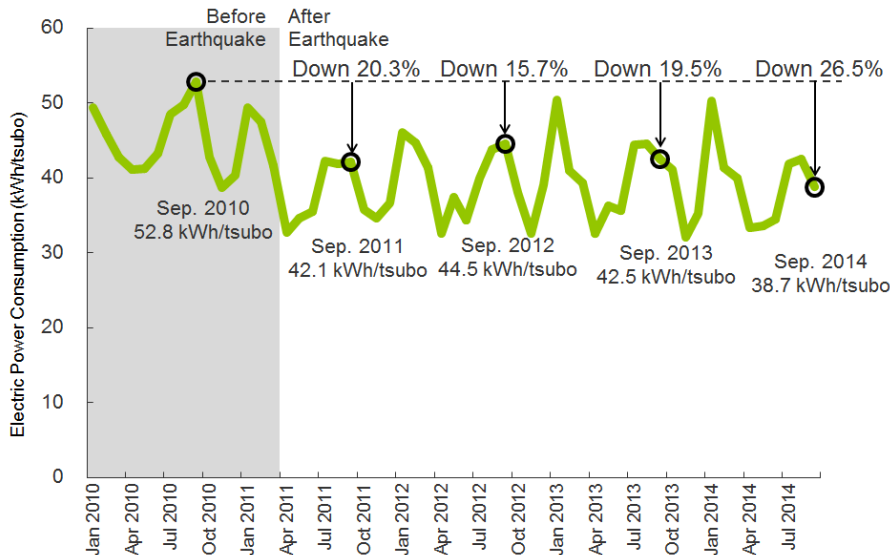
Period	January 2010 – September 2014 (monthly data)
Subject Data	Of the office-use tenants occupying the office buildings in Japan under management by Xymax Group, the valid data (approximately 300 buildings and 3,000 tenants) was used in this study.
Calculation Method	<ol style="list-style-type: none"> 1) Calculate the monthly electric power consumption by tenant in kilowatt-hour (kWh). 2) Adjust the outcome in 1 based on the ordinary business days of the week (excluding Saturdays, Sundays, and national holidays). 3) Calculate the electric power consumption per tsubo (approx. 3.3 sqm) by dividing the outcome in 2 by the tenant's rentable area. 4) Average the outcome in 3 by the areas covered by each electric power company.
Notes	<ul style="list-style-type: none"> • Tenants that use the space for other purposes such as retail, warehouse and computer room are excluded from the subject data. • Tenants in buildings with central air conditioning or gas heat pump, where separate calculation of the energy use by tenant is impossible, are excluded from the subject data. • The month represents the month the electric power meter is read, usually on 20th of each month. • Extraordinary amounts (too high, too low) are identified as outlier and excluded from the subject data. • The number of subject tenants varies month by month as tenants move in and out.

- Previous report: Electric Power Consumption by Office Tenants June 2014 (released on September 19, 2014) <http://www.xymax.co.jp/english/research/images/pdf/20140919-02.pdf>
- Monthly data (January 2010 – September 2014) is available at the end of this report.
- The original research report in Japanese and translated reports in Chinese and Korean are also available online.
 Japanese <http://www.xymax.co.jp/>
 Chinese <http://www.xymax.co.jp/cn/index.html>
 Korean <http://www.xymax.co.jp/ko/index.html>

Electric Power Consumption by Office Tenants

Figure 1 shows changes in electric power consumption from January 2010 to September 2014 by tenants in office buildings in the areas covered by TEPCO. The electric power consumption in July 2014 was 41.8 kWh/tsubo, followed by 42.5 kWh/tsubo in August, and 38.7 kWh/tsubo in September.

Figure 1: Electric Power Consumption by Office Tenants (January 2010 – September 2014)

