

Monitoring report of voluntary efforts and competitive status January to March 2025 period (Tentative translation)

Friday, June 27, 2025



Overview of market trends in the January to March 2025 period (1/2)

1. This period's wholesale electricity market prices did not experience significant daily fluctuations, and an east-west price comparison showed a persistent trend of higher prices in the east and lower in the west. When categorized by the 3-month average, due to market split rates and other factors, the areas are divided as follows: Hokkaido, Tohoku, Tokyo, and Chubu areas (at the 13-yen level); Hokuriku, Kansai, and Chugoku areas (12-yen level); Shikoku area (10-yen level); and Kyushu area (11-yen level).
 - In January, the split rates for Chubu-Hokuriku and Chubu-Kansai were high, and the price difference widened between the Chubu area and the areas from Hokuriku westward.
 - In February, a decrease in the split rates for Chubu-Hokuriku and Chubu-Kansai led to a nearly uniform price range (at the 14-yen level) from the Hokkaido to Chugoku areas. As a result, the price difference widened between Honshu and the Shikoku and Kyushu areas.
 - In March, the split rate for Tokyo-Chubu rose, and the prices in the western area soared above 30 yen several times, driven by an increase in demand from lower temperatures and a decrease in supply capacity due to periodic inspections of thermal power plants and other factors. Affected by these, the average price in the Chubu, Hokuriku, Kansai, and Chugoku areas sat at 12.13 yen/kWh, exceeding the eastern area average of 11.76 yen/kWh. Additionally, the Shikoku area continued to have lower prices than other areas in this period, due to the consistently high split rates for Shikoku-Chugoku and Shikoku-Kansai since last November and the service suspension of the Chugoku-Shikoku interconnection line for inspection and maintenance following the forest fire that occurred in late March.
 - See pp. 12-13 for changes in day-ahead market prices and pp. 24-25 for trends (east-west and area comparisons).
2. In this period, the contracted volume in the day-ahead market was 72.7 billion kWh, 1.2 times that of the same period last year, and the contracted volume in the intraday market was 1.75 billion kWh, 1.0 times that of the same period last year. In the day-ahead market, the contracted volume increased for both general electric utilities and new entrants and other business operators compared to the same period last year, and both categories were net buyers. The increased contracted volume is presumed to be caused by: an increase in both selling and buying volumes (1.1 times the same period last year); and a rise in the execution point on the supply-demand curves due to differences in the price-band ratios of selling and buying volumes (e.g. the ratio of price bands above the contracted prices was higher than in the same period last year). In the intraday market, while the contracted volume was at the same level as that in the same period last year, the contracted selling volume of general electric utilities was 1.3 times that of the same period last year. One of the contributing factors to this outcome is that general electric utilities supplied some of their uncontracted selling volume from the day-ahead market to the intraday market, after receiving a notification of supply capacity provision, which is issued by the Organization for Cross-Regional Coordination of Transmission Operators, JAPAN, at 17:30 or later on the day before a day on which the cross-regional reserve margin is predicted to fall below 8%.
 - See pp. 6-11 for trends in the bidding volume and contracted volume in the day-ahead market and pp. 18-20 for trends in the contracted volume in the intraday market.

Overview of market trends in the January to March 2025 period (2/2)

3. Looking at the market split status, **split rates increased for 7 out of 10 interconnection lines compared to the same period last year**. In particular, the rates for Kansai-Shikoku and Chugoku-Shikoku increased drastically (from an average of around 1% in the same period last year to an average of about 50% in this period). This situation has continued from November last year into this period. The increase in the split rates between the Shikoku area and Honshu was presumably caused by an increase in the grid power flow out of Shikoku. Another possible factor was the Kansai-Shikoku interconnection line work, which resulted in reduced service capacity and funneling of power flow to Chugoku-Shikoku. In late March, the Chugoku-Shikoku interconnection line was suspended for inspection and maintenance due to a forest fire.
 - See pp. 16-17 for changes in the market split status and scheduled power flow.
4. **The contracted volume in the futures market was 37.18 billion kWh, 2.2 times that of the same period last year.** The trading volume is in an upward trend due to factors including: an increase in the number of companies participating in trading^{*1} at the European Energy Exchange (EEX), which accounts for most of the trading; a rise in long-term hedge demand resulting from the extension of the seasonal trading period from 2 years (4 seasons) to 4 years (8 seasons); and improved liquidity in the Kansai area. ^{*1}: From 72 companies at the end of March 2024, to 98 at the end of March 2025
 - See p. 23 for trends in the contracted volume in futures market transactions.
5. **The low-voltage switching rate** (annual number of switches ÷ total number of consumers) **has been decreasing lately, but showed an upturn in FY2024** (up by about 1.3 pt). While new services by new entrants have emerged, attention needs to be paid to the major impact of multiple large-scale business transfers among group companies.
 - See p. 56 for the FY trend in switching rates.

【 Quarterly report 】

- **Wholesale electricity market**
 - JPEX market
 - Day-Ahead market
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 - Forward transaction market
- **Voluntary efforts by general electric utilities, etc.**
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 - Trading status and sell bid withdrawal status in the intraday market
 - Status of block selling bidding
 - Supply of power source to the market for wholesale electricity utilities
 - Status of bidding, etc. for public hydroelectricity business
 - Status of OTC transactions

【Medium- to long-term trend report】

- **Wholesale electricity market**
 - JPEX market
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 - Trends in contracted price
 - Trends in the market splitting occurrence rate
 - JEPX spot price and fuel cost
- **Retail market**
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 - Market share by area
 - Trends in electricity unit price
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 - Average unit price of low-voltage rates
- **Gas market**
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 - Usage status of Start-up wholesale measure

Major indicators

- The major indicators for this period are as follows.

				January to March 2025	Same period last year (January to March 2024)	FY2023 (April 2023-March 2024)	FY2022 (April 2022-March 2023)
JEPX market	Percentage to electricity sales*3			33.5%	29.1%	33.4%	40.1%
	Day-Ahead market	Bidding	Sell volume compared to the same period last year	1.1×	0.9×	(※ ⁵ 1.0×	1.0×
			Buy volume compared to the same period last year	1.1×	0.8×	(※ ⁵ 1.0×	0.9×
		Contract	Contracted volume	72.7 billion kWh	61.3 billion kWh	261.5 billion kWh	318.5 billion kWh
			Contracted volume compared to the same period last year	1.2×	0.7×	(※ ⁵ 0.9×	1.0×
			Average contracted price (system price)	12.5yen/kWh	10.1yen/kWh	10.7yen/kWh	20.4yen/kWh
		Occurrence rate of market splitting between the east and west market		32.2%	26.1%	33.7%	34.9%
	Intraday market	Contract	Contracted volume	1.75 billion kWh	1.72 billion kWh	6.17 billion kWh	4.94 billion kWh
			Average contracted price	13.3yen/kWh	11.0yen/kWh	11.7yen/kWh	22.9yen/kWh
	Forward market	Contract	Contracted volume	0kWh	0kWh	0.003 billion kWh	0.017 billion kWh
Futures market*4			Contracted volume	37.18 billion kWh	16.56billion kWh	30.47 billion kWh	-
OTC transactions			Supply to outside the group	19.28billionkWh	10.68 billion kWh	38.62 billion kWh	56.43 billion kWh
Retail market (Reference)*1	Electricity sales			222.6 billion kWh※2	216.9 billion kWh※2	801.6 billion kWh	805.4 billion kWh
		New entrants	Electricity sales	45.0 billion kWh	38.0 billion kWh	133.8 billion kWh	154.6 billion kWh
			Electricity sales compared to the same period last year	1.2×	1.0×	0.9×	0.9×
			Share of new entrants	19.8%(as of March)	17.3 %(as of March)	-	-

※1Source: Electricity Trading Report

※2 To avoid placing an excessive burden on businesses for tabulating data, the Electricity Trading Report allows businesses to report their electricity sales volume and sales amount recorded from the meter reading date of N – 1 month to the day before the meter reading date of N month as the data for N month. Since most companies report their results up to the meter reading date like this, these figures do not exactly match the actual results for the demand in N month.

※3 The percentage of electricity sales indicates the average value for the relevant period.

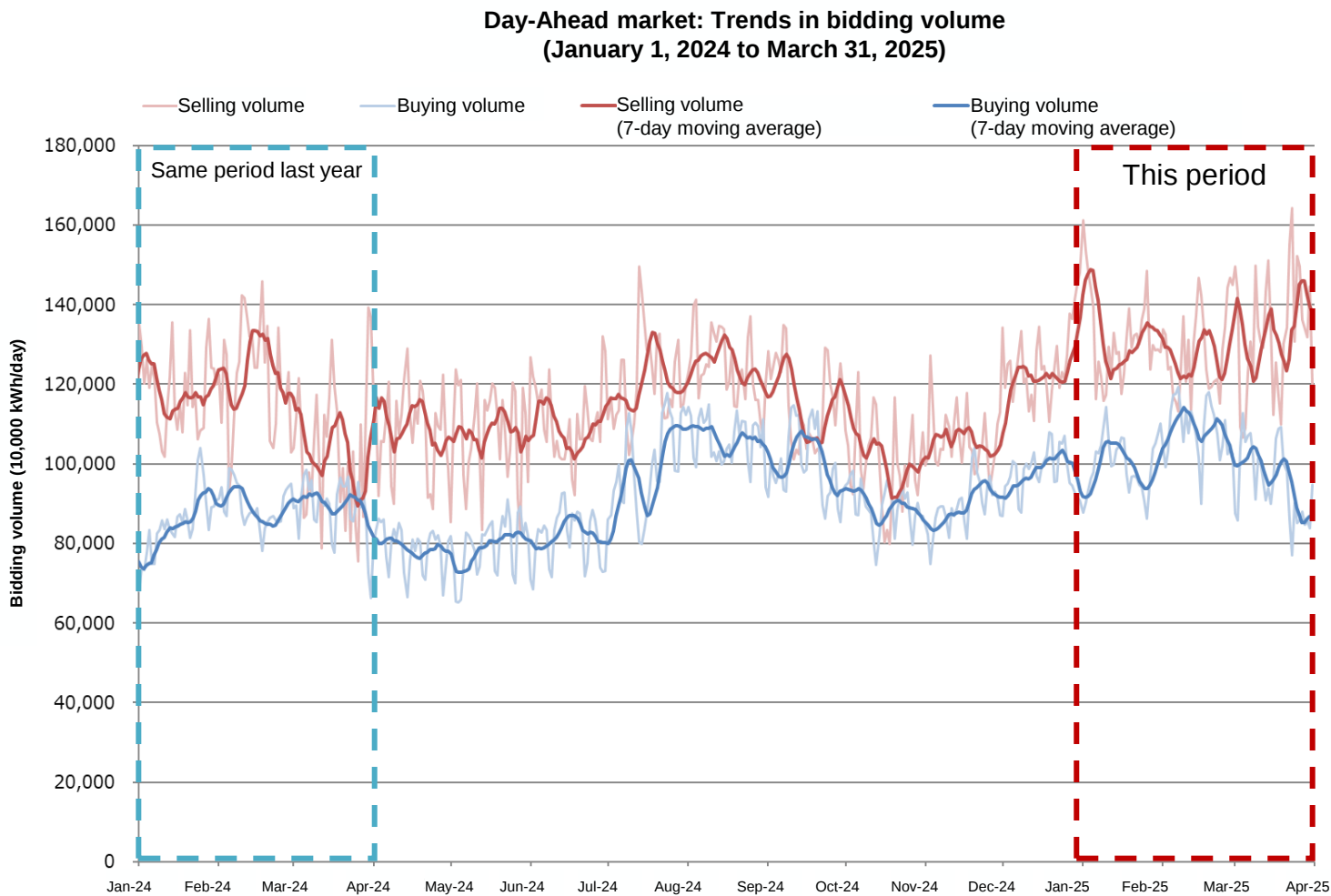
※4 Data added from the October-December 2023 reporting period. (Based on data published on the JPX and EEX websites)

※5 The comparison is based on the volume obtained by deducting the gross bidding volume for internal demand from the bidding volume of general electric utilities in the same period last year. Gross bidding volumes are calculated from the questionnaire results on higher buy-back prices in gross bidding reported by general electric utilities.

(Where general electric utilities refer to Hokkaido Electric Power, Tohoku Electric Power, TEPCO Energy Partner, Chubu Electric Power Miraiz, Hokuriku Electric Power, Kansai Electric Power, Chugoku Electric Power, Shikoku Electric Power, and Kyushu Electric Power.)

Bidding volume in the day-ahead market

- For this period, the bidding volume in the day-ahead market was 117.9 billion kWh for selling and 90.9 billion kWh for buying.
- In year-on-year comparison, the selling volume was 1.1 times that of the same period last year, and the buying volume was 1.1 times.



Main data

Selling volume (January to March 2025)
117.9 billion kWh

Comparison with the selling volume for the same period last year (vs. January to March 2024)
1.1 ×

Buying volume (January to March 2025)
90.9 billion kWh

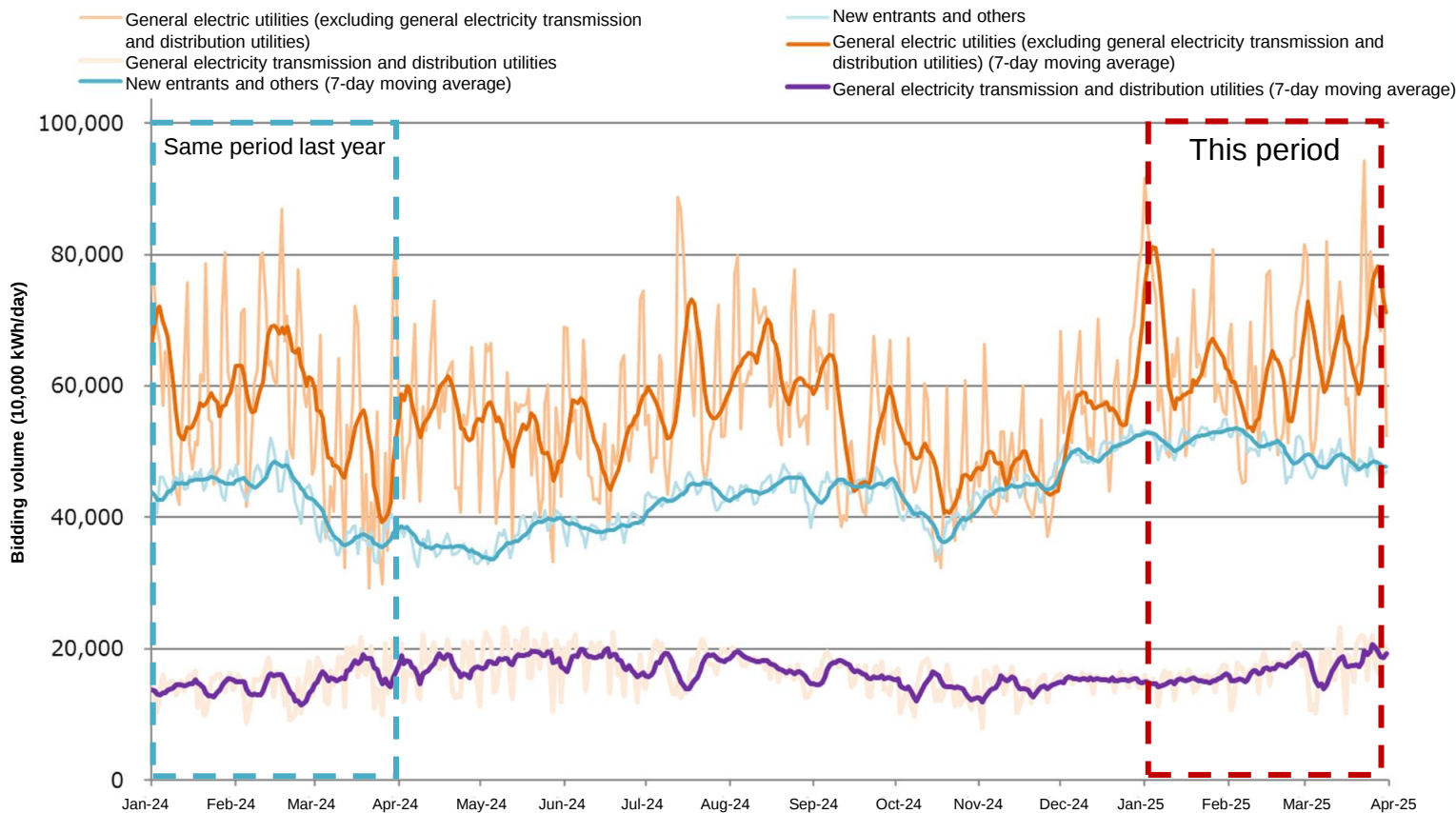
Comparison with the buying volume for the same period last year (vs. January to March 2024)
1.1 ×

* Gross bidding by general electric utilities has been suspended since October 1, 2023.

Selling volume in the day-ahead market by business operator category

- The selling volume in the day-ahead market for this period was 57.6 billion kWh for general electric utilities (excluding general electricity transmission and distribution utilities), 45.3 billion kWh for new entrants and other business operators, and 15.0 billion kWh for general electricity transmission and distribution utilities.
- In year-on-year comparison, the volume was 1.1 times that of the same period last year for general electric utilities, 1.2 times for new entrants and other business operators, and 1.1 times for general electricity transmission and distribution utilities.

Day-Ahead market: Trends in the selling volume
(January 1, 2024 to March 31, 2025)



Main data

Selling volume by general electric utilities (excluding general electricity transmission and distribution utilities) (January to March 2025)
57.6 billion kWh
Comparison with the selling volume by general electric utilities (excluding general electricity transmission and distribution utilities) for the same period last year (vs. January to March 2024)
1.1 ×
Selling volume by new entrants and other business operators (January to March 2025)
45.3 billion kWh
Comparison with the selling volume by new entrants and other business operators for the same period last year (vs. January to March 2024)
1.2 ×
Selling volume by general electricity transmission and distribution utilities (January to March 2025)
15.0 billion kWh
Comparison with the selling volume by general electricity transmission and distribution utilities for the same period last year (vs. January to March 2024)
1.1 ×

* The FIT selling volume by general electricity transmission and distribution utilities has been excluded from the selling volume by general electric utilities, and a new line plotting the selling volume by general electricity transmission and distribution utilities has been added.

* General electric utilities include Hokkaido Electric Power, Tohoku Electric Power, TEPCO Energy Partner, TEPCO Renewable Power, Chubu Electric Power Miraiz, Hokuriku Electric Power, Kansai Electric Power, Chugoku Electric Power, Shikoku Electric Power, Kyushu Electric Power, and JERA.

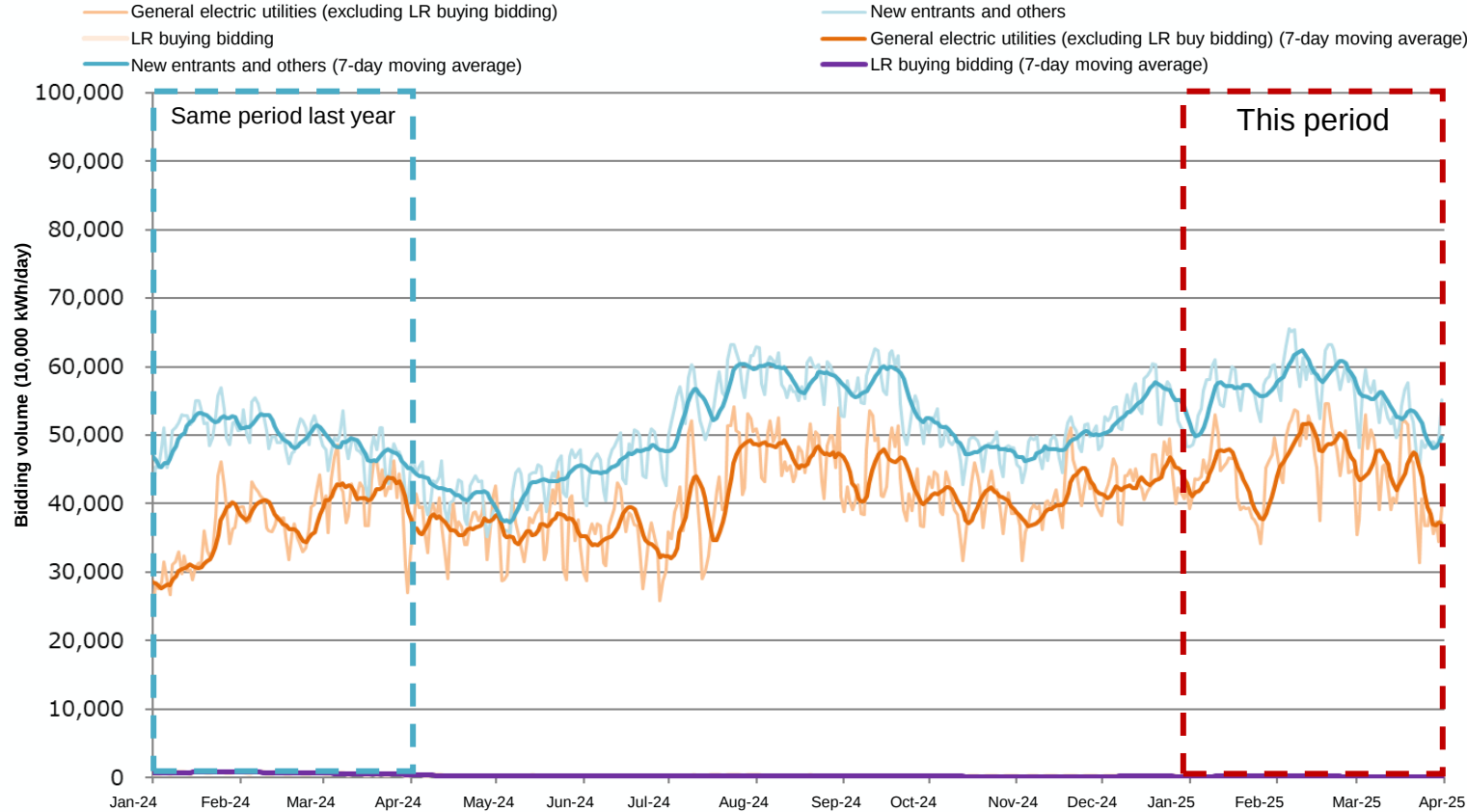
* General electricity transmission and distribution utilities include Hokkaido Electric Power Network, Tohoku Electric Power Network, TEPCO Power Grid, Chubu Electric Power Grid, Hokuriku Electric Power Transmission and Distribution, Kansai Electric Power Transmission and Distribution, Chugoku Electric Power Network, Shikoku Electric Power Transmission and Distribution, and Kyushu Electric Power Transmission and Distribution.

* Gross bidding by general electric utilities has been suspended since October 1, 2023.

Buying volume in the day-ahead market by business operator category

- The buying volume in the day-ahead market for this period was 40.4 billion kWh for general electric utilities (excluding LR*¹ buying bidding) and 50.4 billion kWh for new entrants and other business operators, and the LR buying volume by general electricity transmission and distribution utilities was 0.1 billion kWh.
- In year-on-year comparison, the volume was 1.2 times that of the same period last year for general electric utilities (excluding LR buying bidding) and 1.1 times for new entrants and other business operators.

Day-Ahead market: Trends in buying volume
(January 1, 2024 to March 31, 2025)



Main data

Buying volume by general electric utilities
(excluding LR buying bidding)
(January to March 2025)

40.4 billion kWh

Comparison with the buying volume by
general electric utilities for the same period
last year (excluding LR buying bidding)
(vs. January to March 2024)

1.2 ×

Buying volume by new entrants and other
business operators
(January to March 2025)

50.4 billion kWh

Comparison with the buying volume by new
entrants and other business operators for
the same period last year
(vs. January to March 2024)

1.1 ×

LR buying volume by general electricity
transmission and distribution utilities
(January to March 2025)

0.1 billion kWh

Comparison with the LR buying volume by general
electricity transmission and distribution utilities for
the same period last year
(vs. January to March 2024)

0.2 ×

* General electric utilities include Hokkaido Electric Power, Tohoku Electric Power, TEPCO Energy Partner, TEPCO Renewable Power, Chubu Electric Power Miraiz, Hokuriku Electric Power, Kansai Electric Power, Chugoku Electric Power, Shikoku Electric Power, Kyushu Electric Power, JERA, and general electricity transmission and distribution utilities.