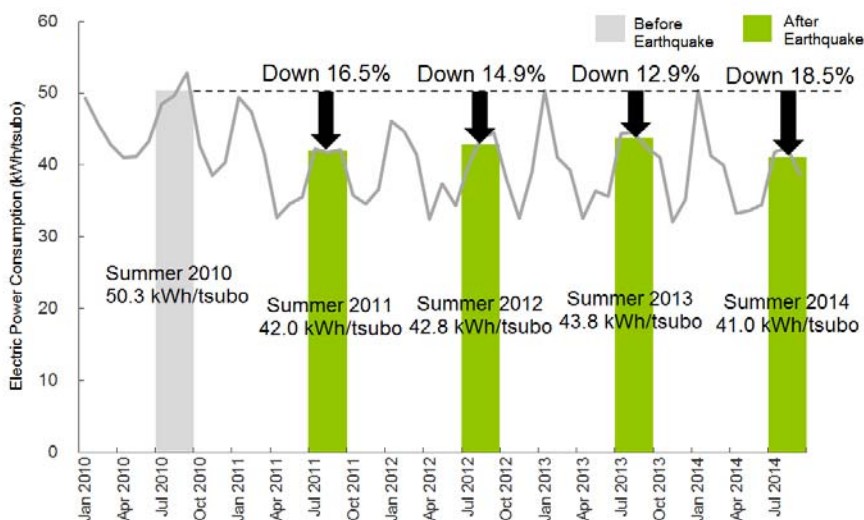


Summer Average: 18.5% lower compared to the summer of 2010 before the earthquake

The electric power consumed by office tenants in the summer period (the July-September average) maintained the level 10%-20% lower than before the earthquake for the four consecutive years: 50.3 kWh/tsubo in 2010, 42.0 kWh/tsubo in 2011 (down 16.5% from 2010), 42.8 kWh/tsubo in 2012 (down 14.9% from 2010), 43.8 kWh/tsubo in 2013 (down 12.9% from 2010), and 41.0 kWh/tsubo in 2014 (down 18.5% from 2010) (see Figure 2).

The rate of decrease in 2014 was slightly larger because use of air conditioner was reduced due to the drastically lower average temperature especially in August and September compared to 2013.

Figure 2: Electric Power Consumption by Office Tenants in Summer (July -September average)



Monthly Electric Power Consumption by Office Tenants and Temperature (Jan. 2010 – Sep. 2014)