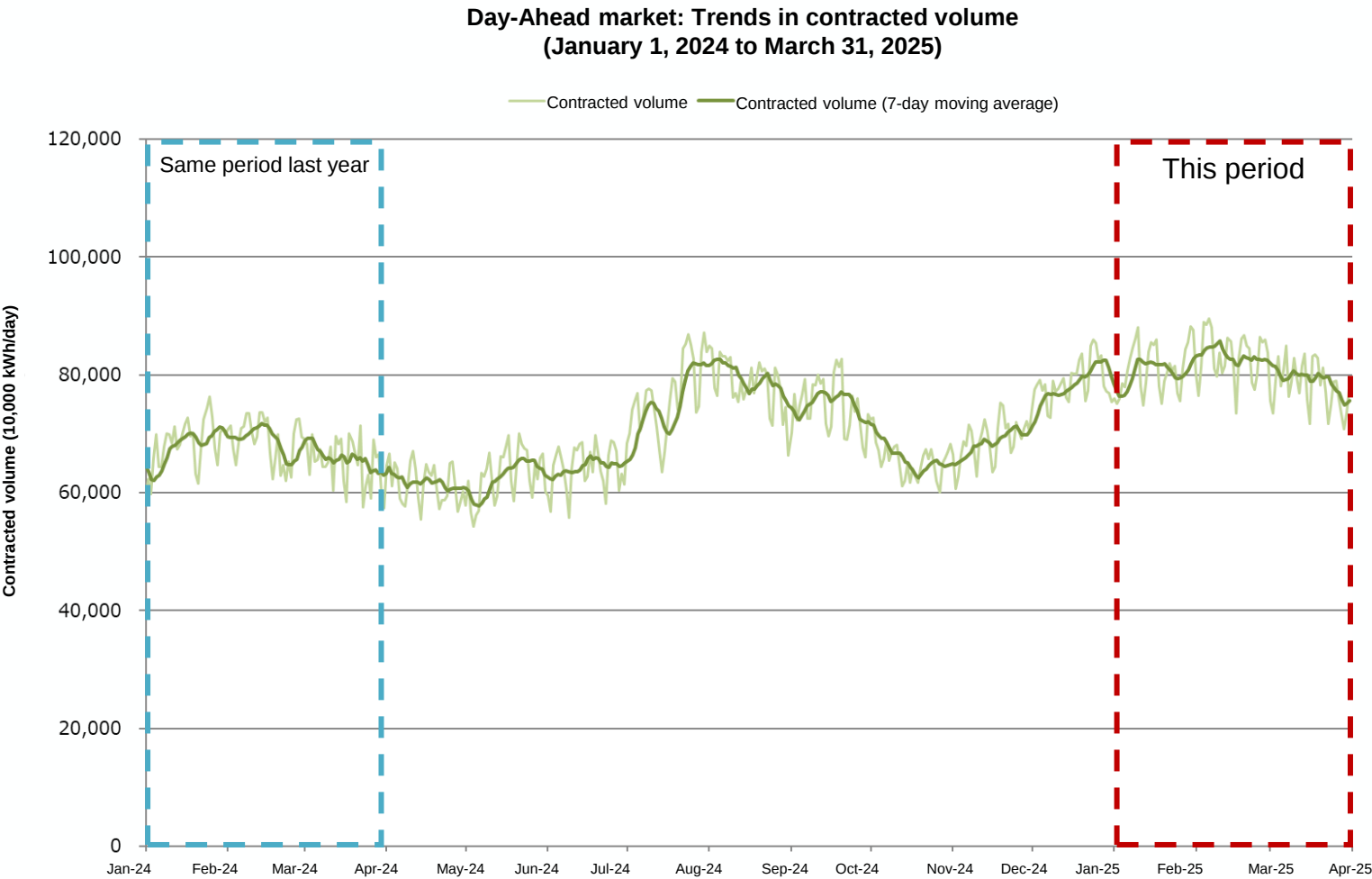
* General electricity transmission and distribution utilities include Hokkaido Electric Power Network, Tohoku Electric Power Network, TEPCO Power Grid, Chubu Electric Power Grid, Hokuriku Electric Power Transmission and Distribution, Kansai Electric Power Transmission and Distribution, Chugoku Electric Power Network, Shikoku Electric Power Transmission and Distribution, and Kyushu Electric Power Transmission and Distribution.

* Gross bidding by general electric utilities has been suspended since October 1, 2023.

*¹ This refers to the last resort supply. Local general electricity transmission and distribution utilities are obliged to supply electricity under the last resort supply agreement to ensure electricity consumers the final source of electricity supply in the event that they fail to conclude a supply contract with any of the electricity retailers.

Contracted volume in the day-ahead market

- The contracted volume in the day-ahead market for this period was 72.7 billion kWh.
- In year-on-year comparison, the volume was 1.2 times that of the same period last year.



Main data

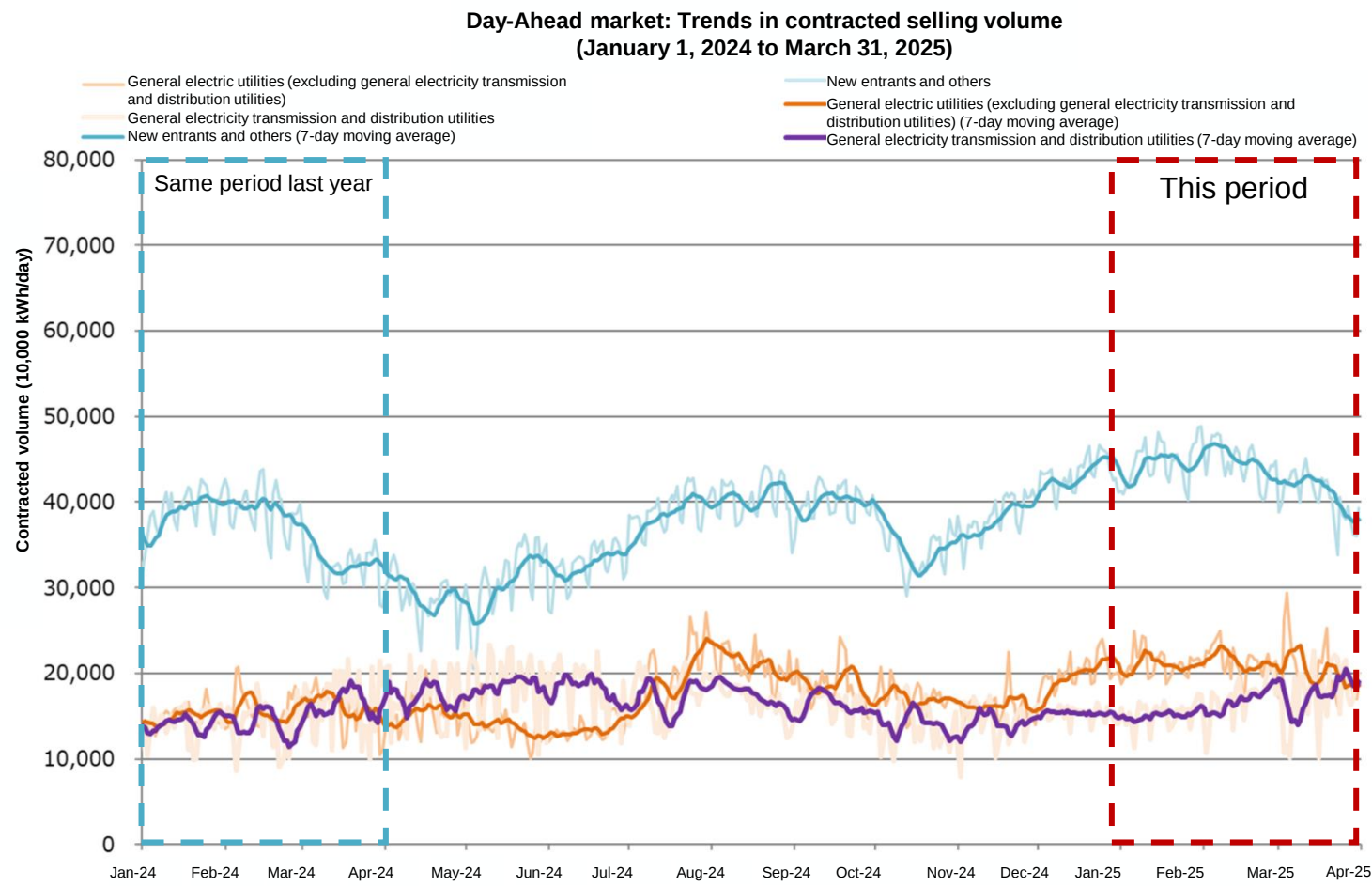
Contracted volume (January to March 2025)
72.7 billion kWh

Comparison with the contracted volume for the same period last year (vs. January to March 2024)
1.2 ×

* Gross bidding by general electric utilities has been suspended since October 1, 2023.

Contracted selling volume in the day-ahead market by business operator category

- The contracted selling volume in the day-ahead market for this period was 18.7 billion kWh for general electric utilities (excluding general electricity transmission and distribution utilities), 38.9 billion kWh for new entrants and other business operators, and 15.0 billion kWh for general electricity transmission and distribution utilities.
- In year-on-year comparison, the volume was 1.3 times that of the same period last year for general electric utilities, 1.2 times for new entrants and other business operators, and 1.1 times for general electricity transmission and distribution utilities.



Main data

Contracted selling volume by general electric utilities (excluding general electricity transmission and distribution utilities) (January to March 2025)
18.7 billion kWh
Comparison with the contracted selling volume by general electric utilities (excluding general electricity transmission and distribution utilities) for the same period last year (vs. January to March 2024)
1.3 ×
Contracted selling volume by new entrants and other business operators (January to March 2025)
38.9 billion kWh
Comparison with the contracted selling volume by new entrants and other business operators for the same period last year (vs. January to March 2024)
1.2 ×
Contracted selling volume by general electricity transmission and distribution utilities (January to March 2025)
15.0 billion kWh
Comparison with the contracted selling volume by general electricity transmission and distribution utilities for the same period last year (vs. January to March 2024)
1.1 ×

* The contracted FIT selling volume by general electricity transmission and distribution utilities has been excluded from the contracted selling volume by general electric utilities, and a new line plotting the contracted selling volume by general electricity transmission and distribution utilities has been added.

* General electric utilities include Hokkaido Electric Power, Tohoku Electric Power, TEPCO Energy Partner, TEPCO Renewable Power, Chubu Electric Power Miraiz, Hokuriku Electric Power, Kansai Electric Power, Chugoku Electric Power, Shikoku Electric Power, Kyushu Electric Power, and JERA.

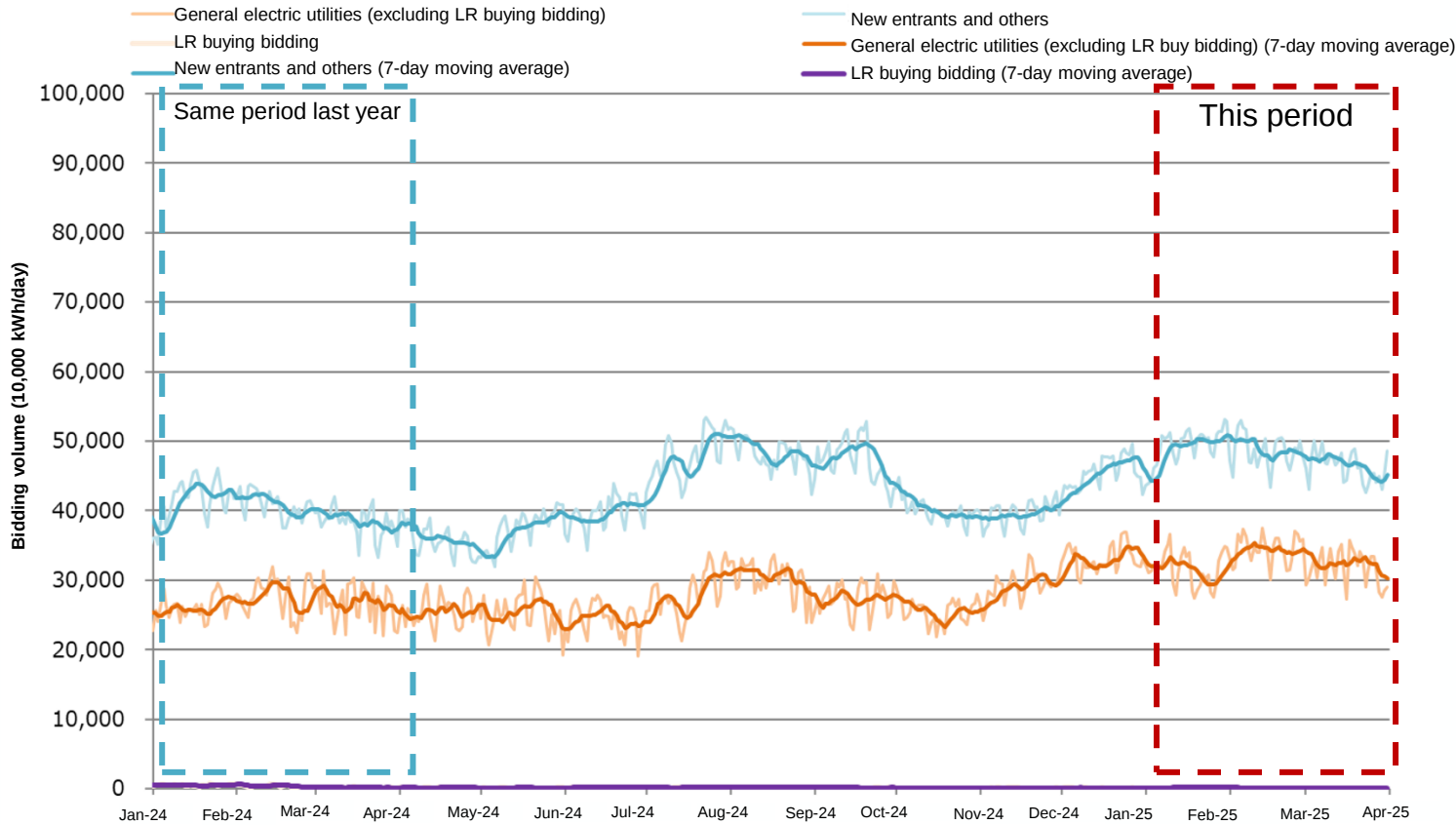
* General electricity transmission and distribution utilities include Hokkaido Electric Power Network, Tohoku Electric Power Network, TEPCO Power Grid, Chubu Electric Power Grid, Hokuriku Electric Power Transmission and Distribution, Kansai Electric Power Transmission and Distribution, Chugoku Electric Power Network, Shikoku Electric Power Transmission and Distribution, and Kyushu Electric Power Transmission and Distribution.

* Gross bidding by general electric utilities has been suspended since October 1, 2023.

Contracted buying volume in the day-ahead market by business operator category

- The contracted buying volume in the day-ahead market for this period was 29.3 billion kWh for general electric utilities (excluding LR buying bidding) and 43.2 billion kWh for new entrants and other business operators, and the contracted LR buying volume by general electricity transmission and distribution utilities was 0.1 billion kWh.
- In year-on-year comparison, the volume was 1.2 times that of the same period last year for general electric utilities (excluding LR buying bidding) and 1.2 times for new entrants and other business operators.
- The market condition continues where the contracted buying volume by general electric utilities exceeds their contracted selling volume. Also for new entrants and other business operators, their contracted buying volume has remained above their contracted selling volume, since the January to March 2024 period.

Day-Ahead Market: Trends in contracted buying volume
(January 1, 2024 to March 31, 2025)



Main data

Contracted buying volume by general electric utilities (excluding LR buying bidding)
(January to March 2025)

29.3 billion kWh

Comparison with the contracted buying volume by general electric utilities for the same period last year (excluding LR buy bidding)
(vs. January to March 2024)

1.2 ×

Contracted buying volume by new entrants and other business operators
(January to March 2025)

43.2 billion kWh

Comparison with the contracted buying volume by new entrants and other business operators for the same period last year
(vs. January to March 2024)

1.2 ×

Contracted LR buying volume by general electricity transmission and distribution utilities
(January to March 2025)

0.1 billion kWh

Comparison with the contracted LR buying volume by general electricity transmission and distribution utilities for the same period last year
(vs. January to March 2024)

0.4 ×

* General electric utilities include Hokkaido Electric Power, Tohoku Electric Power, TEPCO Energy Partner, TEPCO Renewable Power, Chubu Electric Power Miraiz, Hokuriku Electric Power, Kansai Electric Power, Chugoku Electric Power, Shikoku Electric Power, Kyushu Electric Power, JERA, and general electricity transmission and distribution utilities.

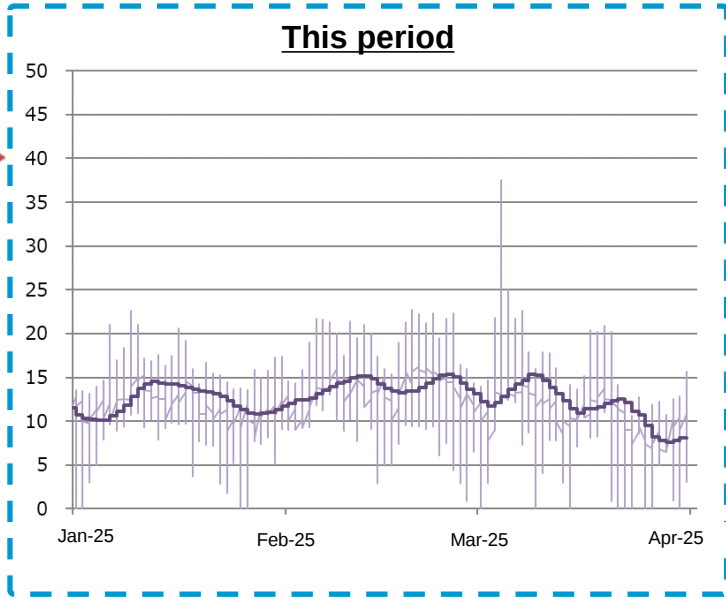
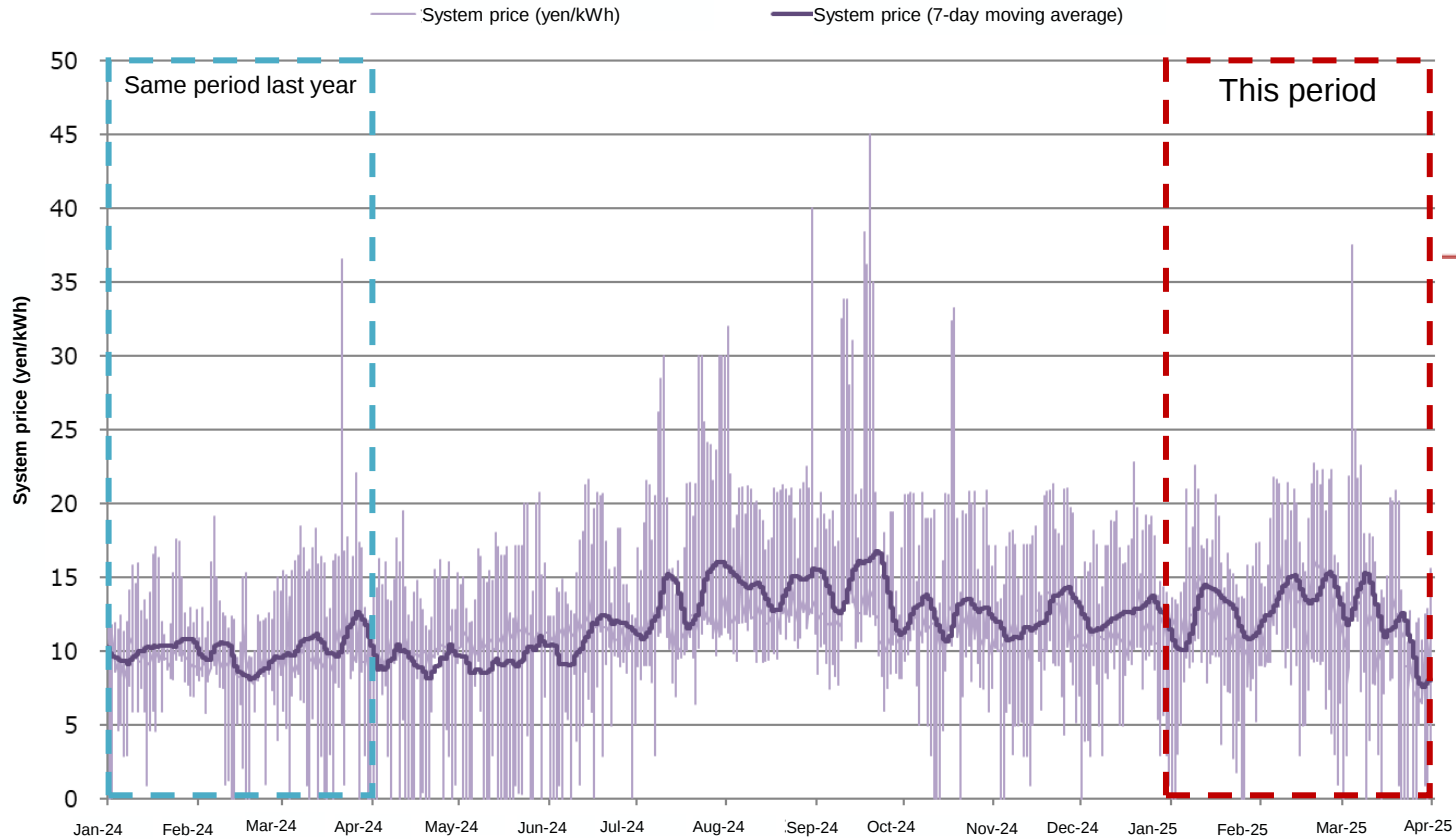
* General electricity transmission and distribution utilities include Hokkaido Electric Power Network, Tohoku Electric Power Network, TEPCO Power Grid, Chubu Electric Power Grid, Hokuriku Electric Power Transmission and Distribution, Kansai Electric Power Transmission and Distribution, Chugoku Electric Power Network, Shikoku Electric Power Transmission and Distribution, and Kyushu Electric Power Transmission and Distribution.

* Gross bidding by general electric utilities has been suspended since October 1, 2023.

System price in the day-ahead market

- The average system price in the day-ahead market for this period was 12.51 yen/kWh. It rose up to 37.55 yen/kWh on March 4. This was likely caused by a reduction in the supply capacity resulting from periodic inspection of thermal power plants, etc., combined with a soaring demand due to the temperature drop in March.
- The system price increased by 2.45 yen/kWh compared to the average of 10.06 yen/kWh for the same period last year.
(LNG spot price increased from an average of \$9.3/MMBtu for the same period last year to an average of \$14.1/MMBtu for this period. The yen also strengthened, with the exchange rate shifting from an average of 148.2 yen per dollar for the same period last year to an average of 152.8 yen per dollar for this period.)

Day-Ahead Market: Trends in system prices
(January 1, 2024 to March 31, 2025)



Main data

Unit: yen/kWh

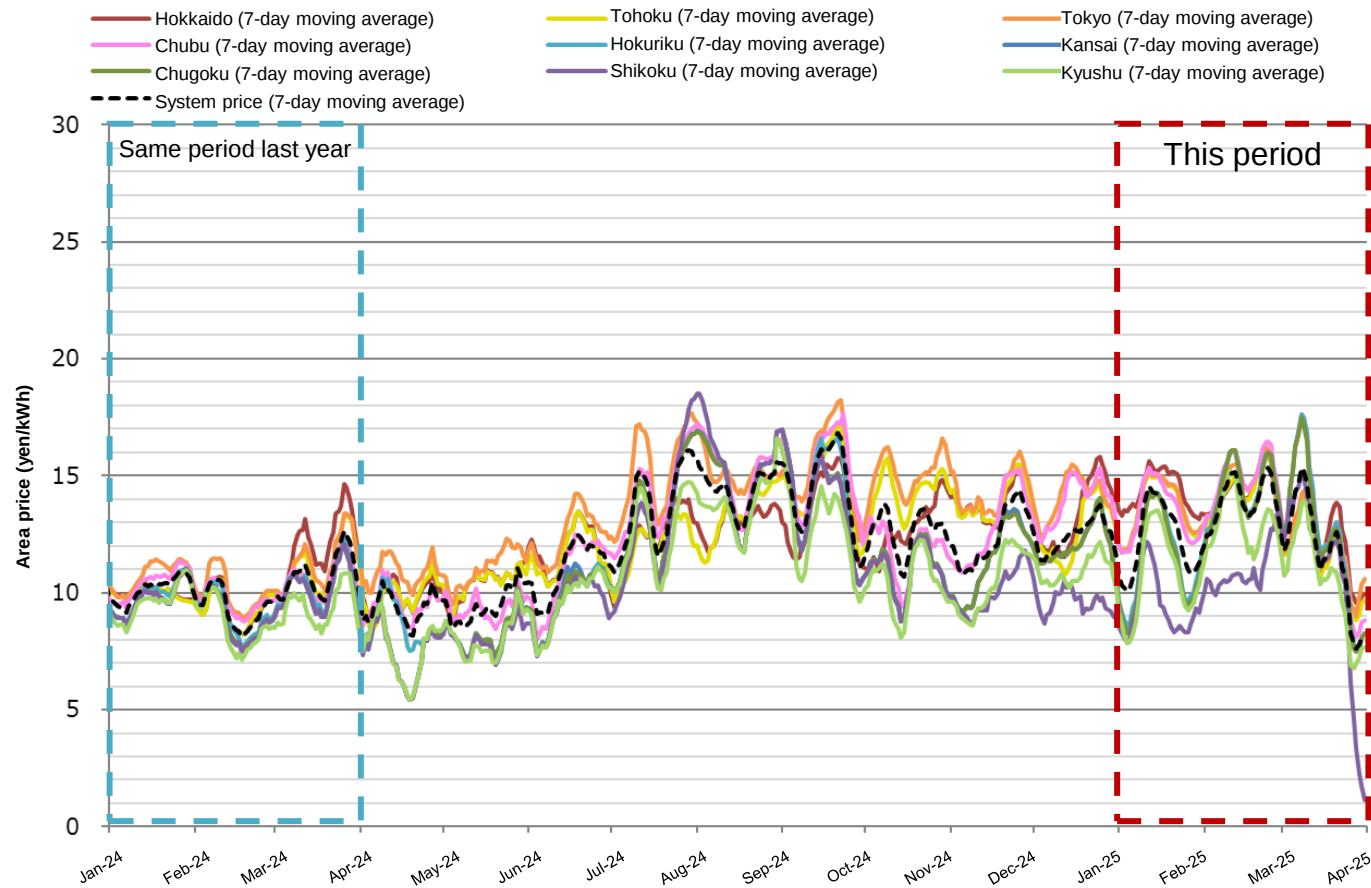
	This period	Same period last year	Difference
Average system price	12.51	10.06	+2.45
Highest price	37.55	36.59	+0.96
Lowest price	0.01	0.01	+0.00

*1 Highest price for this period: 1 day, 1 frame in total
*2 Lowest price for this period: 13 days, 100 frames in total

Area price in the day-ahead market

- The average area prices in the day-ahead market for this period surpassed those for the same period last year in all areas, influenced by more days with soaring prices (to 30 yen/kWh or more; increased from 2 days in the same period last year to 10 days in this period).
- In the western area, the price difference between areas widened due to a rise in the market split rates, and the Shikoku area had the lowest area price. This trend is presumably caused by the rise in the market split rates with Honshu, attributable to increased power flow due to an increase in the selling volume at lower prices, as well as reduced service capacity arising from Kansai-Shikoku interconnection line work and other factors. Especially in late March, the Chugoku-Shikoku interconnection line was suspended for inspection and maintenance following a forest fire, which plummeted the area price.

Day-Ahead Market: Trends in area price
(January 1, 2024 to March 31, 2025)



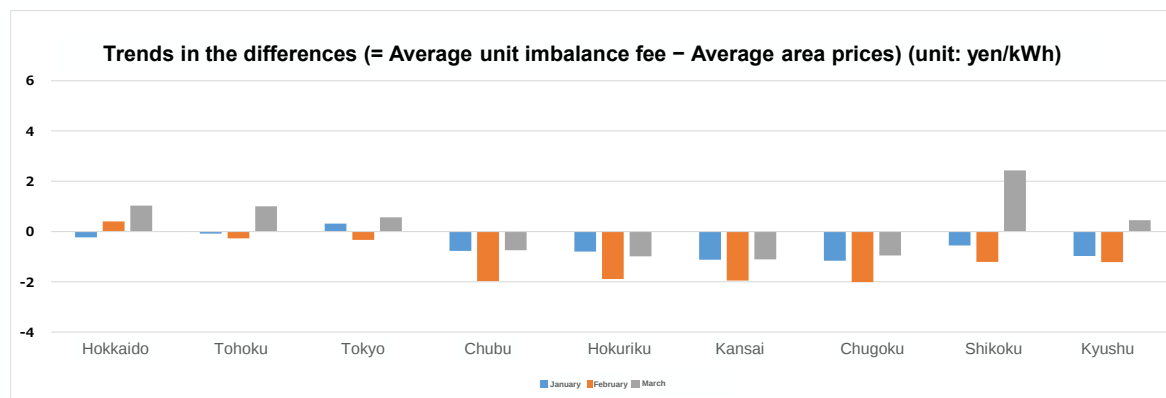
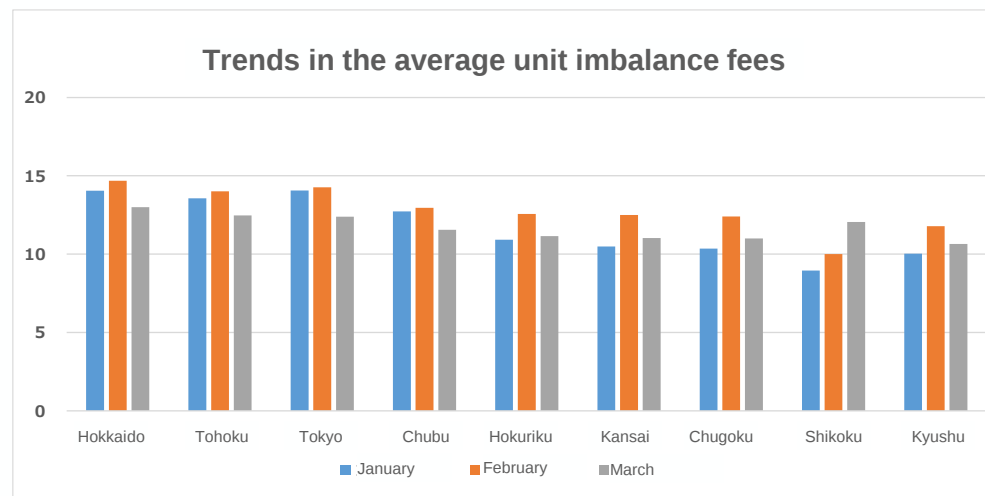
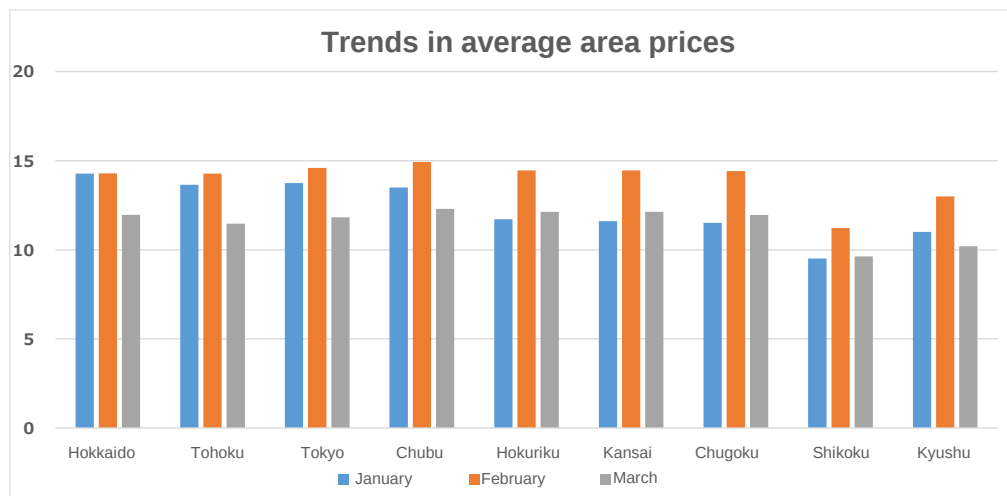
Average price during the period

Unit: yen/kWh

	This period	Same period last year	Difference
System price	12.51	10.06	2.45
Hokkaido	13.48	10.48	3.00
Tohoku	13.09	10.16	2.94
Tokyo	13.35	10.71	2.64
Chubu	13.53	10.20	3.32
Hokuriku	12.71	9.71	3.00
Kansai	12.67	9.55	3.13
Chugoku	12.57	9.54	3.02
Shikoku	10.08	9.52	0.56
Kyushu	11.35	9.16	2.19

Unit imbalance fees and area prices

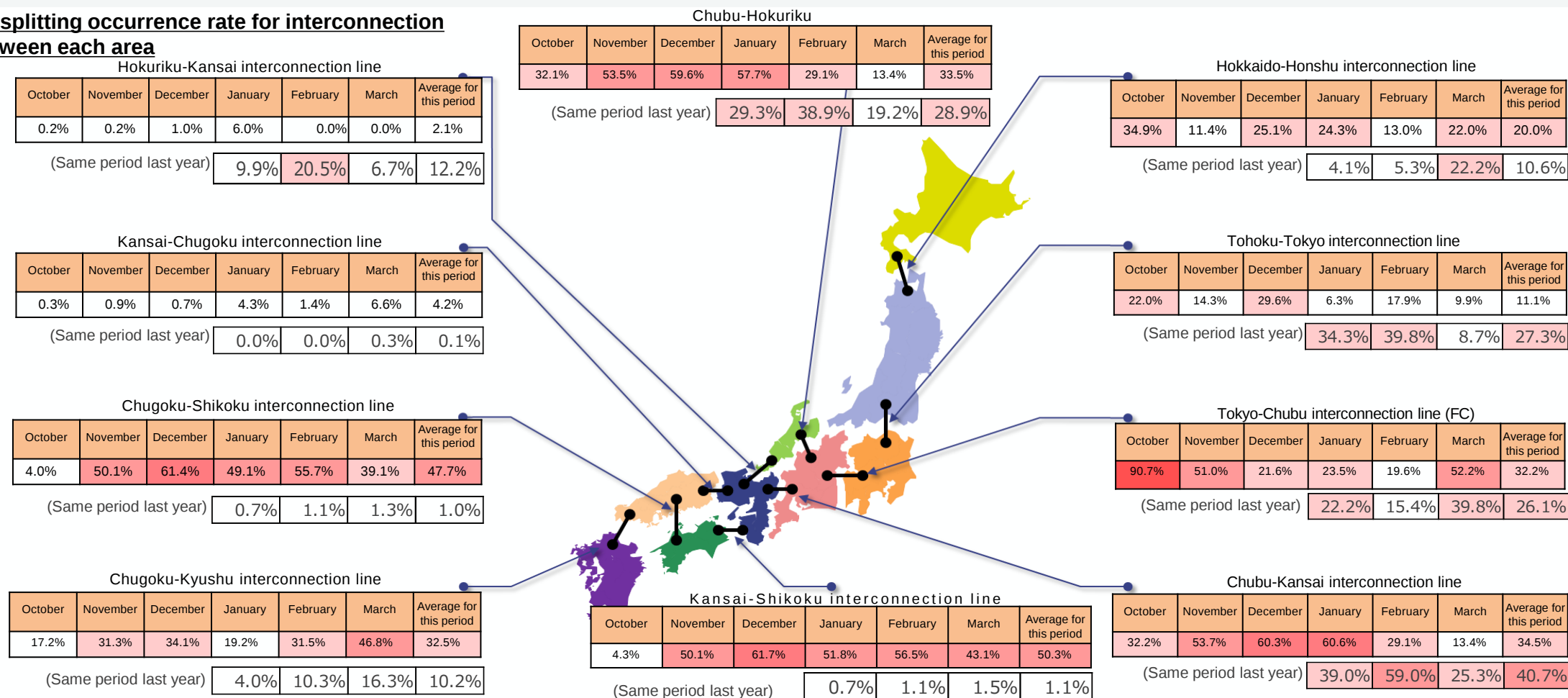
- A comparison of trends in the unit imbalance fees and area prices in each area (monthly averages) indicates a discrepancy of about 2 yen for Chubu, Hokuriku, Kansai, and Chugoku in February and Shikoku in March. In general, the area prices mostly exceeded the unit imbalance fees.
- The differences between the two values were 2.43 yen/kWh at the maximum, 0.08 yen/kWh at the minimum, and 0.98 yen/kWh on average.



Day-Ahead market splitting status between areas

- The average market split occurrence rates were relatively high in the western area during this period, at the 50% level for Kansai-Shikoku, at the 40% level for Chugoku-Shikoku, and at the 30% level for Tokyo-Chubu (FC), Chubu-Kansai, Chubu-Hokuriku, and Chugoku-Kyushu. Of which, the rates for Kansai-Shikoku and Chugoku-Shikoku increased drastically compared to the same period last year (from an average of around 1% to an average of about 50%), and this trend has continued since November last year. This was likely caused by an increase in the selling volume at low prices, which led to a rise in the power flow and split rates. Another underlying factor was the Kansai-Shikoku interconnection line work, resulting in reduced service capacity and funneling of power flow to Chugoku-Shikoku. Additionally, in late March, the Chugoku-Shikoku interconnection line was suspended for inspection and maintenance due to a forest fire.
- For Chubu-Kansai and Chubu-Hokuriku, the split rates have been at 50% or higher since last November, due to reduced supply capacity and increased power flow resulting from increased selling volume at low prices and other factors, and this situation is expected to have been continuing in January as well. The rise in the split rate for Chugoku-Kyushu to slightly below 50% in March is assumed to be caused by the change (reduction) in service capacity limitation, in addition to increased power flow toward Chugoku.
- In addition, the split rate for Tokyo-Chubu was greater than 50% in March, which was likely due to a drop in service capacity from interconnection line work.

Monthly splitting occurrence rate for interconnection lines between each area

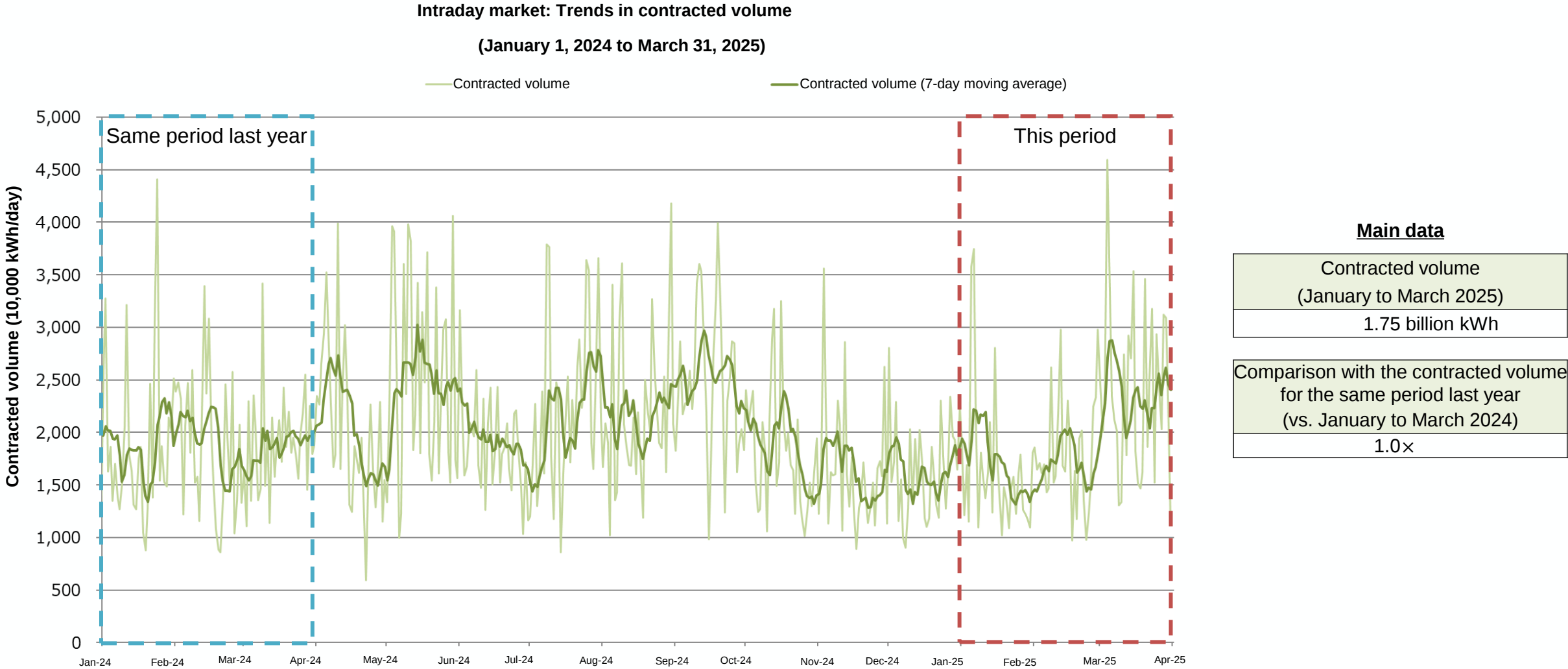


* The numbers (percentages) in the tables show the market splitting occurrence rate in each interconnection line, which is the number of products in which market splitting occurred as a percentage of the number of products handled in each month (48 frames per day every 30-minutes x number of days).

* Occurrences of market splitting include those caused by interconnection line work.

Contracted volume in the intraday market

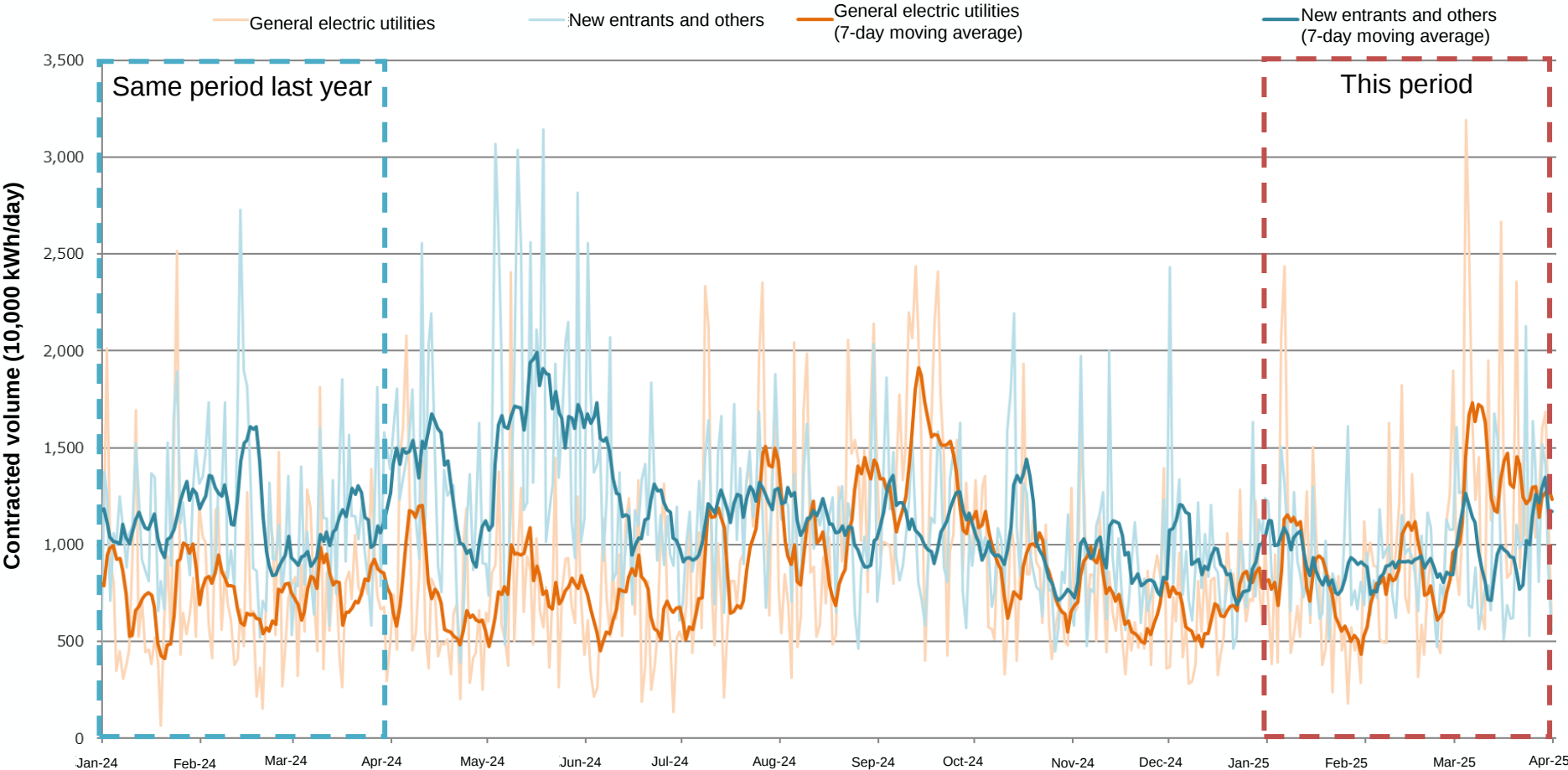
- The contracted volume in the intraday market for this period was 1.75 billion kWh.
- In year-on-year comparison, the volume was 1.0 times that of the same period last year.



Contracted selling volume in the intraday market by business operator category

- The contracted selling volume in the intraday market for this period was 0.91 billion kWh for general electric utilities and 0.84 billion kWh for new entrants and other business operators.
- In year-on-year comparison, the volume was 1.3 times that of the same period last year for general electric utilities, and 0.8 times for new entrants and other business operators.

Intraday market: Trends in contracted selling volume
(January 1, 2024 to March 31, 2025)



Main data

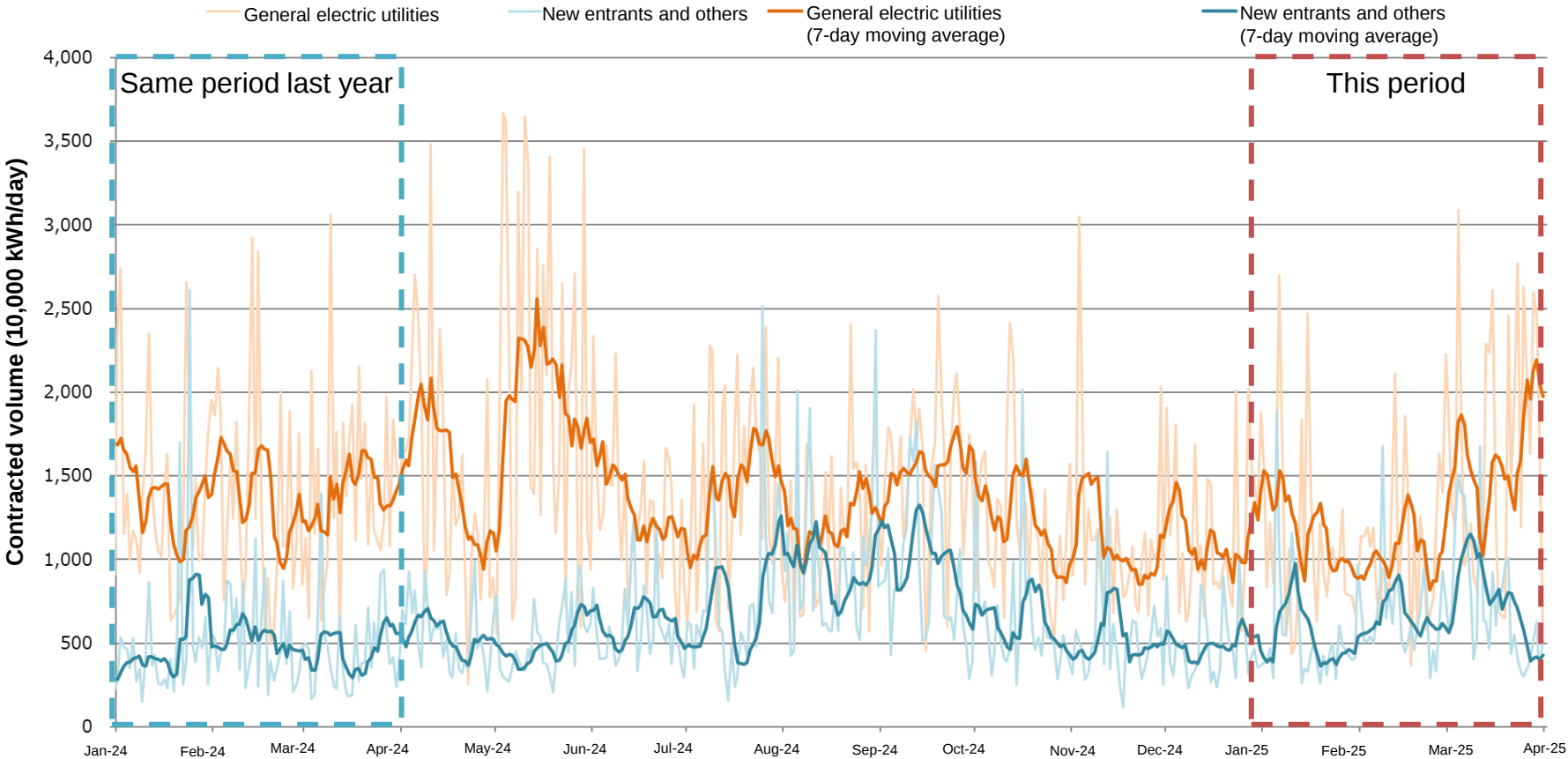
Contracted selling volume by general electric utilities (January to March 2025)
0.91 billion kWh
Comparison with the contracted selling volume by general electric utilities for the same period last year (vs. January to March 2024)
1.3×
Contracted selling volume by new entrants and other business operators (January to March 2025)
0.84 billion kWh
Comparison with the contracted selling volume by new entrants and other business operators for the same period last year (vs. January to March 2024)
0.8×

* General electric utilities include Hokkaido Electric Power, Tohoku Electric Power, TEPCO Energy Partner, TEPCO Renewable Power, Chubu Electric Power Miraiz, Hokuriku Electric Power, Kansai Electric Power, Chugoku Electric Power, Shikoku Electric Power, Kyushu Electric Power, and JERA.

Contracted buying volume in the intraday market by business operator category

- The contracted buying volume in the intraday market for this period was 1.16 billion kWh for general electric utilities and 0.59 billion kWh for new entrants and other business operators.
- In year-on-year comparison, the volume was 0.9 times that of the same period last year for general electric utilities, and 1.3 times for new entrants and other business operators.
- The contracted buying volume by general electric utilities exceeded their contracted selling volume, and the contracted selling volume by the new entrants and other business operators exceeded their contracted buying volume.