Electric Power Company	Hokkaido			Sapporo			Tohoku			Sendai			Tokyo			Tokyo			Hokuriku			Kanazawa			Chubu			Nagoya		
	kWh / tsubo	2010 Average = 100	°C	kWh / tsubo	2010 Average = 100	°C	kWh / tsubo	2010 Average = 100	°C	kWh / tsubo	2010 Average = 100	°C	kWh / tsubo	2010 Average = 100	°C	kWh / tsubo	2010 Average = 100	°C	kWh / tsubo	2010 Average = 100	°C	kWh / tsubo	2010 Average = 100	°C	kWh / tsubo	2010 Average = 100	°C			
Jan 2010	49.0	116	-2.0	29.8	117	2.8	49.3	110	7.0	25.9	105	4.4	42.4	119	4.6															
Feb 2010	46.8	110	-3.2	26.4	104	2.1	45.8	102	6.5	25.9	105	4.8	37.8	106	7.0															
Mar 2010	43.1	102	-0.1	28.0	110	4.4	42.8	96	9.1	24.3	99	6.8	31.6	89	9.1															
Apr 2010	40.7	96	5.5	25.2	99	8.2	41.1	92	12.4	24.9	101	10.7	31.0	87	13.3															
May 2010	40.6	96	12.2	25.6	101	14.7	41.2	92	19.0	24.8	101	16.5	31.9	89	18.7															
Jun 2010	38.9	92	19.2	24.8	97	20.4	43.3	97	23.6	24.6	100	21.9	34.4	97	23.9															
Jul 2010	43.1	102	22.1	24.7	97	25.3	48.5	109	28.0	23.9	97	26.5	39.3	110	27.8															
Aug 2010	43.6	103	24.8	23.1	91	27.2	49.7	111	29.6	23.6	96	29.3	40.1	112	29.4															
Sep 2010	43.5	103	20.0	25.2	99	21.7	52.8	118	25.1	24.5	99	24.5	43.0	120	26.1															
Oct 2010	39.7	94	12.2	24.5	96	16.2	42.7	96	18.9	24.6	99	18.0	32.9	92	19.4															
Nov 2010	37.8	89	5.9	24.0	94	10.1	38.6	86	13.5	24.2	98	11.3	30.3	85	12.1															
Dec 2010	41.6	98	0.6	23.9	94	5.7	40.3	90	9.9	25.1	102	7.0	33.2	93	7.9															
Jan 2011	49.7	117	-3.8	26.6	105	0.5	49.4	111	5.1	28.7	116	1.5	44.6	125	2.8															
Feb 2011	44.6	105	-1.1	25.0	98	3.2	47.4	106	7.0	27.6	112	4.5	42.0	118	6.6															
Mar 2011	42.0	99	0.7	24.2	95	3.8	41.6	93	8.1	24.6	100	5.4	35.5	100	7.5															
Apr 2011	34.3	81	6.9	22.8	90	10.0	32.7	73	14.5	23.3	94	11.5	30.2	85	13.3															
May 2011	37.2	88	11.1	22.8	90	15.6	34.6	77	18.5	24.0	97	17.4	30.9	87	19.0															
Jun 2011	38.9	92	17.3	22.2	87	20.6	35.5	80	22.8	24.1	98	22.7	31.8	89	23.8															
Jul 2011	39.3	93	21.8	22.2	87	24.8	42.2	95	27.3	23.6	95	27.2	42.0	118	27.5															
Aug 2011	37.9	90	23.6	21.8	86	24.9	41.8	94	27.5	23.2	94	27.5	40.1	113	28.3															
Sep 2011	39.1	92	19.2	22.3	88	22.1	42.1	94	25.1	23.4	95	23.8	40.1	112	25.1															
Oct 2011	35.6	84	12.1	21.4	84	15.9	35.7	80	19.5	23.2	94	17.5	32.0	90	18.8															
Nov 2011	36.4	86	6.0	21.8	86	10.5	34.6	78	14.9	23.7	96	13.3	30.5	85	13.9															
Dec 2011	39.9	94	-2.0	21.4	84	3.4	36.6	82	7.5	23.0	93	5.3	33.0	93	6.7															
Jan 2012	47.9	113	-4.5	25.2	99	0.4	46.1	103	4.8	28.1	114	2.9	42.7	120	4.2															
Feb 2012	44.5	105	-4.4	22.5	88	0.3	44.7	100	5.4	27.2	110	2.6	41.6	117	4.1															