Intraday market: Trends in contracted buying volume
(January 1, 2024 to March 31, 2025)



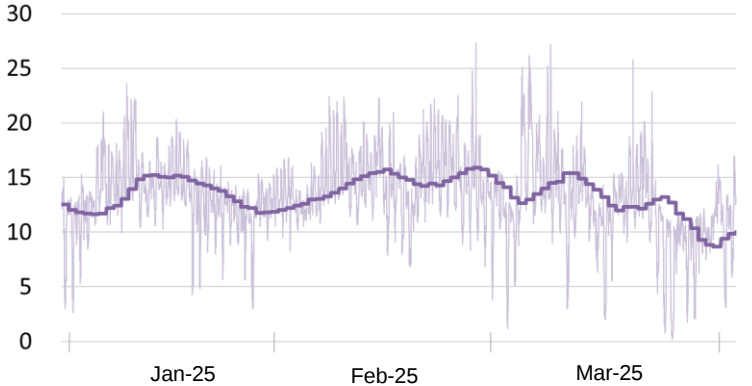
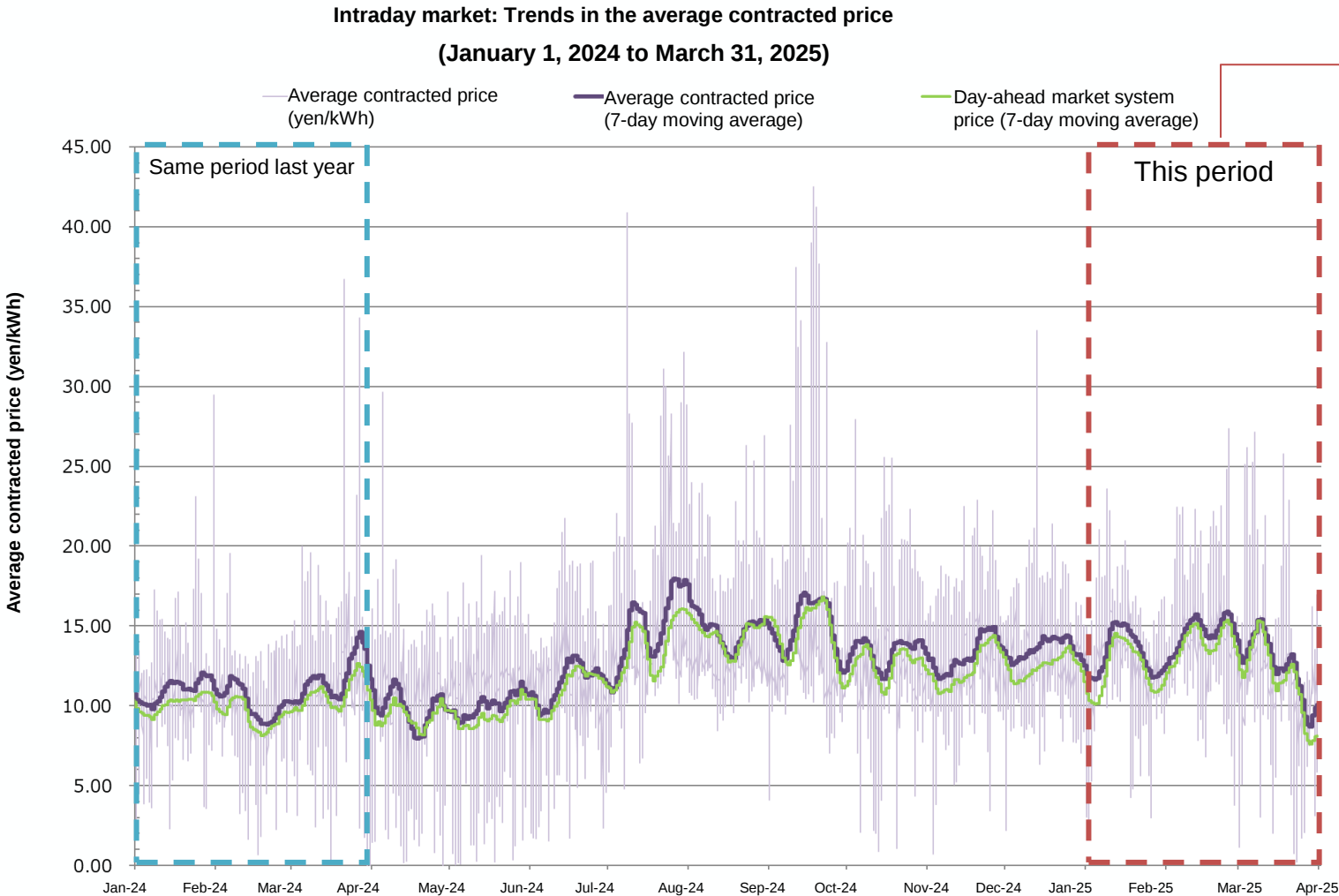
* General electric utilities include Hokkaido Electric Power, Tohoku Electric Power, TEPCO Energy Partner, TEPCO Renewable Power, Chubu Electric Power Miraiz, Hokuriku Electric Power, Kansai Electric Power, Chugoku Electric Power, Shikoku Electric Power, Kyushu Electric Power, and JERA.

Main data

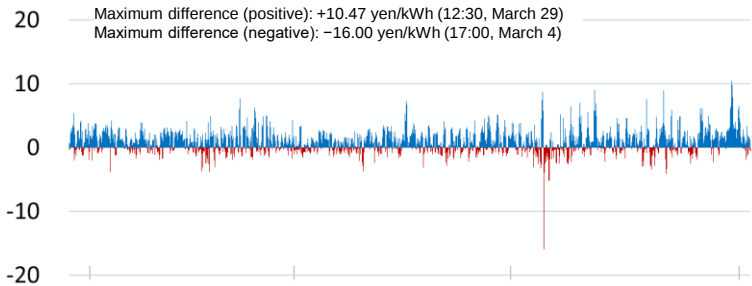
Contracted buying volume by general electric utilities (January to March 2025)
1.16 billion kWh
Comparison with the contracted buying volume by general electric utilities for the same period last year (vs. January to March 2024)
0.9 ×
Contracted buying volume by new entrants and other business operators (January to March 2025)
0.59 billion kWh
Comparison with the contracted buying volume by new entrants and other business operators for the same period last year (vs. January to March 2024)
1.3 ×

Average contracted price in the intraday market

- The average contracted price in the intraday market for this period was 13.32 yen/kWh. This was an increase of approximately 21.5% compared to the average of 10.96 yen/kWh for the same period last year.
On March 4, when the system price reached its maximum value (37.55 yen/kWh), the contracted volume in the intraday market was approximately 46 million kWh (the largest in this period), and the average contracted price in the highest-priced frame was 26.17 yen/kWh (the highest value in the same period was 27.34 yen/kWh on February 25).
- The average contracted price in the intraday market for this period exceeded the average system price (12.51 yen/kWh).



Price difference (Average intraday market price – System price)



Highest price: February 25, 1 frame in total
Lowest price: March 23, 1 frame in total

Main data

Unit: yen/kWh

	This period	Same period last year	Difference
Intraday market average contracted price	13.32	10.96	+2.36
(Reference) Day-ahead market average system price	12.51	10.06	+2.45
Highest price	27.34	36.69	-9.35
Lowest price	0.20	0.01	+0.19

- There was no contracted volume in the forward market for this period.

Contracted volume/bidding volume during the period*1

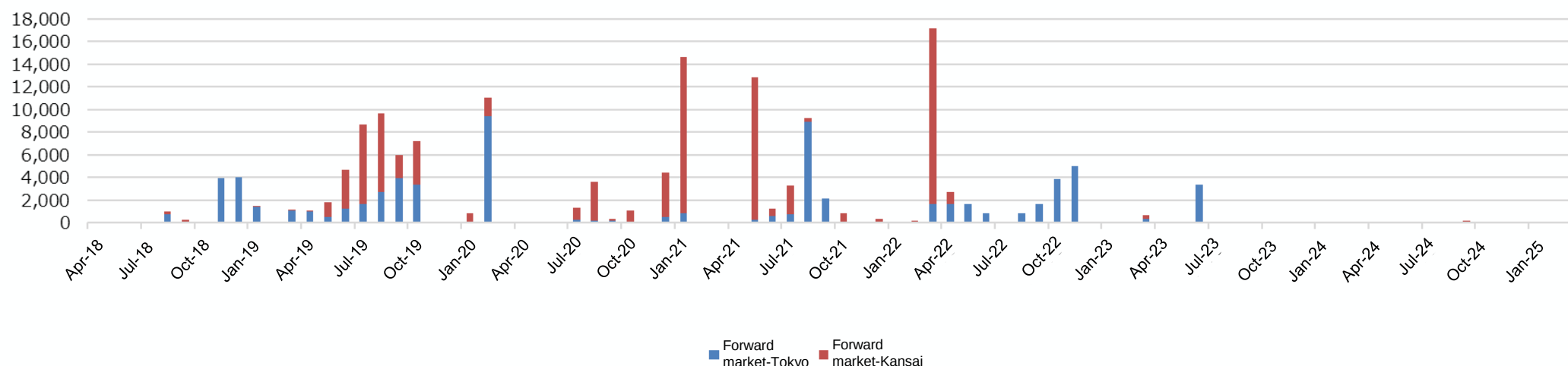
(Unit: MWh)

Item	Area	Total (This period)	Daytime: Weekly	Daytime: Monthly	24-hour: Weekly	24-hour: Monthly	24-hour: Yearly	(Reference) Total (Same period last year)
Contracted volume	Total	0	0	0	0	0	0	0
	Tokyo	0	0	0	0	0	0	0
	Kansai	0	0	0	0	0	0	0

Selling volume	Total	134,624	36,456	88,008	10,160	0	0	848,768
	Tokyo	126,004	29,736	88,008	8,260	0	0	253,428
	Kansai	8,620	6,720	0	1,900	0	0	595,340

Buying volume	Total	76,070	59,640	0	16,430	0	0	5,581,424
	Tokyo	76,070	59,640	0	16,430	0	0	383,814
	Kansai	0	0	0	0	0	0	5,197,610

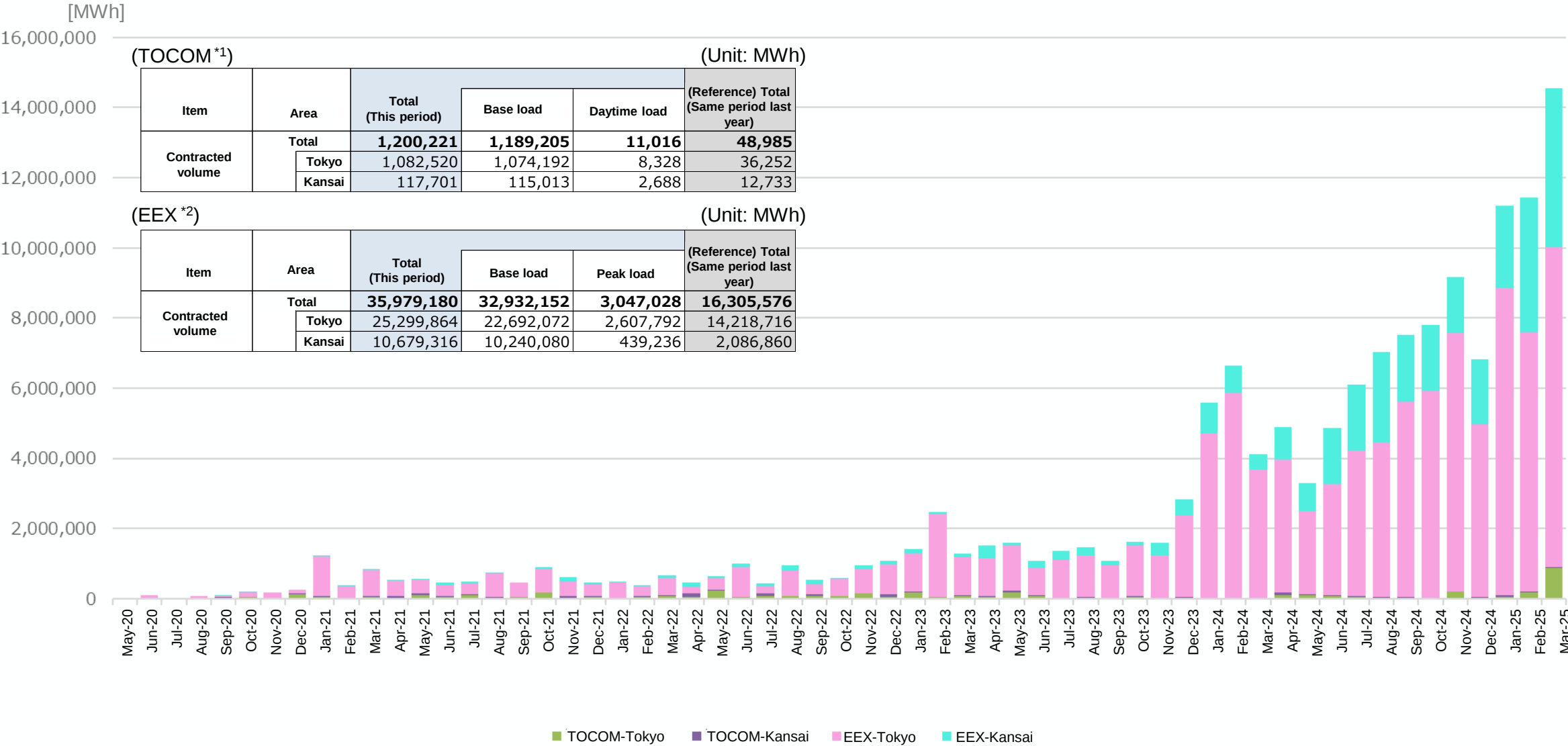
Contracted volume in forward market transactions [MWh]



*1 Forward market data was obtained by converting the contracted volume of each product into kWh (for 24-hour products, total number of days including holidays × 24 hours; for daytime products, number of days excluding holidays × 10 hours) and aggregating the results by contracted month.

Overview of contracted volume in the futures market transactions

- Electricity futures trading contracted for this period was approximately 1.20 billion kWh (24.5 times that of the same period last year) for TOCOM and approximately 35.98 billion kWh (2.2 times that of the same period last year) for EEX.

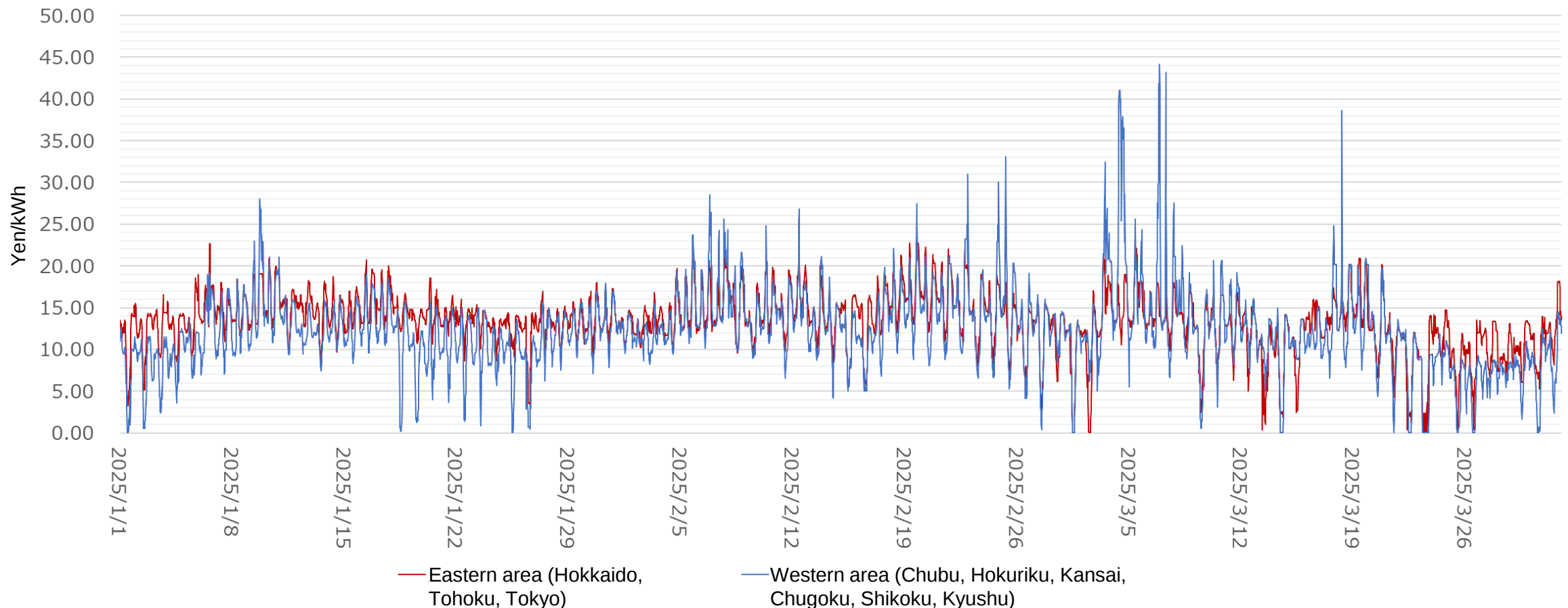


*1 Aggregated based on data published by JPX. The data aggregation method has been changed, effective from the April to June 2024 period.

*2 Aggregated based on data published by EEX.

Trends in day-ahead market prices for the January to March 2025 period 1/2 (East-west comparison)

- In the east-west comparison, the market prices did not change significantly, and remained higher in the east and lower in the west. (Average area prices: for the eastern area it was 13.89 yen/kWh in January, 14.38 yen/kWh in February, and 11.76 yen/kWh in March; for the western area it was 11.47 yen/kWh in January, 13.74 yen/kWh in February, and 11.39 yen/kWh in March.) In March, the prices fell to the 11-yen level in both east and west due to reduced demand and other factors.
- Daily day-ahead market prices exceeded 30 yen/kWh 10 times in total (4 times in western area in February, and 1 time in all areas and 5 times in western area in March; 2 times in the same period last year). The primary likely cause was low temperatures.



Trends in day-ahead market prices for the January to March 2025 period 2/2 (Area comparison)

- When compared on a 3-month average, the areas are categorized as follows: the Hokkaido, Tohoku, Tokyo, and Chubu areas (at the 13-yen level); the Hokuriku, Kansai, and Chugoku areas (12-yen level); the Shikoku area (10-yen level); and the Kyushu area (11-yen level). This is attributable to a rise in the split rates for Chubu-Hokuriku, Chubu-Kansai, Chugoku-Shikoku, and Chugoku-Kyushu.
- On a monthly basis, in January, the split rates for Chubu-Hokuriku and Chubu-Kansai were high at around 60%, and the price difference widened between the Chubu area and the areas from Hokuriku westward as a result. In February, a decrease in the split rates for Chubu-Hokuriku and Chubu-Kansai led to a nearly uniform price range (at the 14-yen level) from the Hokkaido to Chugoku areas. Accordingly, the price difference widened between Honshu and the Shikoku and Kyushu areas. In March, the split rate for Tokyo-Chubu rose, and the prices in the western area soared above 30 yen/kWh several times (5 days in total). Affected by these, the market prices in the Chubu, Hokuriku, Kansai, and Chugoku areas (12.13 yen on average) exceeded that in the Hokkaido, Tohoku, and Tokyo areas (11.76 yen).
- In the Shikoku area, the split rates for Chugoku-Shikoku and Kansai-Shikoku have been high since last November. Further, due to the service suspension of the Chugoku-Shikoku interconnection line for inspection and maintenance following the forest fire that occurred in late March, the Shikoku area continued to have lower prices than other areas in this period.

Trends in area prices and interconnection line split rates for the January to March 2025 period

Year	Month	System price (yen/kWh)	Hokkaido AP (yen/kWh)	Hokkaido- Tohoku split rate (%)	Tohoku AP (yen/kWh)	Tohoku-Tokyo split rate (%)	Tokyo AP (yen/kWh)	Tokyo-Chubu split rate (%)	Chubu AP (yen/kWh)	Chubu- Hokuriku split rate (%)	Chubu-Kansai split rate (%)	Hokuriku AP (yen/kWh)	Hokuriku- Kansai split rate (%)	Kansai AP (yen/kWh)	Kansai- Chugoku split rate (%)	Chugoku AP (yen/kWh)	Chugoku- Shikoku split rate (%)	Chugoku- Kyushu split rate (%)	Shikoku AP (yen/kWh)	Kyushu AP (yen/kWh)
2025	1	12.43	14.27	24.3	13.65	6.3	13.75	23.5	13.49	57.7	60.6	11.72	6.6	11.61	4.3	11.51	49.1	19.2	9.51	11.01
2025	2	13.94	14.29	13.0	14.27	17.9	14.59	19.6	14.93	29.1	29.1	14.46	0.0	14.46	1.4	14.42	55.7	31.5	11.22	12.99
2025	3	11.31	11.97	22.0	11.47	9.9	11.83	52.2	12.29	13.4	13.4	12.13	0.0	12.13	6.6	11.95	39.1	46.8	9.63	10.20
3-month average		12.51	13.48	20.0	13.09	11.1	13.35	32.2	13.53	33.5	34.5	12.71	2.1	12.67	4.2	12.57	47.7	32.5	10.08	11.35

【 Quarterly report 】

- **Wholesale electricity market**
 - JPEX market
 - Day-Ahead market
 - Intraday market
 - Forward transaction market
- **Voluntary efforts by general electric utilities, etc.**
 - Supply of surplus electricity to JEPX market
 - Trading status and sell bid withdrawal status in the intraday market
 - Status of block selling bidding
 - Supply of power source to the market for wholesale electricity utilities
 - Status of bidding, etc. for public hydroelectricity business
 - Status of OTC transactions

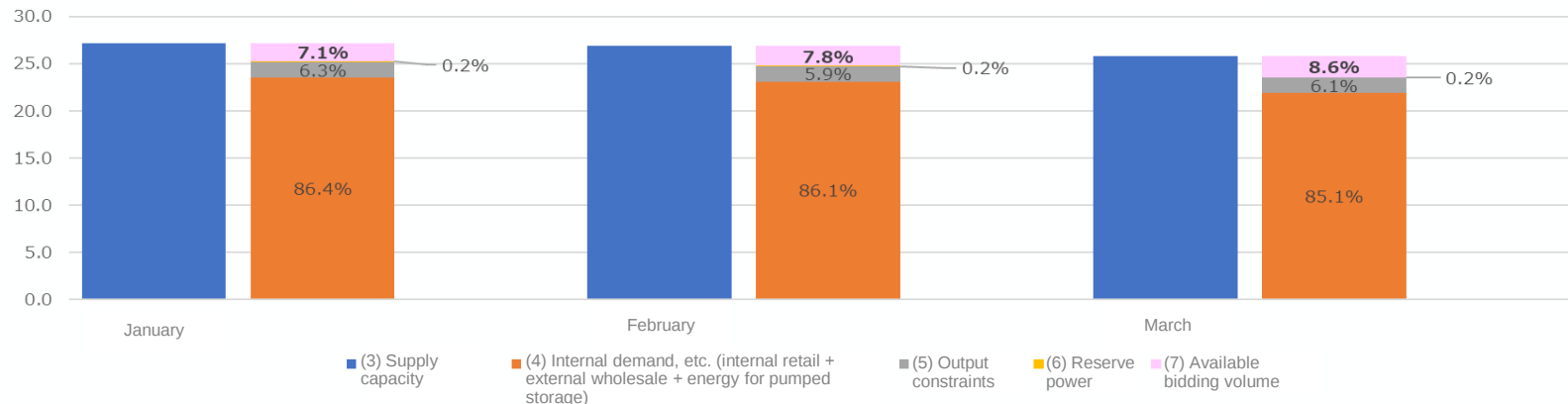
【Medium- to long-term trend report】

- **Wholesale electricity market**
 - JPEX market
 - Trends in contracted volume
 - Trends in contracted price
 - Trends in the market splitting occurrence rate
 - JEPX spot price and fuel cost
- **Retail market**
 - Trends in new entrants share by area
 - Market share by area
 - Trends in electricity unit price
 - Trends in switching
 - Average unit price of low-voltage rates
- **Gas market**
 - Status of OTC transactions of general gas utilities
 - Usage status of Start-up wholesale measure

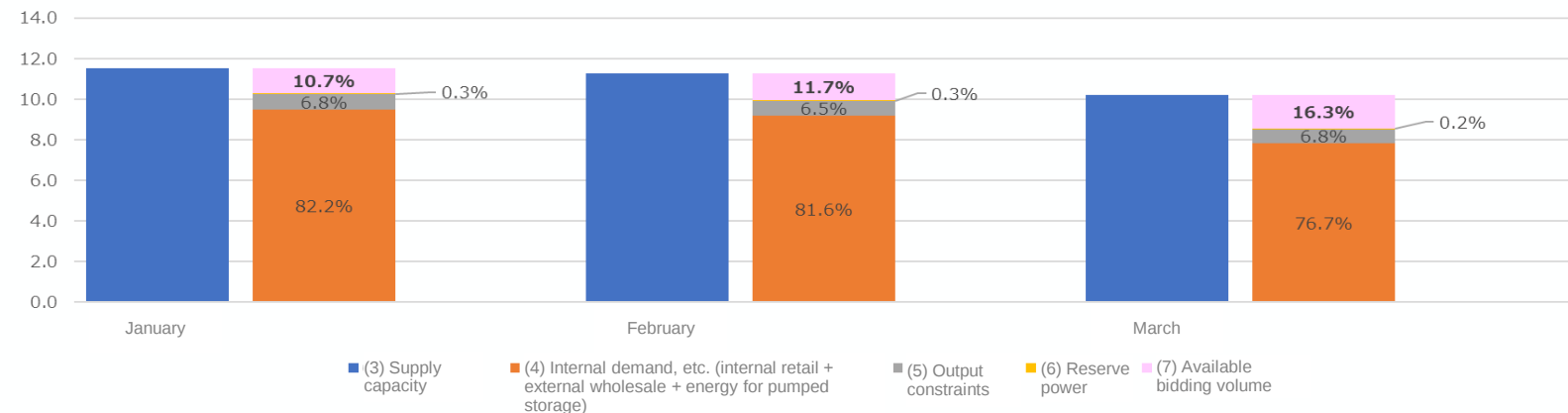
Supply of surplus electricity to JEPX market: Status of available bidding volume for supply capacity

- The total available bidding volume (data aggregated over applicable days each month) was obtained for a total of 21 days with higher spot prices and 9 days with lower spot prices. The former consisted of a total of 10 days with soaring spot and other prices (0 days in January, 4 days in February, 6 days in March) plus 11 days with relatively higher spot prices, while the latter was 3 days each month. As a result, the figures were at the 7–8% levels (7.1% in January, 7.8% in February, 8.6% in March) of the internal supply capacity on days with higher prices, and at the 10–16% levels (10.7% in January, 11.7% in February, 16.3% in March) on days with lower prices.