Mar 2012	40.3	95	0.1	23.5	92	4.5	41.4	93	8.8	25.9	105	7.0	35.3	99	8.3															
Apr 2012	37.3	88	7.0	21.0	82	9.8	32.5	73	14.5	22.2	90	12.7	29.1	82	14.2															
May 2012	37.8	89	13.0	23.6	93	15.9	37.4	84	19.6	26.4	107	17.1	32.6	91	19.2															
Jun 2012	35.2	83	17.1	21.5	85	18.2	34.3	77	21.4	24.3	99	21.3	30.3	85	22.3															
Jul 2012	39.6	93	21.8	24.1	95	22.8	40.0	90	26.4	24.4	99	26.8	37.7	106	26.9															
Aug 2012	38.1	90	23.4	24.3	96	26.2	43.8	98	29.1	27.1	110	28.9	41.8	117	28.4															
Sep 2012	39.0	92	22.4	26.1	102	23.9	44.5	100	26.2	27.2	110	25.2	40.1	112	25.8															
Oct 2012	35.9	85	13.0	20.8	82	16.6	38.0	85	19.4	25.9	105	18.1	33.9	95	19.0															
Nov 2012	33.8	80	5.5	22.0	86	9.7	32.6	73	12.7	23.0	93	10.5	27.2	76	11.3															
Dec 2012	40.0	94	-2.3	26.0	102	3.3	39.0	87	7.3	24.8	101	4.7	34.9	98	5.3															
Jan 2013	53.7	127	-4.7	32.1	126	0.7	50.4	113	5.5	29.0	117	3.0	47.3	133	4.0															
Feb 2013	43.1	102	-4.0	29.8	117	1.1	41.0	92	6.2	26.2	106	3.1	38.3	107	4.6															
Mar 2013	40.8	96	0.0	28.5	112	5.8	39.3	88	12.1	23.4	95	8.3	34.9	98	10.5															
Apr 2013	35.1	83	6.3	22.0	86	10.2	32.6	73	15.2	22.5	91	11.4	27.1	76	13.8															
May 2013	35.9	85	11.3	22.5	88	14.4	36.3	81	19.8	23.3	94	17.2	30.5	86	19.4															
Jun 2013	34.8	82	17.6	21.1	83	19.0	35.6	80	22.9	23.8	96	22.9	32.6	91	23.6															
Jul 2013	35.4	84	22.5	23.7	93	22.2	44.4	99	27.3	29.9	121	27.2	41.5	116	28.1															
Aug 2013	33.2	78	23.1	23.8	94	25.6	44.5	100	29.2	27.8	113	28.2	39.9	112	29.3															
Sep 2013	31.9	75	18.8	24.3	96	21.9	42.5	95	25.2	25.9	105	23.0	37.9	106	24.9															
Oct 2013	28.6	68	12.9	23.9	94	16.7	41.1	92	19.8	26.9	109	18.9	36.5	102	20.2															
Nov 2013	27.2	64	6.3	22.8	90	9.6	32.1	72	13.5	23.0	93	10.9	27.8	78	11.5															
Dec 2013	28.7	68	0.8	25.3	99	4.7	35.2	79	8.3	26.1	106	6.3	31.6	89	6.4															
Jan 2014	46.9	111	-4.1	32.9	129	1.9	50.3	113	6.3	32.8	133	3.9	45.2	127	4.6															
Feb 2014	39.1	92	-3.5	29.9	118	1.4	41.3	92	5.9	28.0	113	3.5	36.9	104	5.3															
Mar 2014	34.9	82	0.5	31.7	125	5.5	40.0	90	10.4	27.8	113	7.4	33.6	94	9.3															
Apr 2014	28.6	68	7.3	23.9	94	10.9	33.3	75	15.0	22.8	92	12.4	27.1	76	14.6															
May 2014	26.4	62	14.0	21.0	83	16.5	33.6	75	20.3	22.0	89	18.0	27.8	78	19.5															
Jun 2014	27.6	65	18.7	21.7	85	20.6	34.5	77	23.4	24.2	98	22.7	30.0	84	24.0															
Jul 2014	28.2	67	22.5	25.6	101	23.7	41.8	94	26.8	28.8	117	26.1	37.4	105	27.4															
Aug 2014	29.2	69	22.4	25.3	99	24.6	42.5	95	27.7	28.3	115	26.5	37.0	104	27.1															
Sep 2014	24.7	58	18.1	24.0	94	20.5	38.7	87	23.2	26.8	109	22.5	34.1	96	23.4															