On 21 days with soaring spot and other prices in January to March 2025



On 9 days with lower spot prices in January to March 2025 (TWh)



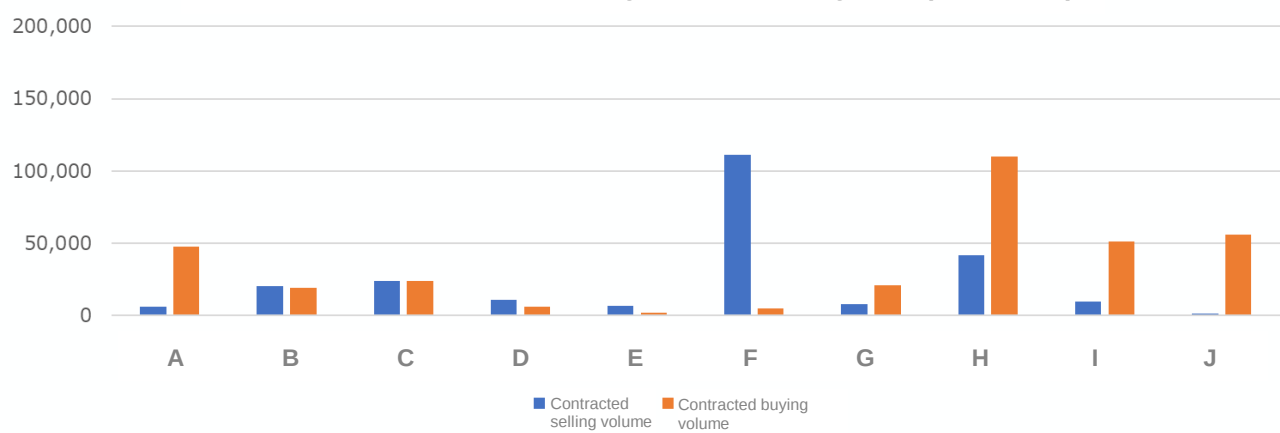
[Date for aggregation of available bidding volume]

- ◆ For the three months, the secretariat designated sampling dates, which consisted of 21 days with the highest spot and other prices, and 9 days with the lowest spot and other prices. Evaluations were performed on data provided by general electric utilities and JERA. Sampling dates for January consist of days with soaring spot and other prices (none), weekdays with the highest daily average SP (January 6, 8, 9, 10, 15, 16, and 17), and 3 weekdays with the lowest daily average SP (January 22, 23, and 24). Sampling dates for February consist of days with soaring spot and other prices (February 12, 22, 24, and 25), weekdays with the highest daily average SP (February 7, 19, and 20), and 3 weekdays with the lowest daily average SP (February 3, 27, and 28). Sampling dates for March consist of the days with soaring spot and other prices (March 3, 4, 5, 6, 7, and 18), weekday with the highest frame SP (March 19), and 3 weekdays with the lowest daily average SP (March 13, 14, and 25).
- ◆ The data was collected in the specified data submission format for days when the price rose to 30 yen/kWh or more in the day-ahead market and the intraday market. * SP: system price

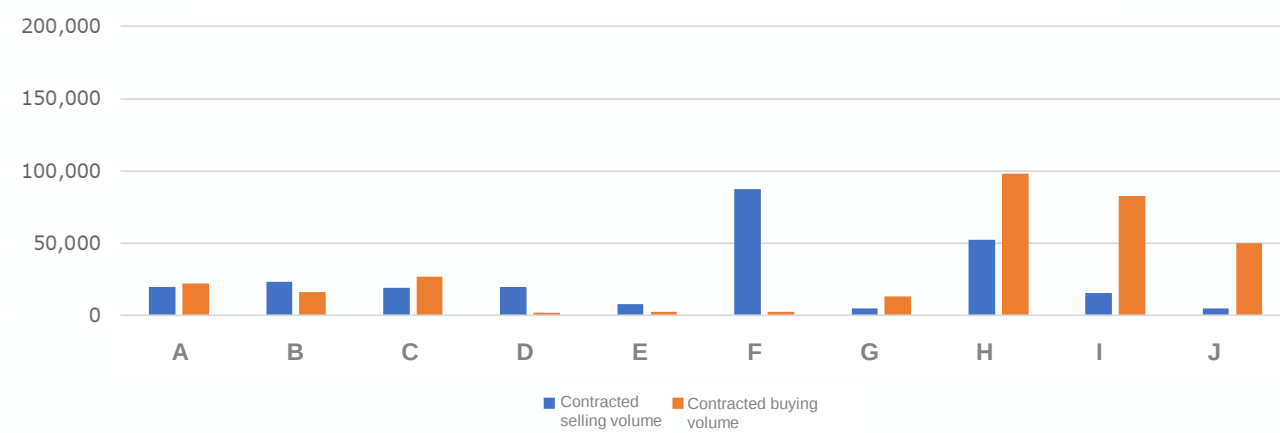
Intraday market for general electric utilities: Contract status by buyer and by seller

- Regarding the contracted volume in the intraday market for general electric utilities and JERA, electric company F was a net seller, while electric companies G, H, I and J were net buyers.

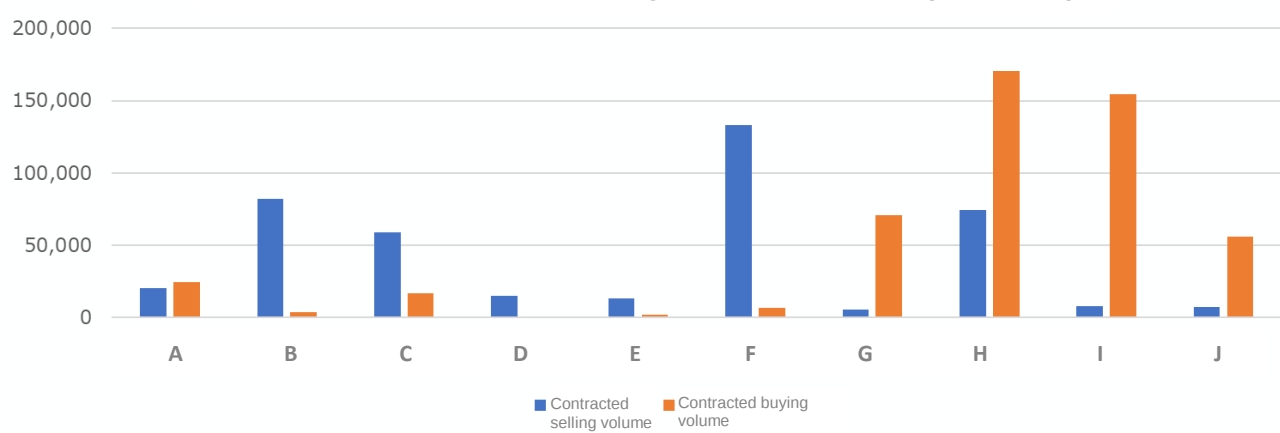
Contracted volume in the intraday market, January 2025 (Unit: MWh)



Contracted volume in the intraday market, February 2025 (Unit: MWh)

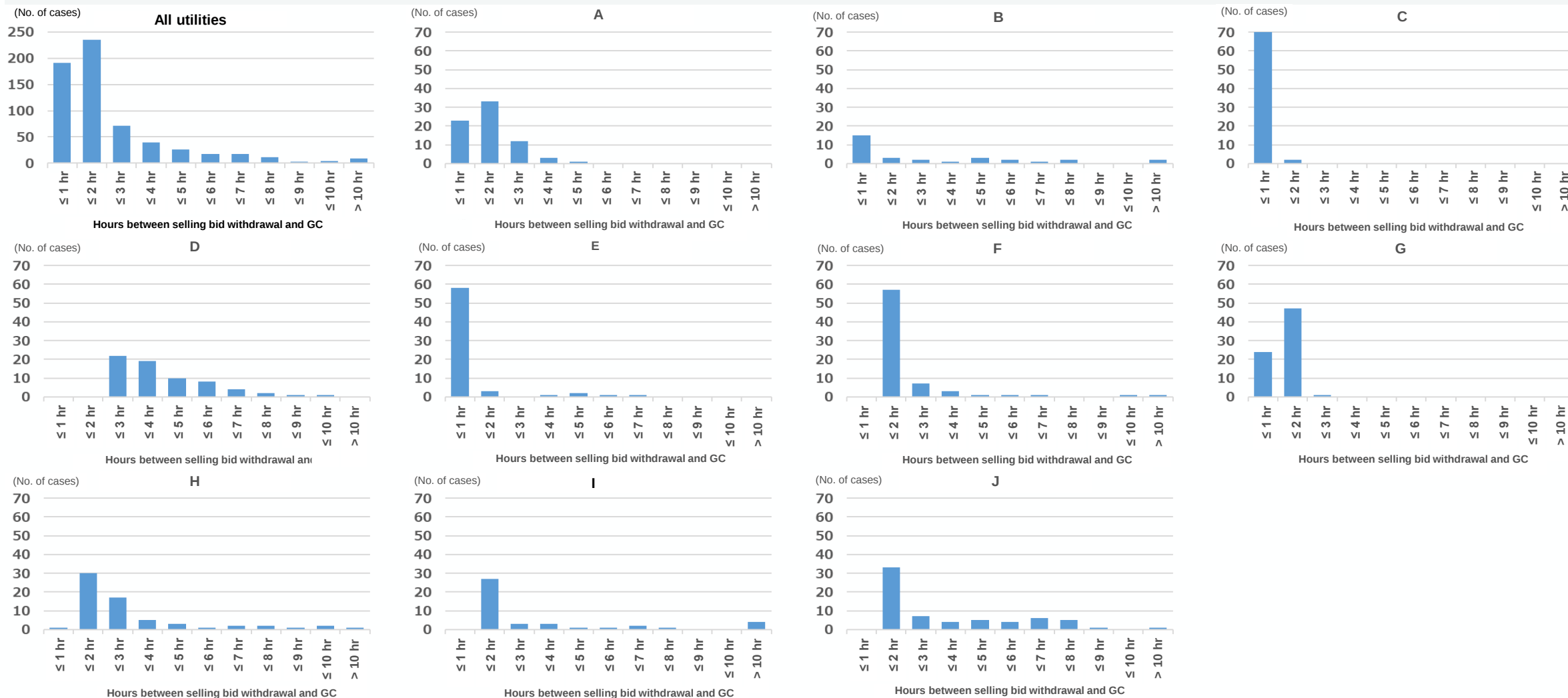


Contracted volume in the intraday market, March 2025 (Unit: MWh)



* Aggregated from JEPX data (undisclosed)
* Calculated for general electric utilities (excluding Okinawa Electric Power) and JERA

- For the three sampling days (January 10, February 26, and March 4), the distribution of the number of utilities was checked to see how many hours before GC they withdrew their selling bids. It was found that the trend of the distribution concentrating in the period “more than one hour up to two hours before GC” has continued. The number of cases corresponding to “up to one hour” was 191 out of the total of 625, at the same level as the previous quarter (197/651). There has been no change in the trend for all companies.



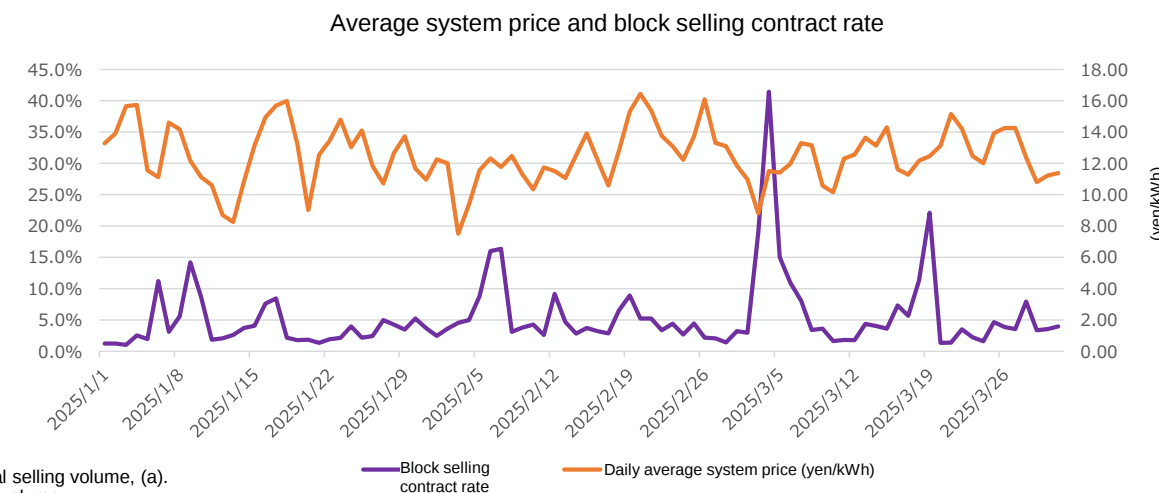
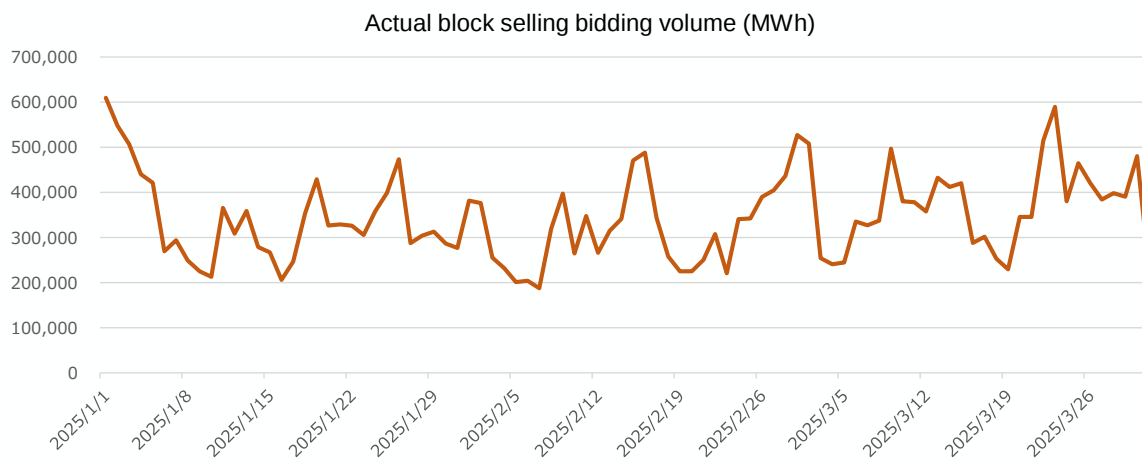
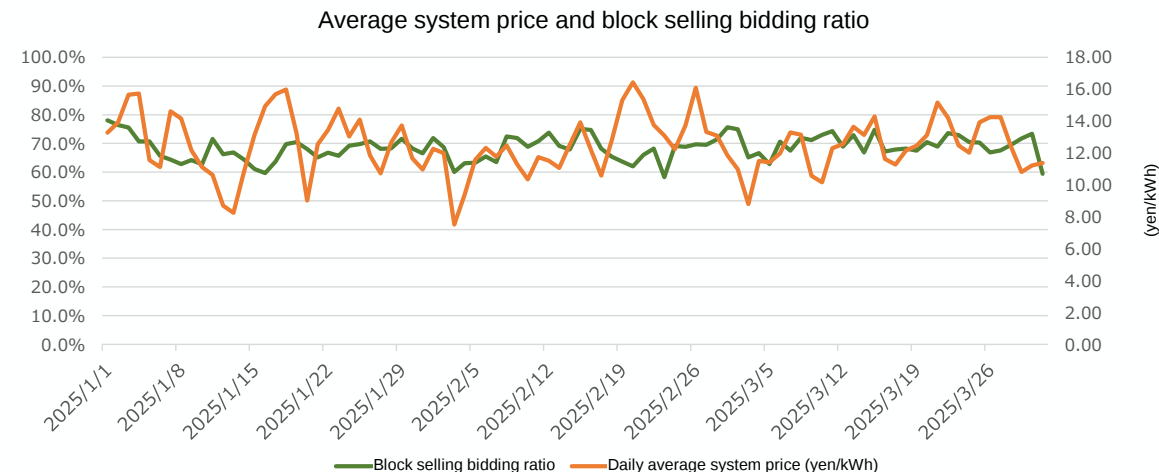
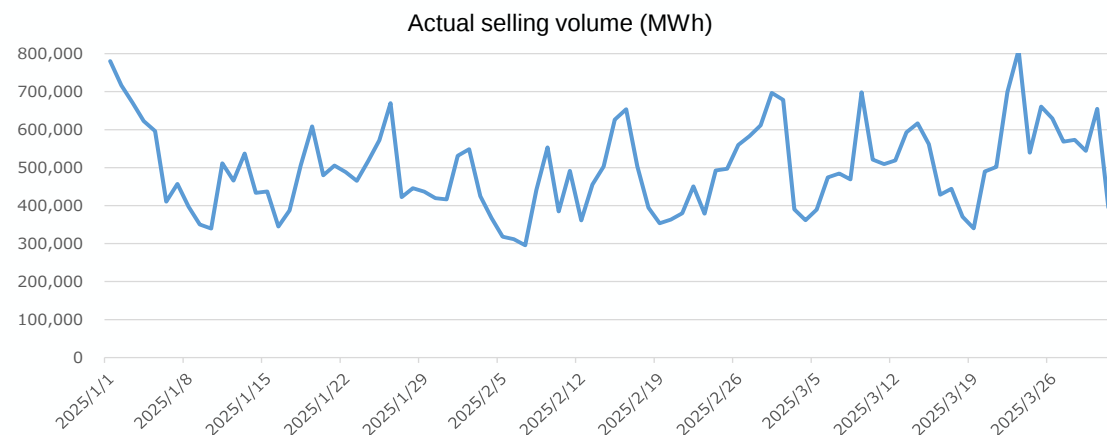
※ The number of selling bids on the board was counted at 59 minutes and 59 seconds past every hour. The time until the GC was calculated with the time after which there were no selling bids on the board, was assumed as the withdrawal time.

※ Only "00 minute" frames (e.g. 01:00) were counted, and "30 minute" frames (e.g. 01:30) were not counted. Frames with always 0 selling bids were excluded from the calculations.

※ The secretariat sampled the characteristic day of each month: for January, the weekday with the highest daily average system price in January; for February, the weekday with the lowest daily average system price in February; for March, the weekday with the highest daily average SP in the three months.)

Status of block selling bidding

- The block selling bidding ratio continues to indicate a trend of being lower on days when the spot prices rise, and being higher on days when spot prices fall.
- The block selling contract rate continues to indicate a trend of being higher on days when spot prices rise and being lower on days when spot prices fall.
- When the day-ahead market prices soar, the block selling bidding volume reduces, and the contract rate tends to rise. Especially on March 4, the contract rate marked a high level at 41.4%.



* Calculated based on data provided by general electric utilities (nine companies excluding Okinawa Electric Power) and JERA.

* The block bidding ratio is calculated as the ratio of the actual block bidding volume for which no buyer has been determined, (b), to the actual selling volume, (a).

(a) Actual selling volume = Total selling volume (for regular bids) – Gross bidding high price buying-back volume – Implicit auction selling volume

(b) Actual block bidding volume = Normal block bidding volume (excluding implicit auctions and gross bidding) + Gross bidding actual block selling volume*

* Gross bidding actual block selling volume = Gross bidding block selling volume – Gross bidding high price buying-back volume. If a negative value is obtained, it is counted as zero.

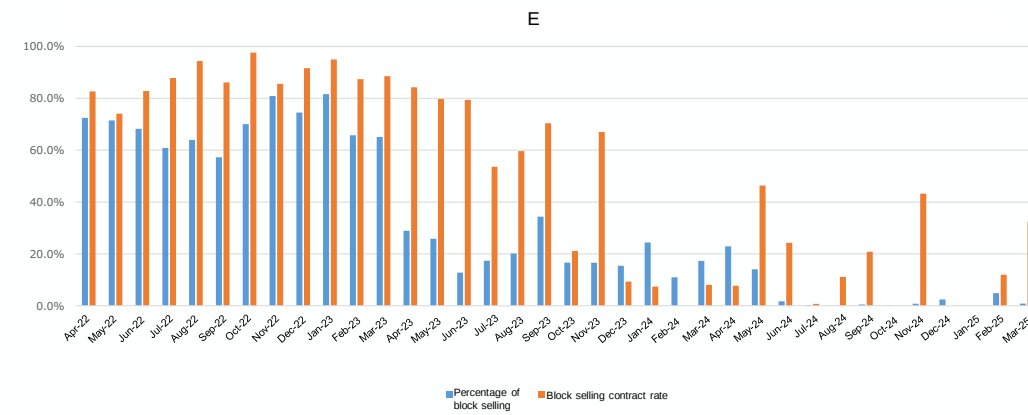
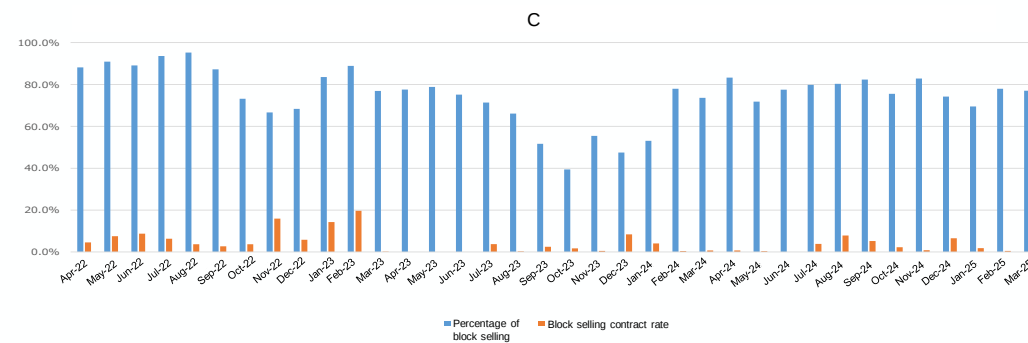
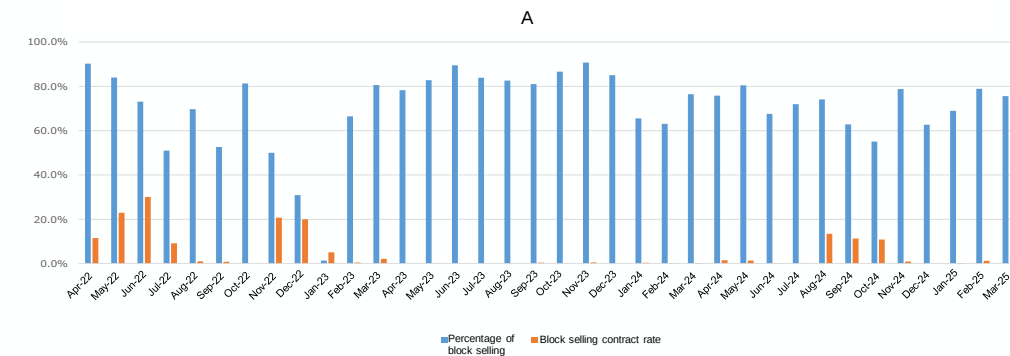
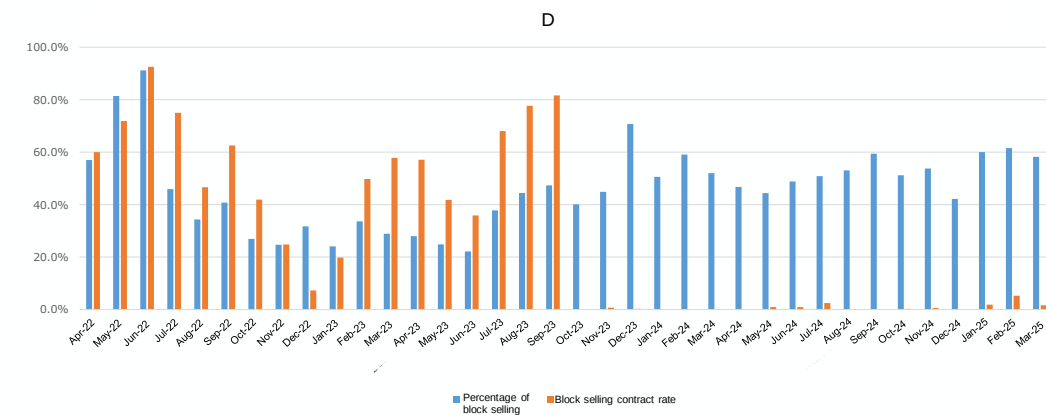
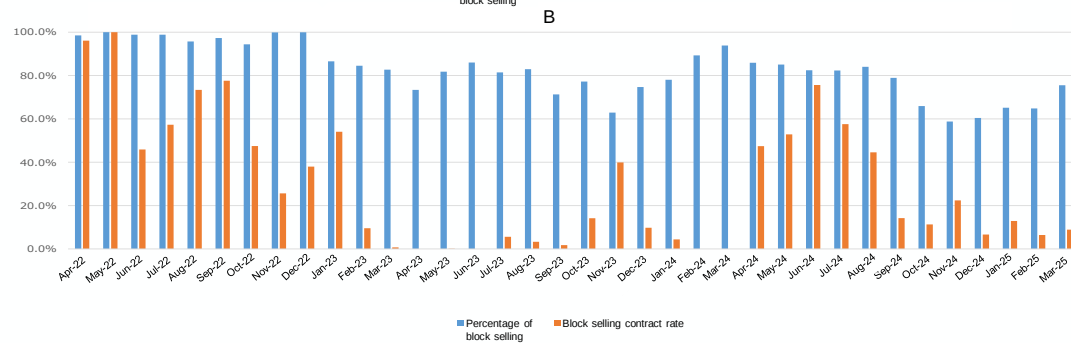
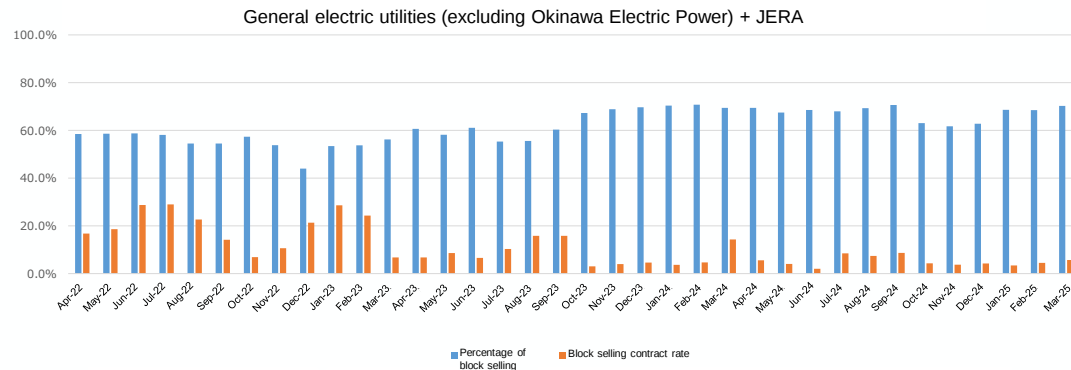
* The block selling contract rate is calculated as the ratio of actual contracted block volume, (c), to actual block bidding volume, (b).

(c) Actual contracted block volume = Normal contracted block volume (excluding implicit auctions and gross bidding) + Gross bidding actual contracted block selling volume**

** Gross bidding actual contracted block selling volume = Gross bidding contracted block selling volume – Gross bidding high price buying-back volume. If a negative value is obtained, it is counted as zero.

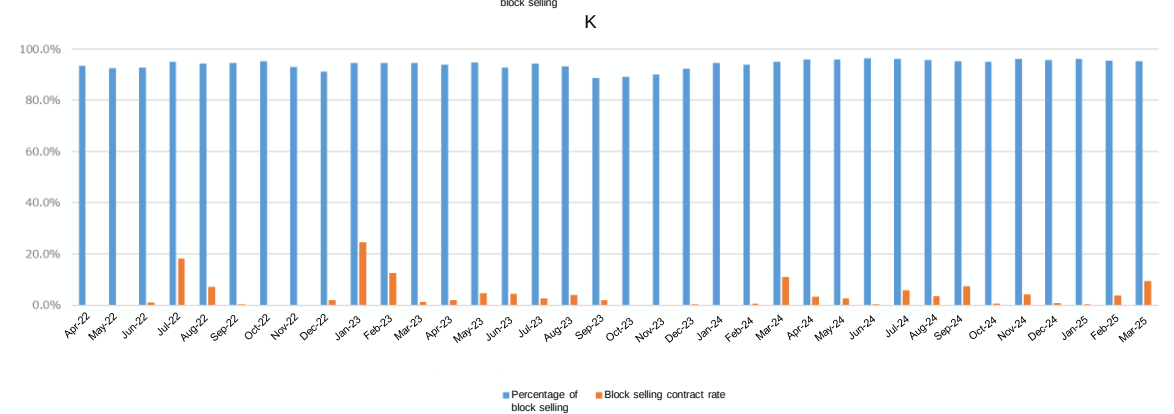
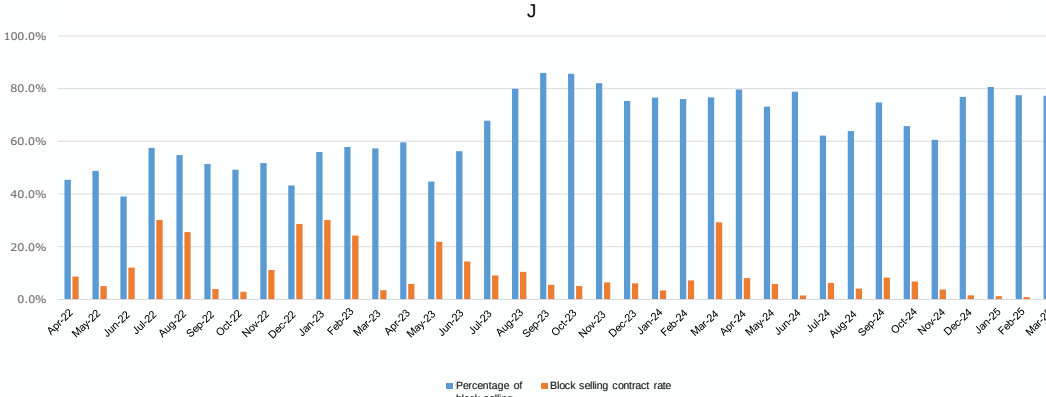
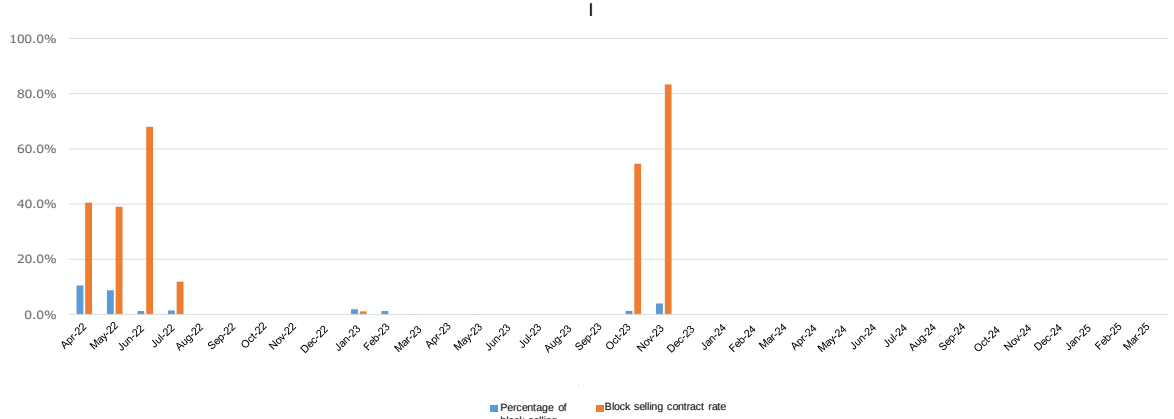
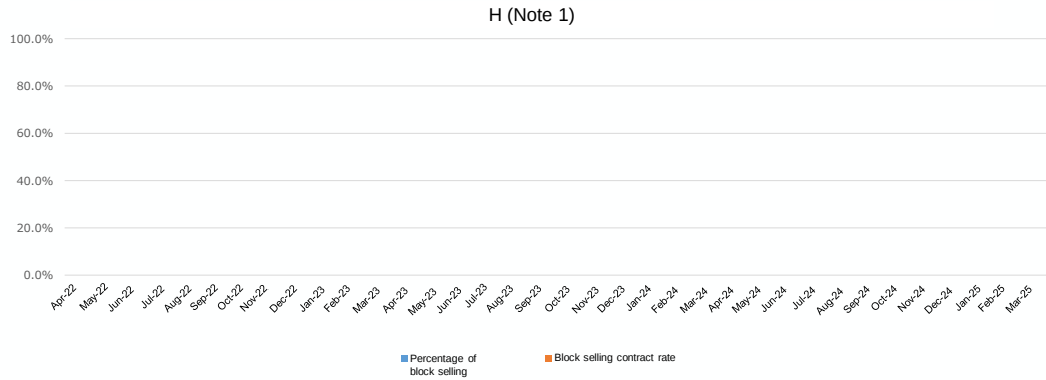
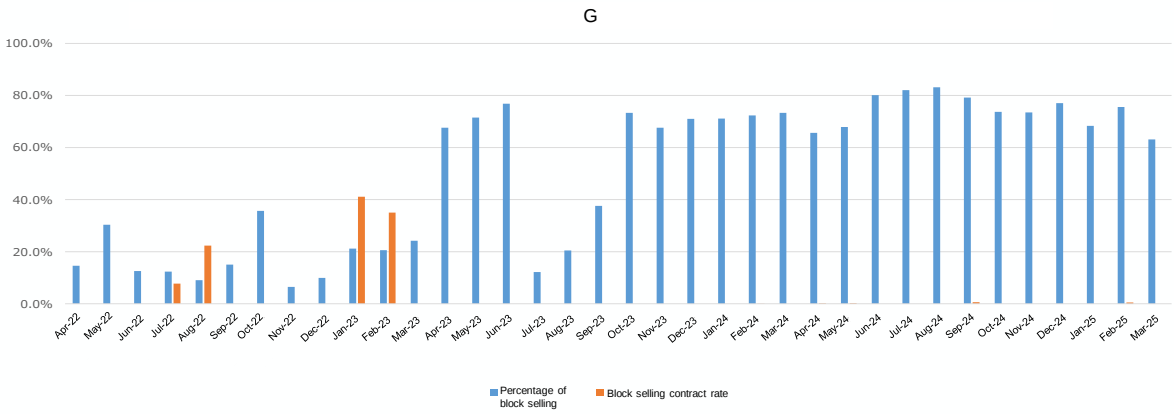
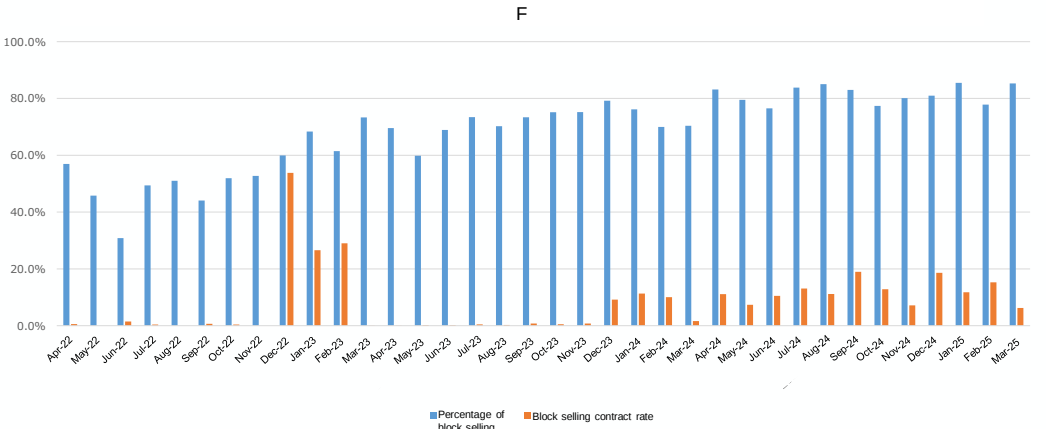
Monthly trends in block selling bidding ratio and contract rate by business operator (1/2)

- Contract rates declined (especially for the electric company D) because, as a result of the suspension of gross bidding, block selling bids for supplying some surplus electricity at 0.01 yen/kWh (for buying at marginal cost) were changed to supply it at a marginal cost, as mentioned earlier.
- The block selling bidding ratio transitioned relatively high, at around 80% for electric companies F and J and above 80% for electric company K.



* Calculated based on data provided by general electric utilities (nine companies excluding Okinawa Electric Power) and JERA.

Monthly trends in block selling bidding ratio and contract rate by business operator (2/2)



* Calculated based on data provided by general electric utilities (nine companies excluding Okinawa Electric Power) and JERA. (Note 1) Electric Company H does not conduct block selling bidding.

Supply of power source to the market for wholesale electricity utilities (J-Power)

- To date, approximately 619,000 kW^{*5} (approximately 5%) of the total of 12 million kW^{*4} has been supplied. No progress has been seen compared to the same period last year.
- Further supply of power has not yet been decided for each company.

Volume of supplied power		Discussion status, etc.
Hokkaido Electric Power	Approximately 200 million kWh supplied per year ^{*3}	Further supply of power is yet to be decided.
Tohoku Electric Power	50,000 kW ^{*2} already supplied	Further supply of power is yet to be decided.
TEPCO EP	30,000 kW ^{*1} already supplied	Further supply of power is yet to be decided.
Chubu Electric Power	18,000 kW ^{*1} already supplied	For the power sources subject to supply to the market, the power supply contracts with J-POWER ended at the end of March 2021 (for the entire volume, including the volume already supplied). Further supply of power is yet to be decided.
Hokuriku Electric Power	10,000 kW ^{*1} already supplied	For the power sources subject to supply to the market, the power supply contracts with J-POWER ended at the end of March 2021 (for the entire volume, including the volume already supplied). Further supply of power is yet to be decided.
Kansai Electric Power	350,000 kW ^{*2} already supplied	Further supply of power is yet to be decided.
Chugoku Electric Power	18,000 kW ^{*1} already supplied	Further supply of power is yet to be decided.
Shikoku Electric Power	30,000 kW ^{*1} already supplied	Further supply of power is yet to be decided.
Kyushu Electric Power	80,000 kW ^{*1} already supplied	Further supply of power is yet to be decided.
Okinawa Electric Power	10,000 kW ^{*1} already supplied	Further supply of power is yet to be decided.

Source: Information provided by general electric utilities

*1: Sending end output, *2: Starting output, *3: Annual total power generation amount, *4: Total power output excluding approximately 5 million kW of pumped storage power plant output, *5: For Hokkaido Electric Power, an estimation from the volume already supplied is indicated for convenience sake.

The data does not include volumes newly supplied to deliver to the base load market.

Status of competitive bidding, etc., for public hydroelectric business

- Local governments manage hydroelectric power generation projects with a total installed capacity of approximately 2.31 million kW. Among them, 1.41 million kW (61%) have been contracted through general competitive bidding. This represents an increase of 0.75 million kW compared to the January to March 2024 period, which is because municipalities with long-term basic contracts ended in FY2023 shifted to general competitive bidding or other options in the April to June 2024 period.
- Of the remaining 0.89 million kW installations, 50% continue to be under discretionary contracts with general electric utilities, and 50% consist of FIT power sources for sale and installations under modification to become eligible for FIT.

Public hydroelectric power generation facilities (as of April 1, 2024)

- Number of power plants: 309
- Total output: Approx. 2.31 million kW

The table to the right shows examples of hydroelectric power sales contracts among 24 public utilities in which power is being delivered to successful bidders determined through competitive bidding or public proposals (as of March 31, 2025)

Business entity	Number of hydroelectric power plants	Total maximum output (kW)	Contract type	Successful bidder
Hokkaido	5	50,500	General competitive bidding	SB Power
Iwate Prefecture	10	133,170	Public proposal	Tohoku Electric Power, Tohoku Electric Power Frontier
	3 ^{*7}	4,900	Public proposal	Tohoku Automotive Industry Green Energy Promotion Association
	1	450	Public proposal	Kuji Regional Energy
	1 ^{*7}	61	Public proposal	Tohoku Electric Power Network => Kuji Regional Energy Co., Ltd.
Akita Prefecture	12	92,900	Public proposal	Tohoku Electric Power, Tohoku Electric Power Frontier
	3 ^{*1}	9,250	Public proposal	Tohoku Network (=> Local Denki specified wholesale)
	1 ^{*8}	8,800	Public proposal	Tohoku Network (=> Kazuno Power specified wholesale)
Yamagata Prefecture	6	50,700	Public proposal	Tohoku Electric Power, Tohoku Electric Power Frontier
	2	8,700	Public proposal	Yamagata Power Supply
	4 ^{*1}	26,600	Public proposal	The Earth Club
	1 ^{*1}	420	Public proposal	Yamagata Power Supply
Tochigi Prefecture	6 ^{*4}	48,200	Public proposal	TEPCO Energy Partner
Gunma Prefecture	6 ^{*5}	43,490	Public proposal	Marubeni Power Retail
	10 ^{*5}	101,300	General competitive bidding	TEPCO Energy Partner
	10 ^{*5,10}	43,042	General competitive bidding	Zero Watt Power
Tokyo	3	36,500	Public proposal	Tokyo Gas
Kanagawa Prefecture	11 ^{*5}	347,589	Public proposal	SB Power
	10 ^{*5}	74,960	Public proposal	TEPCO Energy Partner
Yamanashi Prefecture	5 ^{*5}	42,500	General competitive bidding	Palsystem Power, The Earth Club, UPDATER
	1 ^{*5}	1,100	Public proposal	Visionary Power
	1 ^{*2}	380	Public proposal	Ennet
Nagano Prefecture	22 ^{*1,9}	69,311	Public proposal	Diamond Power, Marubeni Power Retail, UPDATER
Niigata Prefecture	7 ^{*3}	100,200	General competitive bidding	Tohoku Electric Power
Kyoto Prefecture	1	11,000	General competitive bidding	Mitsuuroko Green Energy
Tottori Prefecture	1 ^{*6}	1,100	General competitive bidding	Tottori Citizen's Electric Power
Okayama Prefecture	10 ^{*5}	54,680	General competitive bidding	Zero Watt Power
	1 ^{*2}	180	General competitive bidding	Zero Watt Power
Yamaguchi Prefecture	8 ^{*5}	50,550	Public proposal	Mitsuuroko Green Energy
	1 ^{*2}	260	Public proposal	Mitsuuroko Green Energy
Total		1,412,793		

Total number: 30

Total maximum output: 1,412,793 kW

[61.3% of total hydropower output]

Source: Information provided by municipalities

*1 These numbers were revised because starting from the July to September 2021 report, FIT power sources that had shifted to public proposals or general competitive bidding, have been subjected to adjustment.

(For Nagano Prefecture, four power plants under replacement, etc., to become FIT-eligible, have been included in contracts as they were to start supply in FY2024. As a result, the number was changed from 18 to 22 in the April to June 2024 period.)

*2 These power plants shifted to general competitive bidding or public proposals after their termination of FIT.

*3 For Niigata Prefecture, the number of power plants subject to general competitive bidding was changed from nine to seven in the October to December 2023 period, because two of them have been replaced to become FIT-eligible or for other purposes.

*4 For Tochigi Prefecture, the number of power plants subject to public proposals was changed from eight to six in the January to March 2024 period, because two of them are currently being replaced to become FIT-eligible.

*5 The prefectures of Gunma, Kanagawa, Yamanashi, Okayama, and Yamaguchi shifted to general competitive bidding or public proposals in the April to June 2024 period, after the ending of their long-term basic contracts in FY2023.

*6 For Tottori Prefecture, two power plants under prolonged inspection/refurbishment work have been excluded from the targets of contracts, causing the number to change from three to one in the April to June 2024 period.

*7 For Iwate Prefecture, two FIT-eligible power plants shifted to public proposals for specified wholesale in the October to December 2024 period and one power plant shifted in the January to March 2025 period. *8 For Akita Prefecture, one power plant was replaced to become FIT-eligible, and shifted to public proposals in the October to December 2024 period.

*9 For Nagano Prefecture, among those subject to public proposals, one power plant was replaced to increase output, and was shifted to FIP in the October to December 2024 period. *10 For Gunma Prefecture, one power plant shifted from FIT to non-FIT in March 2025 through general competitive bidding.

- According to questionnaire surveys of general electric utilities regarding the status of long-term contract cancellations, there were no requests to discuss, or consultations about premature termination from municipalities during this period.

Compiled from responses from general electric utilities regarding cancellation and review of electricity sales contracts with local governments from January 2025 onwards

[Status of negotiations for premature cancellation of existing contracts]

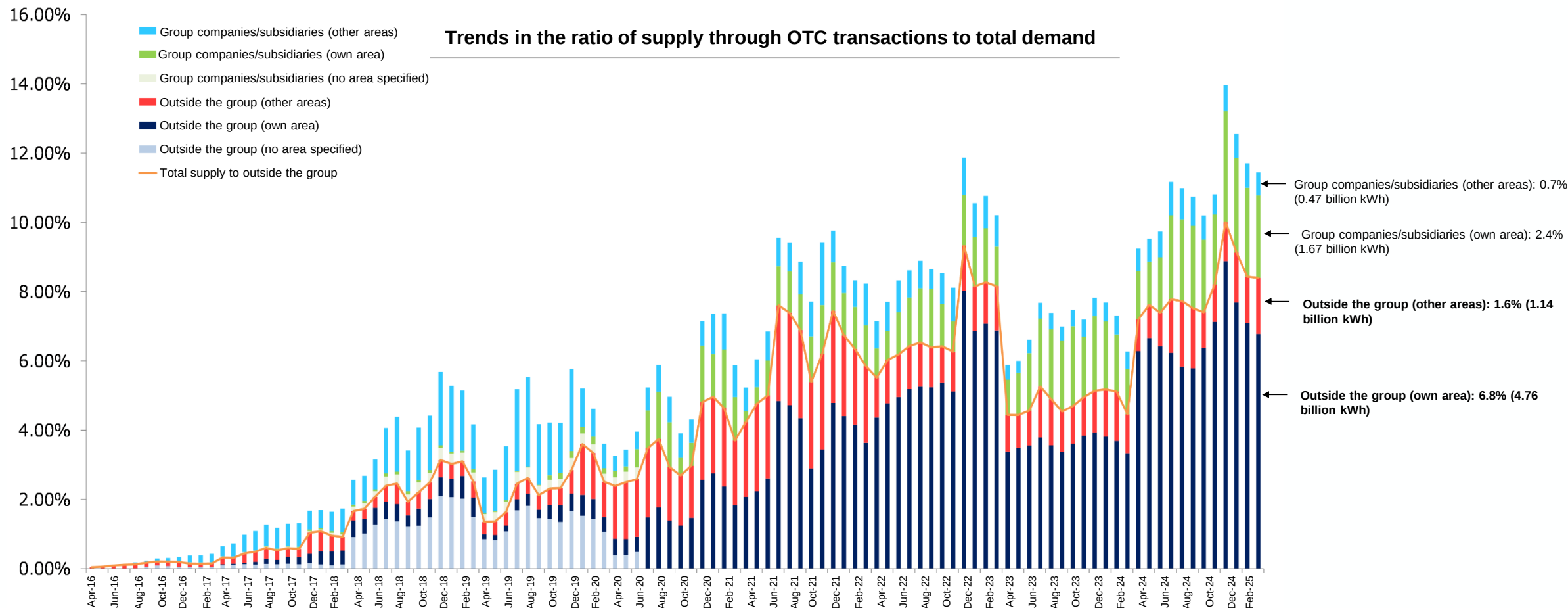
- During this period, municipalities did not request or consult to cancel or review the basic power supply contract (multi-year, long-term contract) with general electric utilities.

Reference: Compiled from responses to regular simple questionnaires on efforts related to power sales contracts by local governments since January 2025

- Moves toward premature cancellation of existing contracts with general electric utilities
 - Of municipalities whose basic contracts with general electric utilities expired by FY2023 and who shifted to power sale contracts based on general competitive bidding or public proposals, municipalities whose current contracts expire at the end of FY2024 have concluded contracts for the next term through the same procedure.
 - Municipalities whose basic contracts expire at the end of FY2024 all plan to shift to power sale contracts based on general competitive bidding or public proposals, and have concluded contracts for the next term.
 - Municipalities whose basic contracts continue into FY2025 generally maintain the contracts until the expiration of the period, without prematurely terminating them. They plan to shift to general competitive bidding or public proposals once the basic contracts end.
 - One power plant was found to have non-FIT basic contracts with general electric utilities which will remain even after FY2026.
- Unique efforts by municipalities regarding power sales contracts
 - Establishment of original electricity rate plans in power sales contracts with general electric utilities (e.g. a plan with added environmental value, a plan for investment promotion, a plan for local industry promotion, a discount plan for people relocated from other areas)
 - Implementation of the following unique efforts aimed at local production for local consumption in contracts for which the successful bidder is determined through general competitive bidding, etc.
 - ✓ In calls for public proposals, division of electricity sales into a general quota and a quota of new regional entrants within the prefecture
 - ✓ Introduction of a local production for local consumption-type PPA (Gunma model), which matches electricity consumers with retailers
 - ✓ Supply to public facilities and public transportation systems operated by local governments
 - ✓ Conclusion of contracts on condition that the entire volume of electricity is supplied within the prefecture

Status of OTC transactions by general electric utilities

- As of March 2025, the ratio of supply from general electric utilities through OTC transactions to total demand was 11.4% (8.04 billion kWh, 1.8 times that of the same period last year).
- OTC wholesale supplies to external parties (8.4%, 5.89 billion kWh) accounted for 42.4% of the demand for electricity from new entrants (13.89 billion kWh).



Source: Information provided by general electric utilities (including JERA), etc.

* Group companies are defined as companies with a capital relationship of 20% or more.

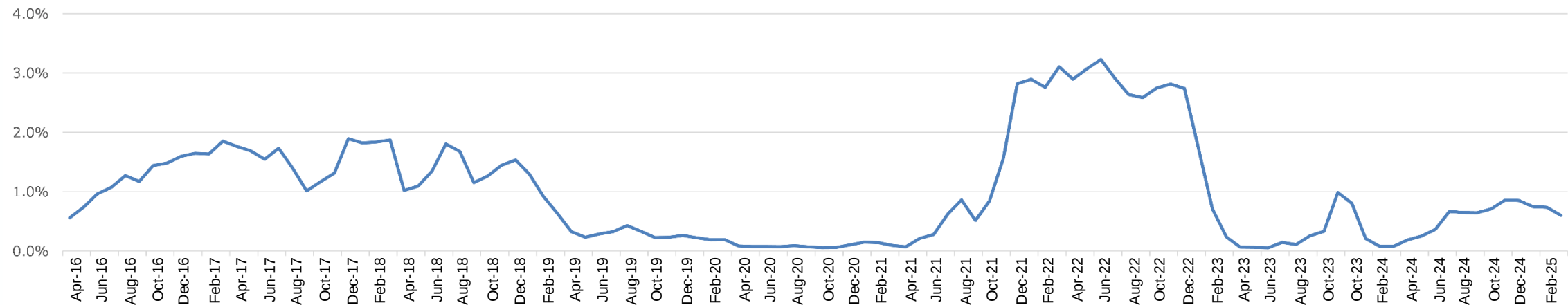
* Notes on the "area": Until June 2020, the companies' responses were mixed, with some answering about the "(1) power receiving area" and others about the "(2) usage area". Most responses answering about "(2) usage area" reported "no area specified". To understand the situation more accurately, we notified the utilities that their responses should always refer to the "(1) power receiving area", starting in the July-September 2020 period. The results reflect this change and as a result, the "no area specified" option was eliminated.