Electric Power Company	Kansai			Chugoku			Shikoku			Kyushu		
	kWh / tsubo	2010 Average = 100	°C	kWh / tsubo	2010 Average = 100	°C	kWh / tsubo	2010 Average = 100	°C	kWh / tsubo	2010 Average = 100	°C
Jan 2010	43.3	114	6.1	44.4	127	5.2	49.6	125	5.9	43.4	118	6.6
Feb 2010	37.7	99	7.8	40.7	117	7.6	44.5	112	7.4	36.9	100	9.4
Mar 2010	35.6	94	9.6	34.1	97	9.1	40.0	101	9.3	32.7	89	10.9
Apr 2010	34.0	89	13.6	29.7	85	13.0	36.1	91	13.2	31.4	85	13.8
May 2010	35.2	93	18.8	27.7	79	18.5	32.8	83	18.8	32.9	90	19.2
Jun 2010	36.3	96	23.9	28.0	80	23.3	33.8	85	23.9	35.3	96	23.5
Jul 2010	41.5	109	27.9	33.6	96	27.2	44.5	112	27.8	39.1	106	27.7
Aug 2010	42.7	112	30.5	39.6	113	30.3	46.5	117	30.4	42.9	117	30.3
Sep 2010	44.8	118	26.7	47.5	136	26.2	53.0	134	26.7	46.3	126	26.3
Oct 2010	38.1	100	19.9	34.0	97	19.2	34.9	88	19.8	35.6	97	20.0
Nov 2010	32.4	85	13.2	27.3	78	12.0	26.5	67	12.7	30.6	83	13.2
Dec 2010	34.3	90	9.0	33.1	95	7.3	33.1	84	8.3	34.2	93	8.8
Jan 2011	42.1	111	4.4	44.3	127	2.9	43.2	109	4.1	43.1	117	3.8
Feb 2011	39.0	103	7.4	44.7	128	6.6	41.7	105	6.6	42.3	115	8.2
Mar 2011	35.3	93	8.1	36.4	104	7.2	36.1	91	7.9	33.7	92	8.8
Apr 2011	32.3	85	13.8	30.5	87	13.4	30.6	77	13.6	29.9	81	14.7
May 2011	33.5	88	19.6	28.9	82	19.5	25.4	64	19.6	31.6	86	19.8
Jun 2011	34.3	90	24.2	29.9	86	23.6	26.9	68	24.0	32.5	88	23.9
Jul 2011	40.8	107	27.8	39.3	112	27.6	35.1	89	27.3	40.0	109	27.9
Aug 2011	39.8	105	28.9	40.6	116	28.2	34.9	88	28.6	40.1	109	28.5
Sep 2011	40.3	106	25.2	40.4	115	24.9	37.3	94	25.1	40.7	111	25.2
Oct 2011	33.7	89	19.5	29.6	85	18.5	27.8	70	19.2	32.1	87	19.7
Nov 2011	30.9	81	15.2	26.4	76	14.7	23.9	60	15.0	30.5	83	16.3
Dec 2011	32.0	84	8.1	30.3	87	6.9	28.5	72	7.9	29.4	80	8.5
Jan 2012	39.9	105	5.6	42.0	120	4.7	36.6	93	5.2	38.9	106	6.3
Feb 2012	37.9	100	5.1	42.8	122	4.3	36.2	91	4.7	38.4	104	5.7
Mar 2012	36.8	97	9.1	36.5	104	8.7	31.0	78	8.9	33.0	90	10.7
Apr 2012	29.2	77	15.2	27.9	80	15.0	26.1	66	15.0	26.4	72	16.2
May 2012	33.5	88	19.6	30.2	86	19.6	24.6	62	19.4	32.2	88	20.1
Jun 2012	31.5	83	23.0	29.9	86	23.2	24.3	61	22.8	30.3	82	23.1
Jul 2012	36.5	96	27.8	36.2	104	27.4	27.8	70	27.7	34.7	94	28.0
Aug 2012	42.0	111	29.4	43.9	126	29.5	34.3	87	29.3	39.4	107	29.1
Sep 2012	40.5	107	26.0	41.8	120	25.6	31.9	81	25.2	36.7	100	24.5
Oct 2012	33.8	89	19.3	30.1	86	18.9	26.8	68	18.9	31.9	87	19.2
Nov 2012	29.3	77	12.4	24.9	71	11.7	21.5	54	12.3	26.3	72	12.9
Dec 2012	33.6	88	6.6	35.5	102	5.5	26.2	66	6.3	31.2	85	7.6
Jan 2013	43.1	113	5.2	46.9	134	4.4	34.1	86	4.7	41.0	111	6.1
Feb 2013	36.5	96	5.6	39.9	114	6.0	31.1	79	5.8	32.4	88	7.8
Mar 2013	34.7	91	10.7	34.3	98	10.7	27.7	70	10.4	29.9	81	12.3
Apr 2013	28.4	75	14.3	25.6	73	13.5	22.3	56	13.6	26.2	71	14.7
May 2013	32.2	85	19.8	27.4	78	19.7	23.0	58	19.9	29.2	79	20.3
Jun 2013	34.8	92	24.3	32.7	93	24.0	25.3	64	24.2	32.0	87	23.7
Jul 2013	39.4	104	28.5	39.7	114	28.3	28.9	73	29.0	38.8	105	30.0
Aug 2013	41.2	108	30.0	43.1	123	29.5	31.7	80	29.8	39.5	107	30.0
Sep 2013	38.3	101	25.1	36.4	104	24.6	29.2	74	24.5	36.9	100	25.2
Oct 2013	38.2	101	20.8	35.4	101	19.9	27.2	69	20.3	36.2	98	20.7
Nov 2013	30.1	79	12.9	25.5	73	11.9	21.7	55	12.5	25.6	70	13.4
Dec 2013	31.7	83	7.8	32.8	94	6.5	25.4	64	7.4	29.5	80	8.1
Jan 2014	42.3	111	5.9	48.1	138	5.7	33.1	84	5.8	39.2	107	7.5
Feb 2014	36.5	96	5.8	40.2	115	6.2	28.6	72	5.7	32.2	88	7.6
Mar 2014	34.7	91	9.9	37.4	107	10.0	34.0	86	9.8	30.9	84	11.5
Apr 2014	29.5	78	14.8	23.2	66	14.3	16.9	43	14.3	26.2	71	15.6
May 2014	31.3	82	19.8	24.2	69	19.6	23.3	59	19.8	27.4	74	20.5
Jun 2014	32.2	85	23.9	29.0	83	23.2	25.4	64	23.6	29.3	80	22.6
Jul 2014	38.5	101	27.8	34.9	100	26.9	28.0	71	27.6	35.4	96	27.1
Aug 2014	38.4	101	27.8	38.5	110	26.9	31.2	79	26.9	34.5	94	26.5
Sep 2014	37.7	99	24.0	35.9	103	23.9	29.5	74	24.0	36.1	98	24.2

Average temperature: Website of the Meteorological Agency (<http://www.data.jma.go.jp/obd/stats/etrn/index.php>)