* For JERA, the calculation excluded the wholesale portion of TEPCO Energy Partner and Chubu Electric Power Miraiz.

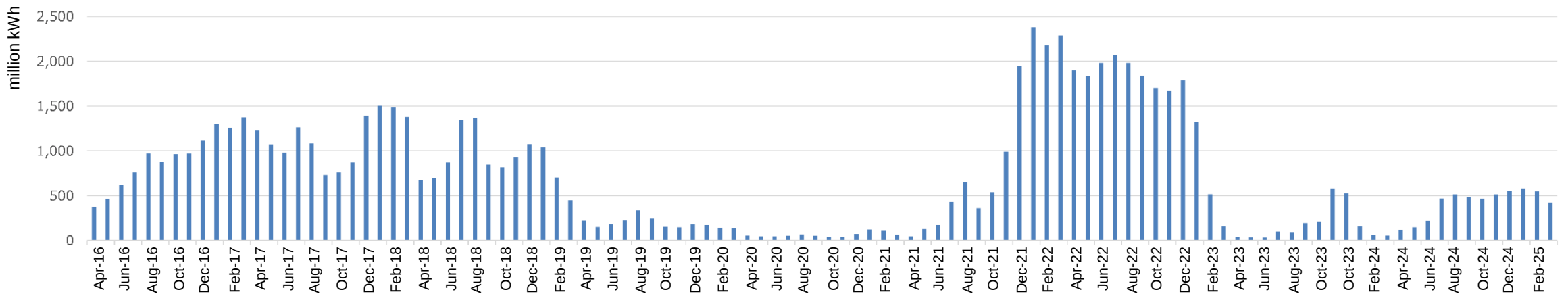
Trends in regular BU electricity sales

- As of March 2025, the ratio of regular BU electricity sales to total demand was 0.6% (422 million kWh). Note that, the Hokkaido and Okinawa areas did not conduct regular BU in FY2024.

10 utilities' regular BU electricity sales as a percentage of total demand (%)



Total regular BU electricity sales by 10 utilities (kWh)



Source: Information provided by general electric utilities (including JERA), etc.

【 Quarterly report 】

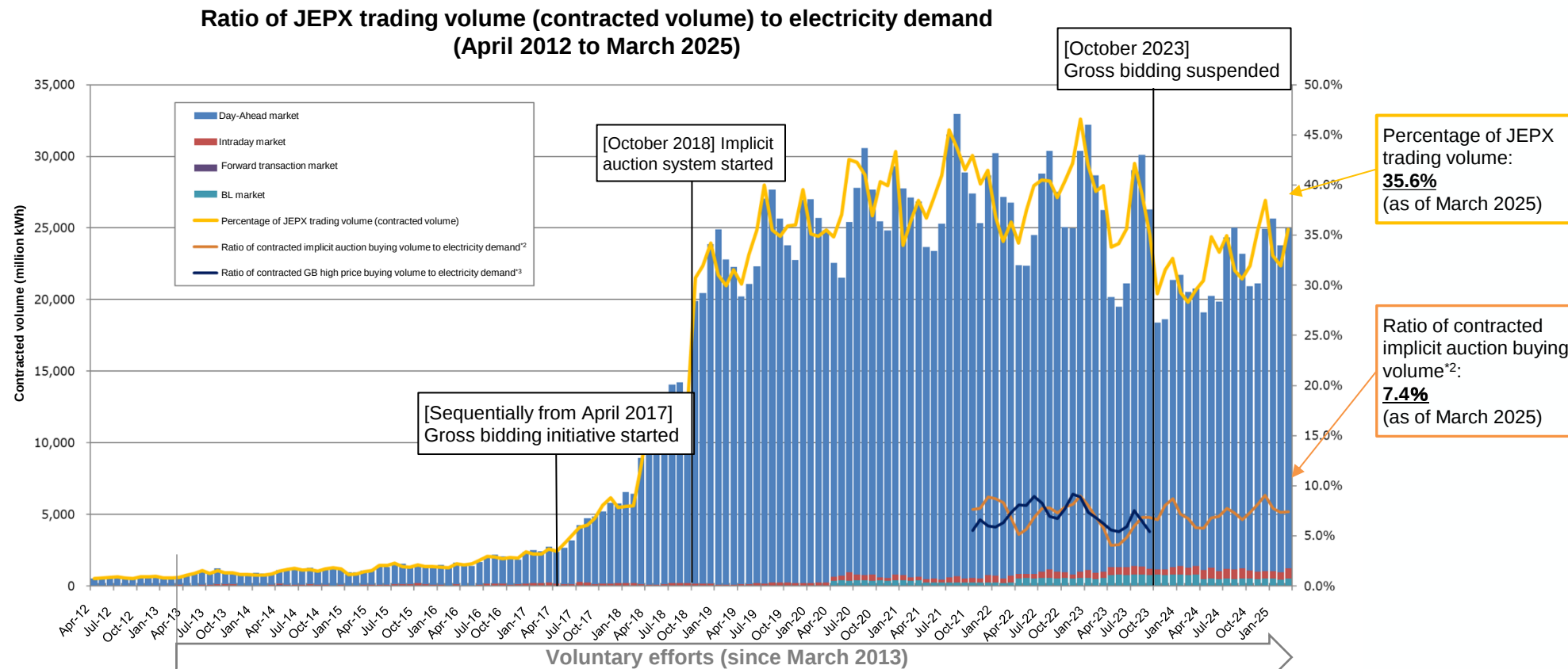
- **Wholesale electricity market**
 - JPEX market
 - Day-Ahead market
 - Intraday market
 - Forward transaction market
- **Voluntary efforts by general electric utilities, etc.**
 - Supply of surplus electricity to JEPX market
 - Trading status and sell bid withdrawal status in the intraday market
 - Status of block selling bidding
 - Supply of power source to the market for wholesale electricity utilities
 - Status of bidding, etc. for public hydroelectricity business
 - Status of OTC transactions

【Medium- to long-term trend report】

- **Wholesale electricity market**
 - JPEX market
 - Trends in contracted volume
 - Trends in contracted price
 - Trends in the market splitting occurrence rate
 - JEPX spot price and fuel cost
- **Retail market**
 - Trends in new entrants share by area
 - Market share by area
 - Trends in electricity unit price
 - Trends in switching
 - Average unit price of low-voltage rates
- **Gas market**
 - Status of OTC transactions of general gas utilities
 - Usage status of Start-up wholesale measure

Trends in the ratio of JEPX trading volume (contracted volume) to electricity demand

- As of March 2025, the ratio of JEPX trading volume (contracted volume*¹) to Japan's electricity demand was 35.6%.
- The ratio of contracted implicit auction buying volume*² to electricity demand was 7.4%.



	2012/04	2013/04	2014/04	2015/04	2016/04	2017/04	2018/04	2019/04	2020/04	2021/04	2022/04	2023/04	2024/04	2025/3
Percentage of JEPX trading volume	0.7%	1.1%	1.5%	1.6%	2.1%	3.5%	17.1%	30.1%	34.8%	36.7%	34.2%	33.8%	30.5%	35.6%
(Percentage of day-ahead market)	0.7%	1.0%	1.4%	1.5%	2.1%	3.2%	16.9%	29.9%	33.8%	36.0%	32.9%	31.6%	28.7%	33.8%
(Percentage of intraday market)	0.001%	0.1%	0.1%	0.1%	0.004%	0.3%	0.2%	0.2%	0.4%	0.4%	0.5%	0.9%	1.0%	1.0%
(Percentage of BL market)	—	—	—	—	—	—	—	—	0.6%	0.4%	0.8%	1.3%	0.8%	0.7%

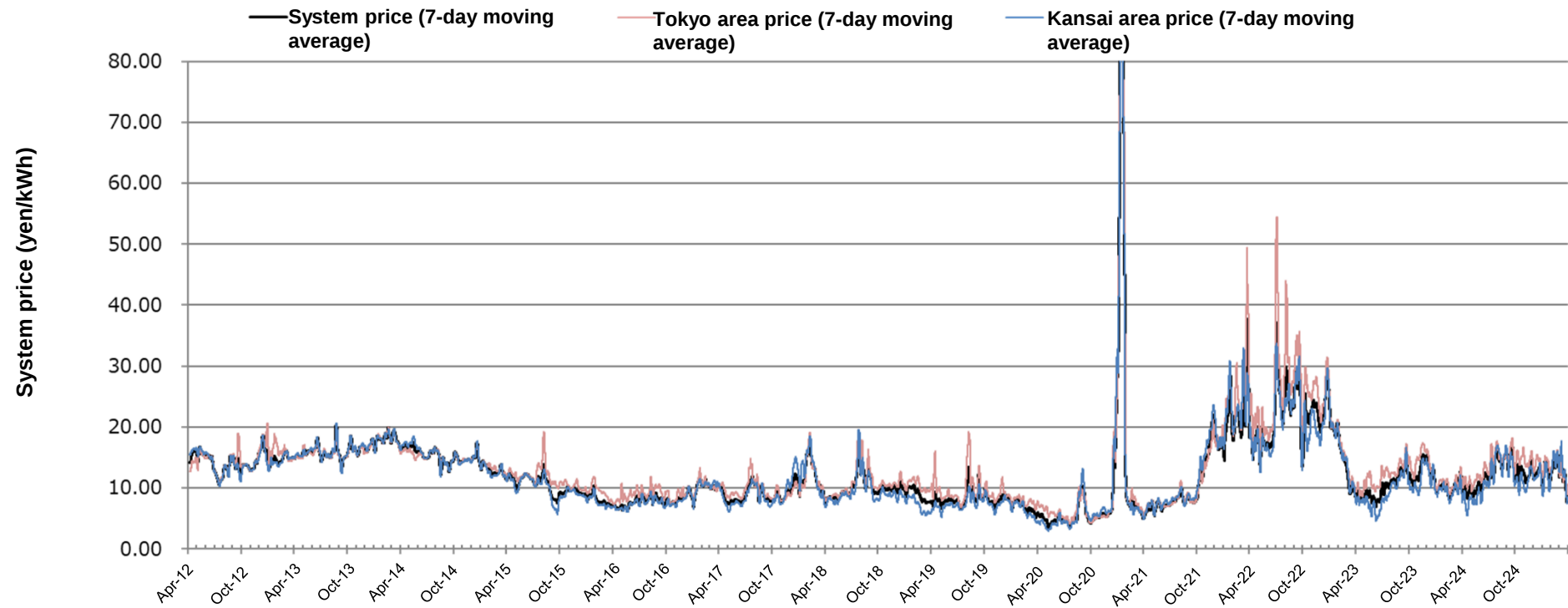
*1 Total of contracted buying volume of each business operator and each frame (including contracted buying volume when the same business operator has contracted for both buying and selling in the same frame, such as through its own implicit auctions).

*2 The contracted implicit auction buying volume is the sum of the contracted volumes of accounts that are determined to be implicit auctions, based on their attributes in the JEPX user account data.

Price trends in the day-ahead market

- Daily average system prices have ranged between roughly 8 to 18 yen/kWh since April 2023, and the average for the last quarter was 12.51 yen/kWh.
- In FY2024, the east-west price difference was about 2 yen/kWh, roughly 1.5 yen/kWh smaller than that in FY2023.

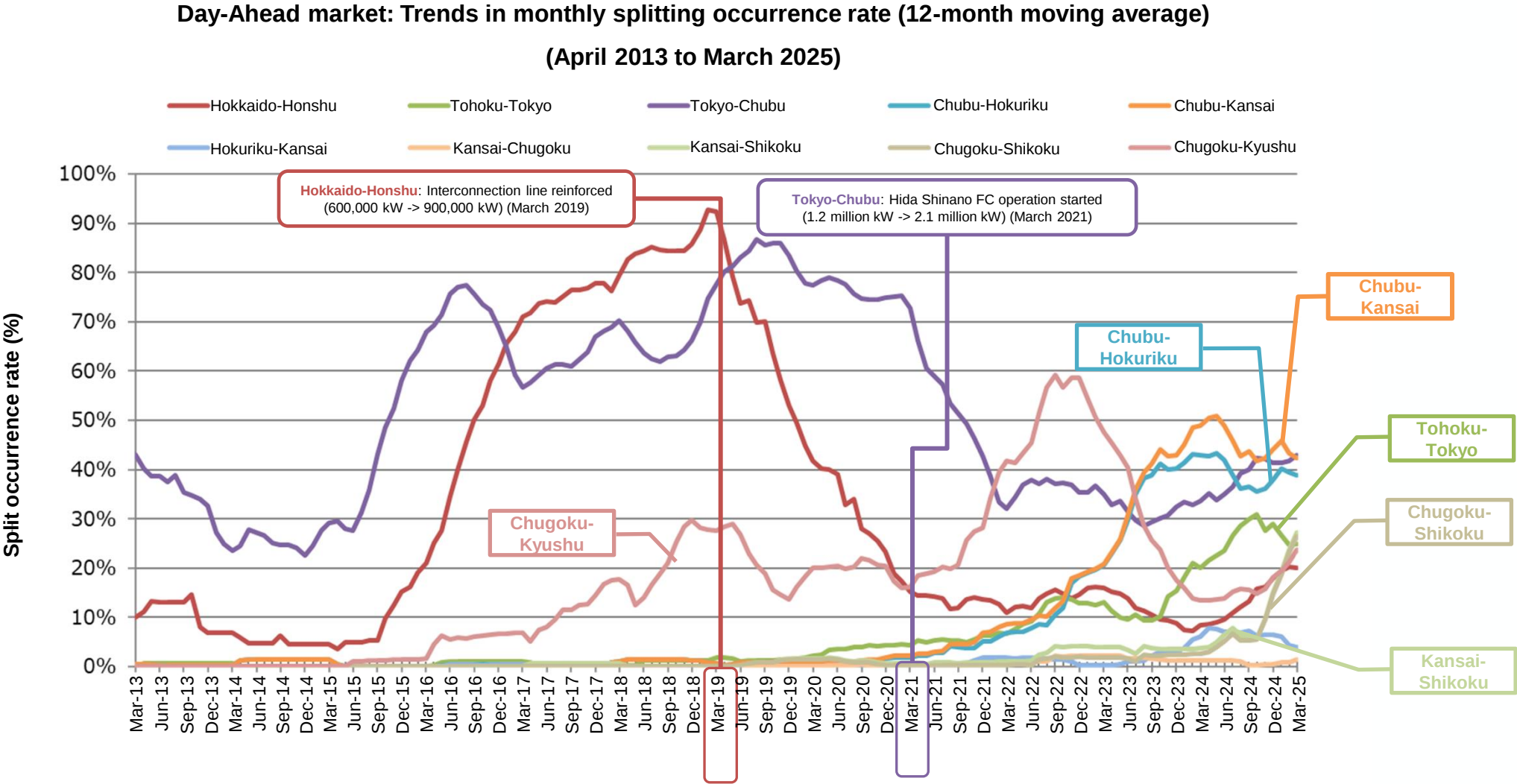
Day-Ahead Market: Trends in system prices
(April 1, 2012 to March 31, 2025)



(yen/kWh)	FY2012 average	FY2013 average	FY2014 average	FY2015 average	FY2016 average	FY2017 average	FY2018 average	FY2019 average	FY2020 average	FY2021 average	FY2022 average	FY2023 average	FY2024 average	Current quarter average
System price	14.43	16.51	14.67	9.78	8.46	9.72	9.76	7.93	11.21	13.46	20.41	10.74	12.29	12.51
Tokyo area price	14.75	16.44	14.63	10.99	9.32	10.15	10.68	9.12	12.02	14.27	23.50	12.20	13.66	13.35
Kansai area price	14.32	16.62	14.71	9.37	8.29	9.81	8.88	7.18	11.06	14.05	19.54	9.74	11.70	12.67

Trends in the occurrence rate of market splitting between each area

- The split occurrence rates for Tokyo-Chubu, Chubu-Kansai, and Chubu-Hokuriku have recently been around 40%.
- The rates for Kansai-Shikoku and Chugoku-Shikoku have been increasing substantially since November 2024.
- The rates for Hokkaido-Honshu and Chugoku-Kyushu have dropped to around 20%, but are showing an upward trend recently.



* Monthly splitting occurrence rate (12-month moving average): The 12-month moving average of the monthly sum of the percentage of the frames in which different area prices were observed between adjacent areas, among all 30-minute frames in the day-ahead market.

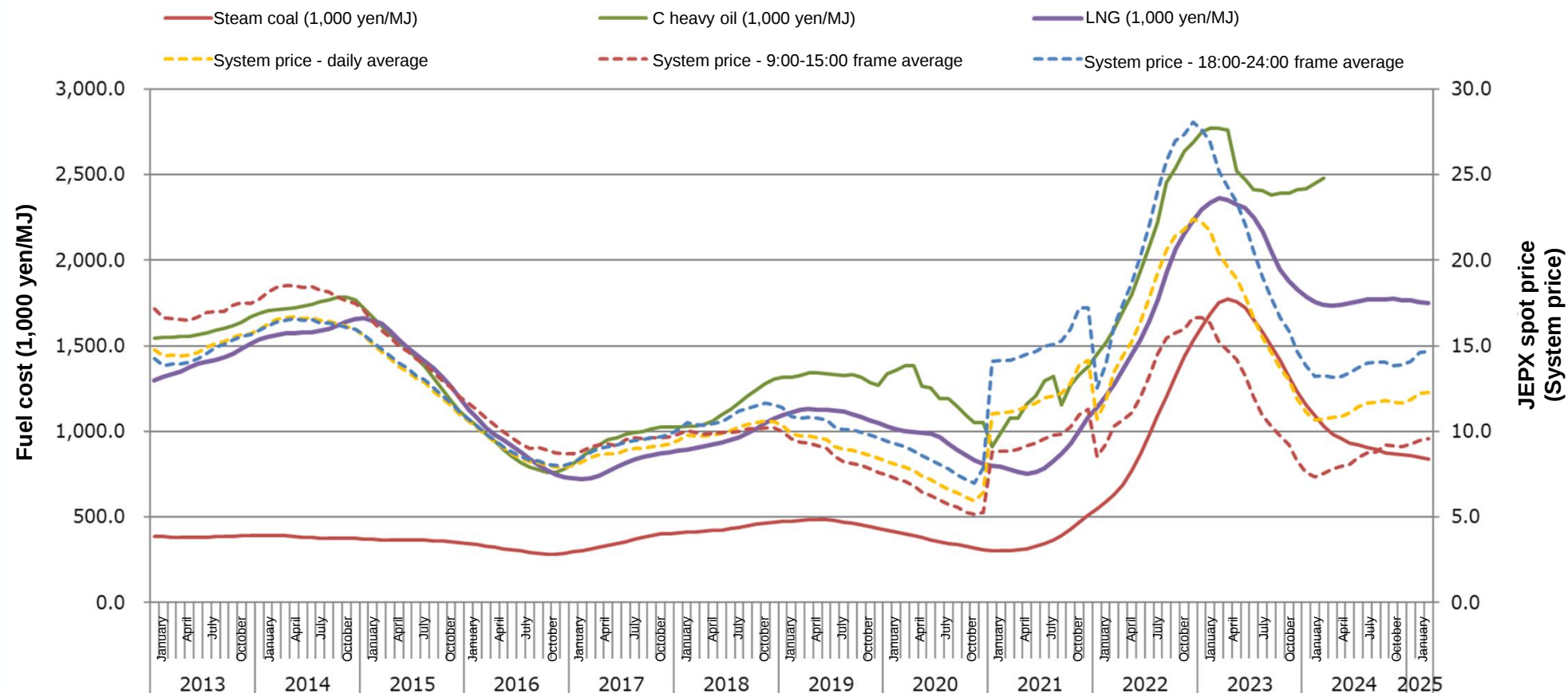
* The spot transaction in the Hokkaido area was suspended from September 7 to 26, 2018, due to the effects of the 2018 Hokkaido Eastern Iwate Earthquake. Calculations excluded the period of suspension.

JEPX spot price and fuel cost

- Over the long term, the trend of JEPX spot prices has been close to that of LNG and C heavy oil prices.
- Fuel costs maintained a downward trend since the beginning of 2023, but recent LNG prices have leveled and are closest to spot prices in terms of price trends.

Trends in JEPX spot prices and fuel costs (12-month moving average)

(January 2013 to March 2025)



Source: Prepared by

* Fuel costs are import CIF prices aggregated based on the calorific values shown in the thermal power generation fuel results in the Electricity Survey Statistics.

* There are no trade statistics available for C heavy oil for April, July, August, October, and December 2019; February, March, April, June, August, September, November, and December 2020; and April, May, and September 2021.

* The system price plummeted in January 2022 because the 12-month moving average from February 2021 to January 2022 was used, and thus a spike in the single monthly price for January 2021 was not included in the calculation.

* Imports of C heavy oil were zero for many months since April 2024, and therefore C heavy oil is not plotted in the graph for such period.

【 Quarterly report 】

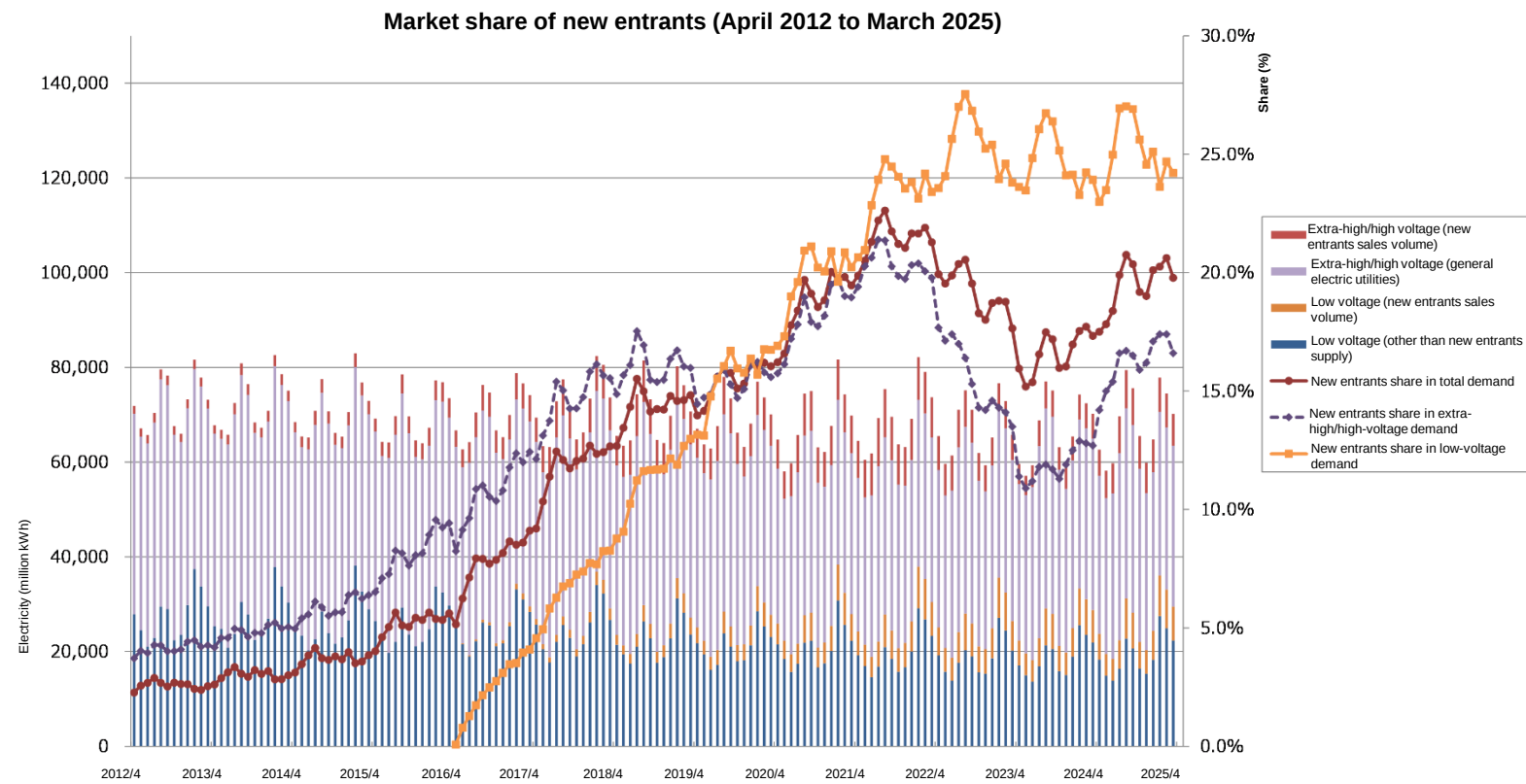
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Trends in new entrants share

- The share of new entrants in total electricity demand on the electricity sales volume basis has been on the moderate rise compared to last year.
- As of March 2025, the share of new entrants in total demand was approximately 19.8%, their share in extra-high/high-voltage demand was approximately 16.6%, and their share in low-voltage demand was approximately 24.2%.

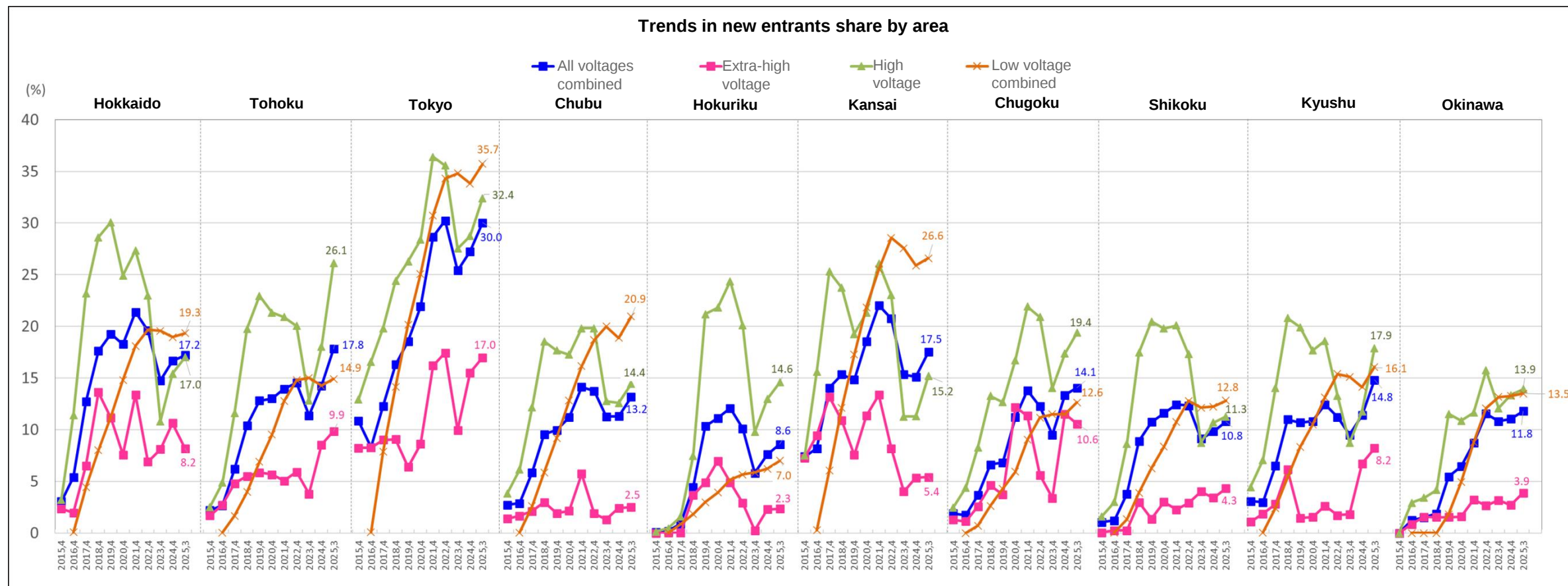


* "New entrants" refers to electricity retailers other than general electric utilities. Subsidiaries of general electric utilities are also included in new entrants.
(Source: Monthly electricity generation/reception report, Electricity Trading Report)

	2012/4	2013/4	2014/4	2015/4	2016/4	2017/4	2018/4	2019/4	2020/4	2021/4	2022/4	2023/ 4	2024/4	2025/3
New entrants share in total demand	2.3%	2.6%	3.1%	4.0%	5.2%	9.2%	12.7%	14.0%	16.2%	19.9%	19.9%	16.0%	17.5%	19.8%
New entrants share in extra-high/high-voltage demand	3.7%	4.2%	5.0%	6.5%	8.2%	12.1%	14.9%	14.5%	15.8%	19.4%	17.7%	11.4%	14.2%	16.6%
New entrants share in low-voltage demand	-	-	-	-	0.1%	4.6%	8.8%	13.2%	16.9%	20.6%	23.6%	23.6%	23.0%	24.2%

Trends in new entrants share by area (by fiscal year)

- Looking at the share of new entrants in electricity sales by area for all voltages combined, an upward trend has been observed recently in all areas. The increase is particularly remarkable for high voltage. Tokyo is one of the areas where new entrants hold a high share of electricity sales.

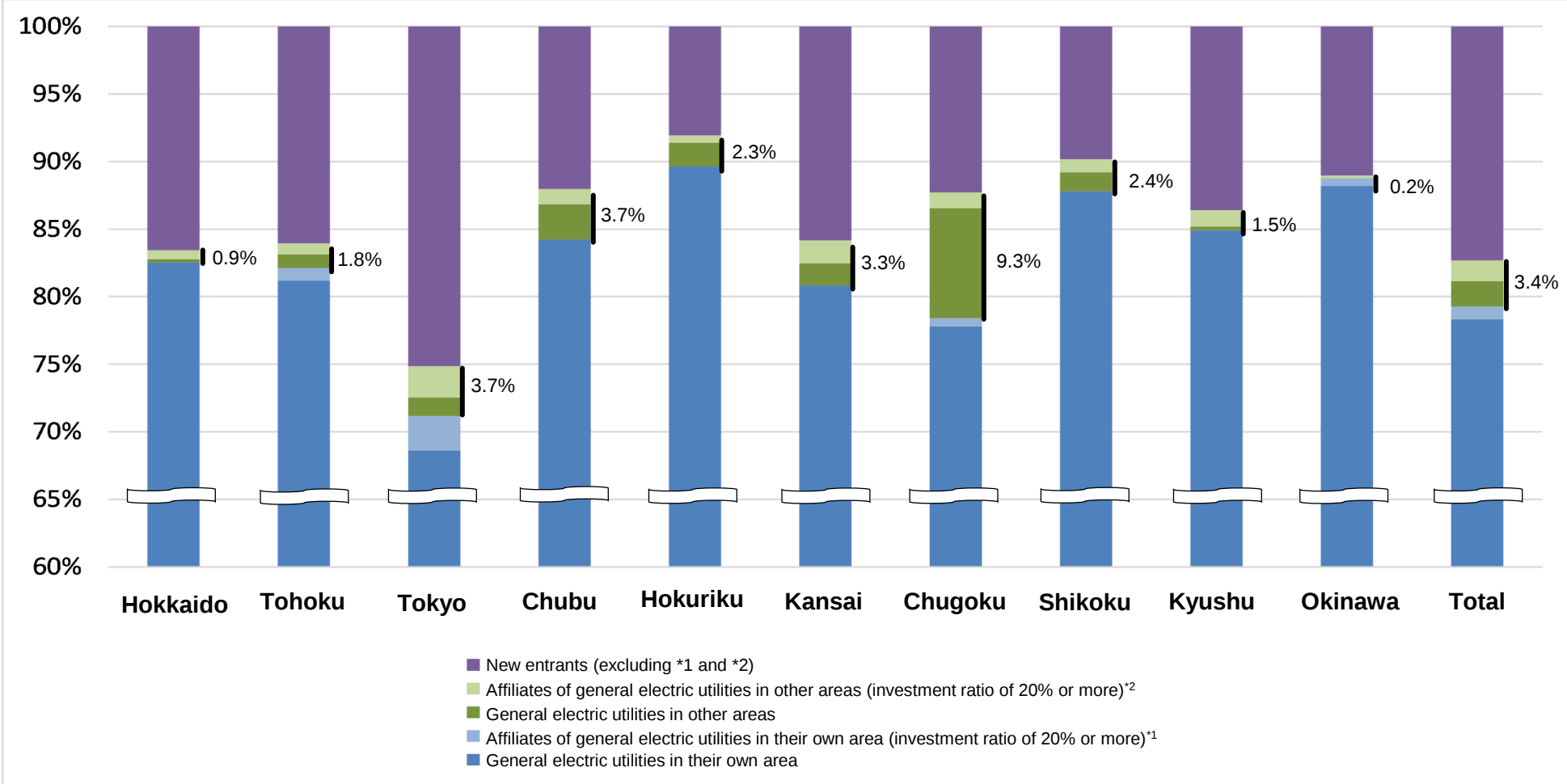


* "New entrants" refers to electricity retailers other than general electric utilities. Subsidiaries of general electric utilities are also included in new entrants.
(Source: Monthly electricity generation/reception report, Electricity Trading Report)

Market share by area

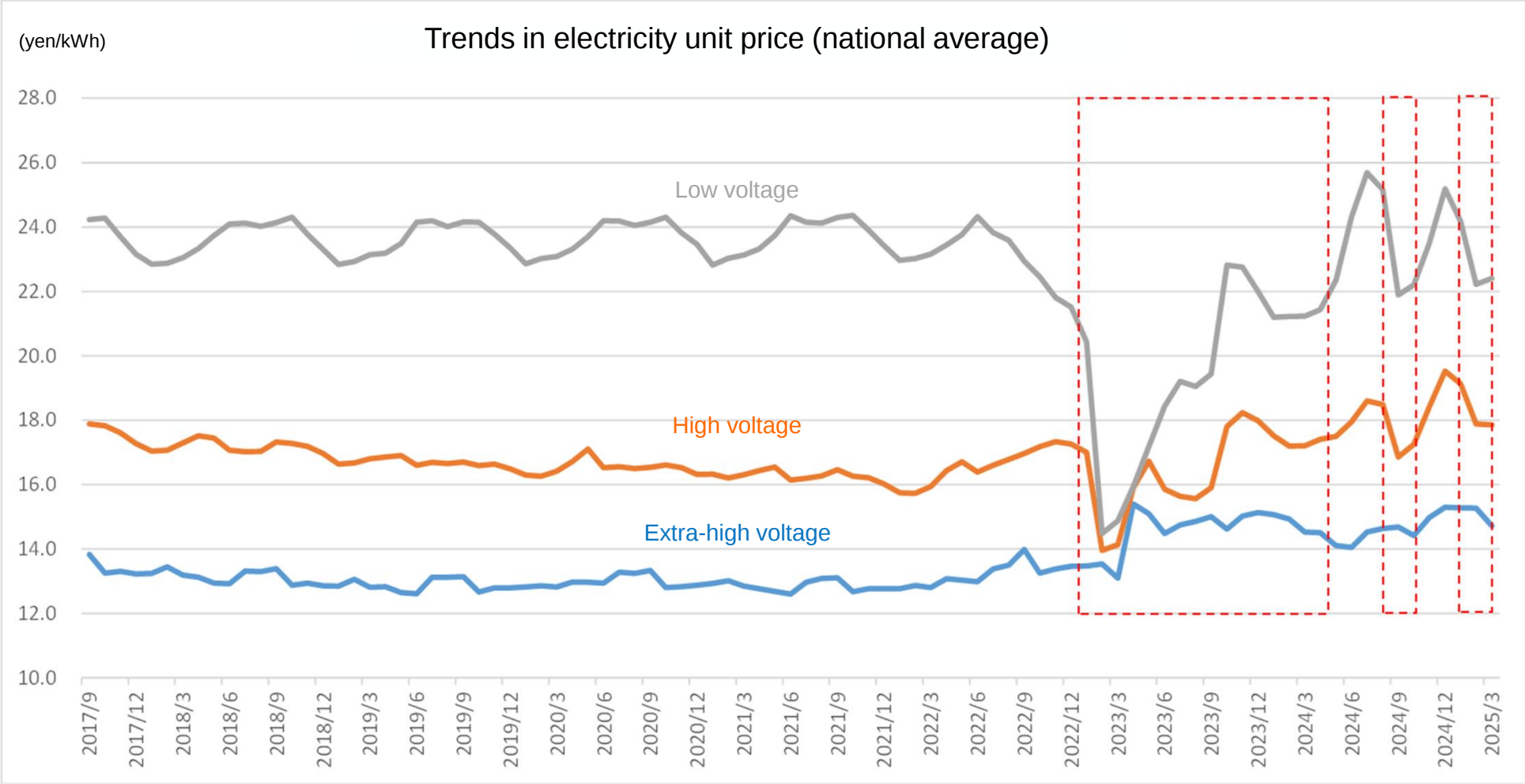
- Supply by general electric utilities and their affiliated companies to areas outside their service areas was approximately 3.4% of the total.
(March 2024 report value was 3.3%; marginally increased by 0.1 pt)

Market share by area (March 2025)



(Source) Electricity Trading Report
(Note) Based on electricity sales volume

- After electricity liberalization, the unit price of electricity (excluding fuel cost adjustment unit price, FIT levy, and consumption tax) is fluctuating recently due to the impact of the drastic change mitigation project, but has been on the rise in the long term.



(Notes)

- Excluding fuel cost adjustment unit price, FIT levy, and consumption tax
(For exclusion of the fuel cost adjustment unit price [yen/kWh], the meter-rate figures published by the general electricity utility in each area are used for all electricity retailers.)

(Source)

Prepared by the Electricity and Gas Market Surveillance Commission Secretariat from Electricity Trading Reports

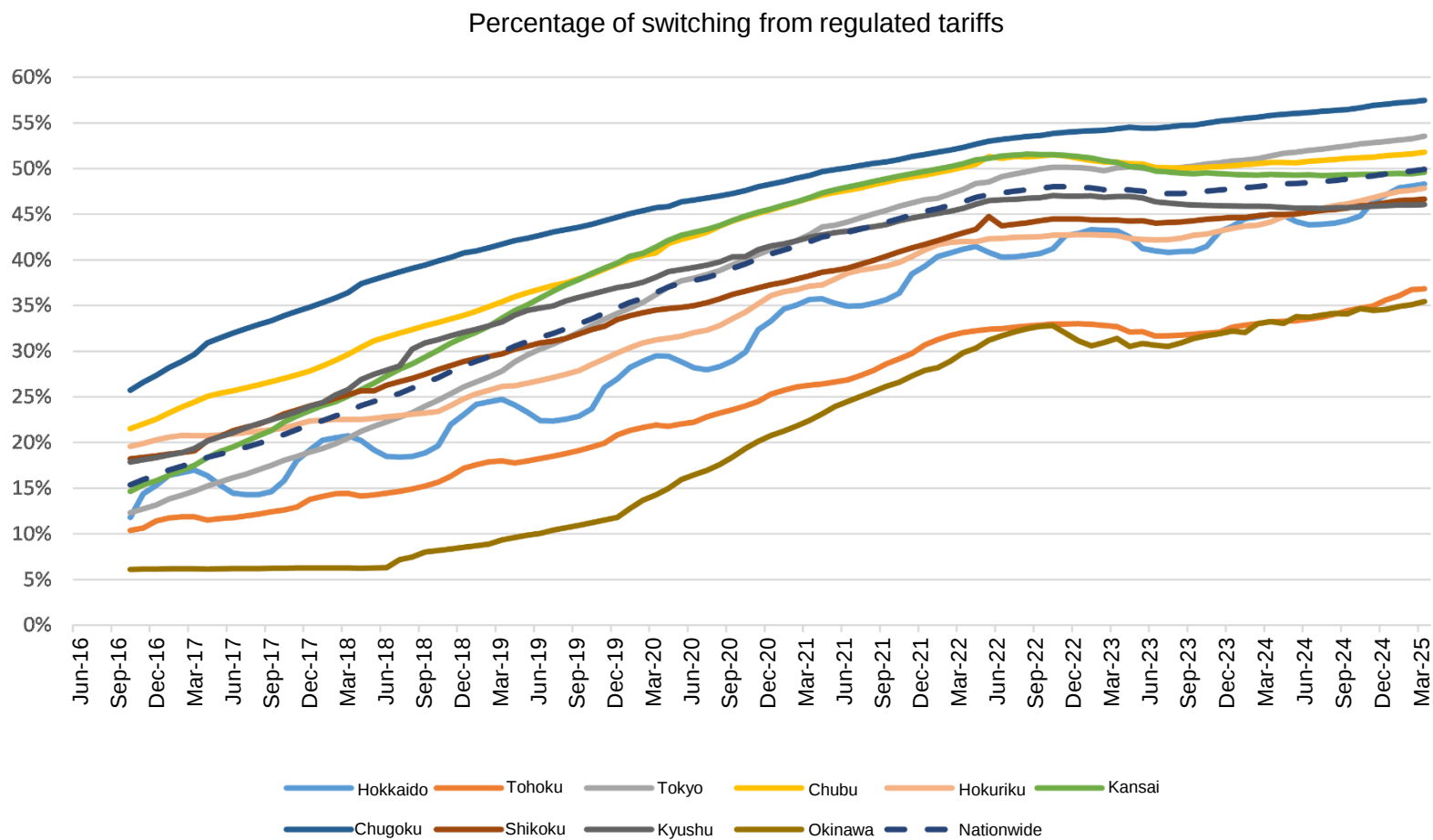
Drastic change mitigation (low voltage) subsidy amount (per kWh)

- January to August 2023	: 7.0 yen	- August to September 2024	: 4.0 yen
- September 2023 to April 2024	: 3.5 yen	- October 2024	: 2.5 yen
- May 2024	: 1.8 yen	- January to February 2025	: 2.5 yen
		- March 2025	: 1.3 yen

Drastic change mitigation measures

Trends in switching (low voltage) (1)

- Switching from the regulated tariff menu of general electric utilities to voluntary rate menus and new entrants has been on an upward trend since 2016, but the upward curves have been tapering off. As of March 2025, the nationwide switching rate was 49.9% (increased by 0.5 pt from December 2024).



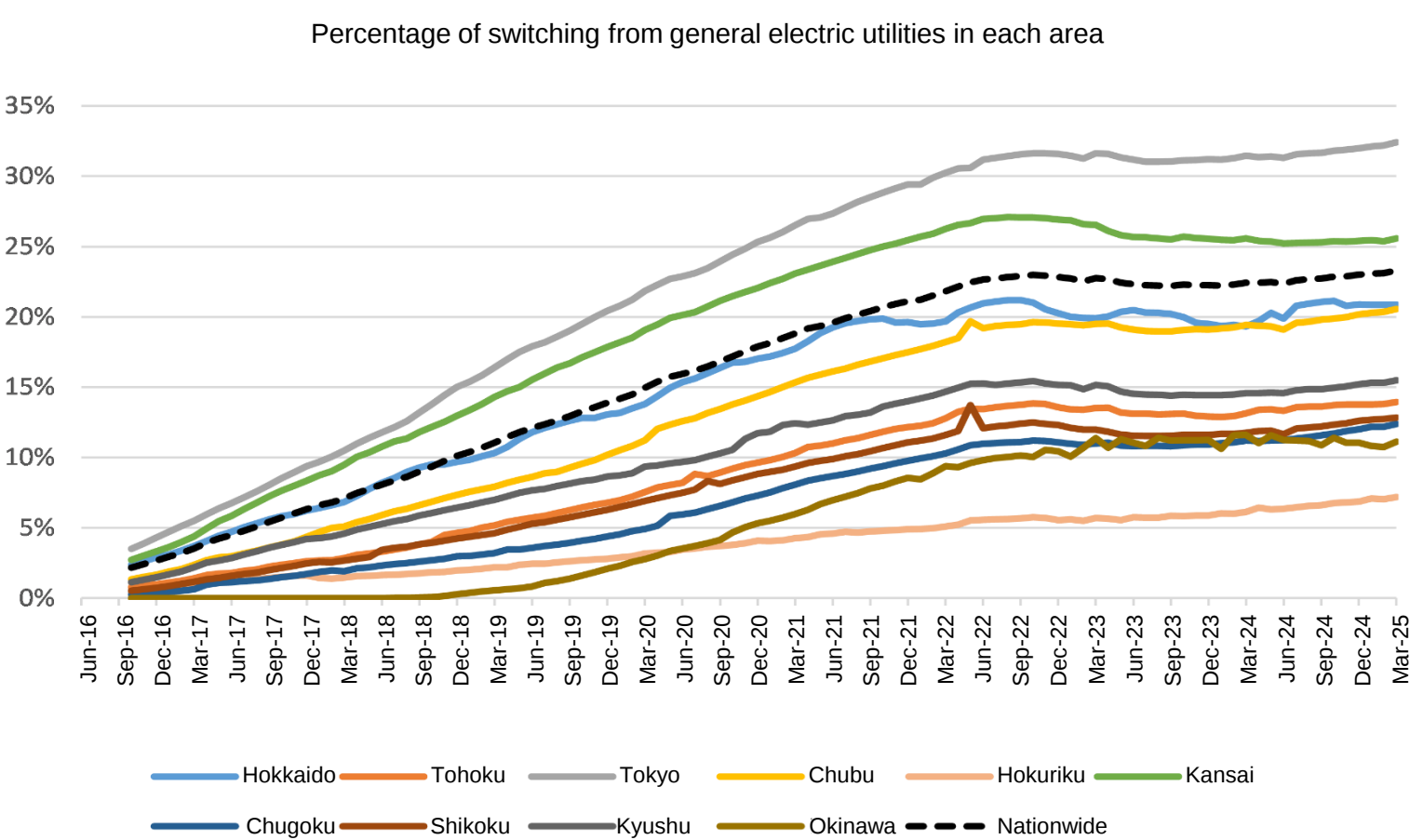
	March 2025
Hokkaido	48.3%
Tohoku	36.8%
Tokyo	53.6%
Chubu	51.8%
Hokuriku	47.8%
Kansai	49.6%
Chugoku	57.5%
Shikoku	46.6%
Kyushu	46.1%
Okinawa	35.5%
Nationwide	49.9%

* For Okinawa, calculations are based only on low-voltage electricity (switching in high-voltage electricity is not included).

(Source) Monthly electricity generation/reception report, Electricity Trading Report
(Note) Low voltage: Calculations are based on the number of contracts.

Trends in switching (low voltage) (2)

- The rate of switching from general electric utilities in each area to new entrants and other business operators (including general electric utilities that supply electricity outside their areas) continues to show no major fluctuations. As of March 2025, the nationwide switching rate was 23.3% (marginally increased by 0.3 pt from December 2024).

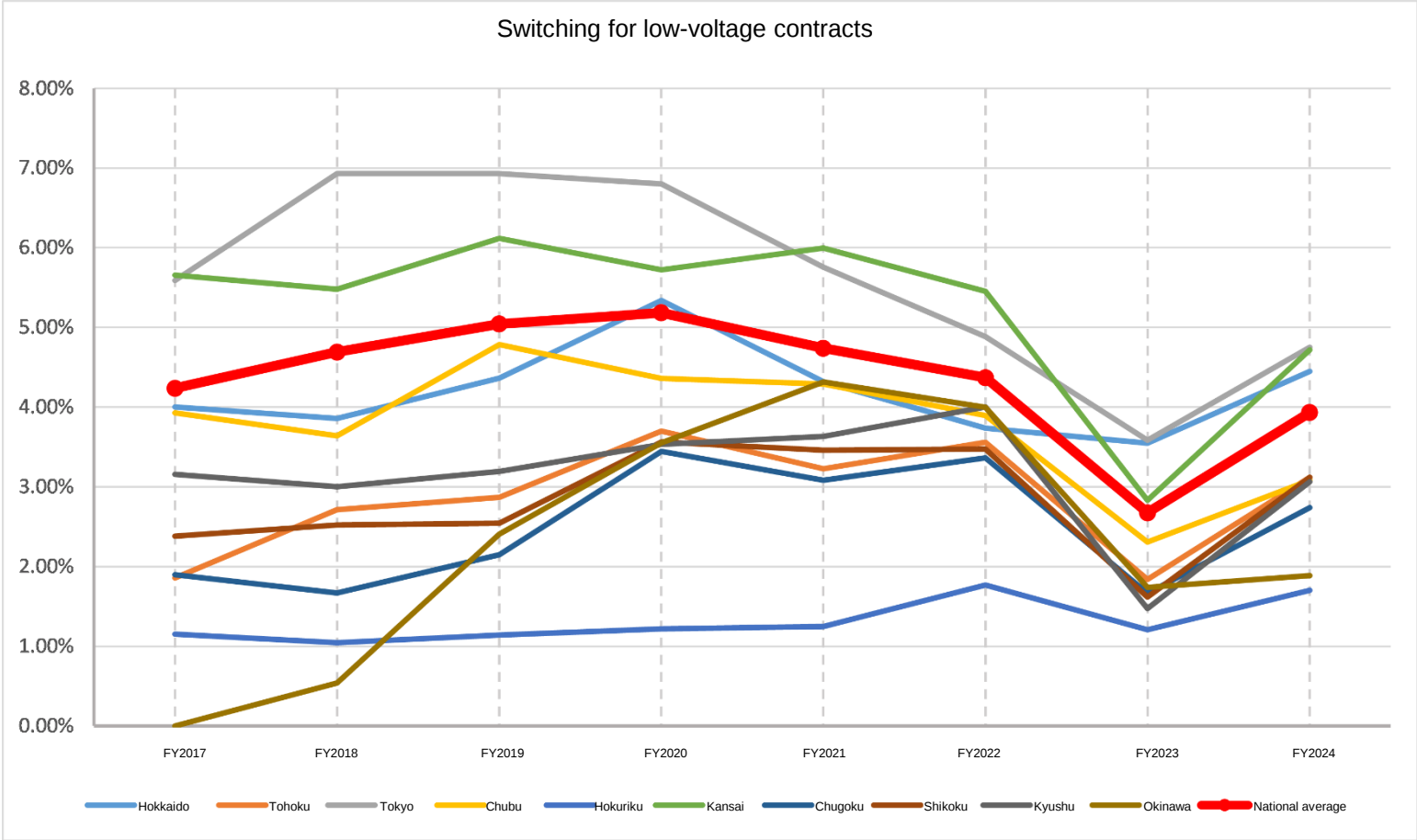


	March 2025
Hokkaido	20.9%
Tohoku	13.9%
Tokyo	32.4%
Chubu	20.6%
Hokuriku	7.2%
Kansai	25.6%
Chugoku	12.4%
Shikoku	12.9%
Kyushu	15.5%
Okinawa	11.1%
Nationwide	23.3%

(Source) Electricity Trading Report
(Note) Low voltage: Calculations are based on the number of contracts.

Trends in switching (low voltage) (3): Trends in the switching rate by fiscal year

- The FY trends in the switching rate show a steady decline until FY2023, but this reversed in FY2024 and increased by approximately 1.3 pt compared to the previous fiscal year. While new services by new entrants have emerged, attention needs to be paid to the major impact of multiple large-scale business transfers among group companies.



	FY2024
Hokkaido	4.5%
Tohoku	3.1%
Tokyo	4.8%
Chubu	3.1%
Hokuriku	1.7%
Kansai	4.7%
Chugoku	2.7%
Shikoku	3.1%
Kyushu	3.1%
Okinawa	1.9%
Nationwide	3.9%

(Source: Electricity Trading Report)

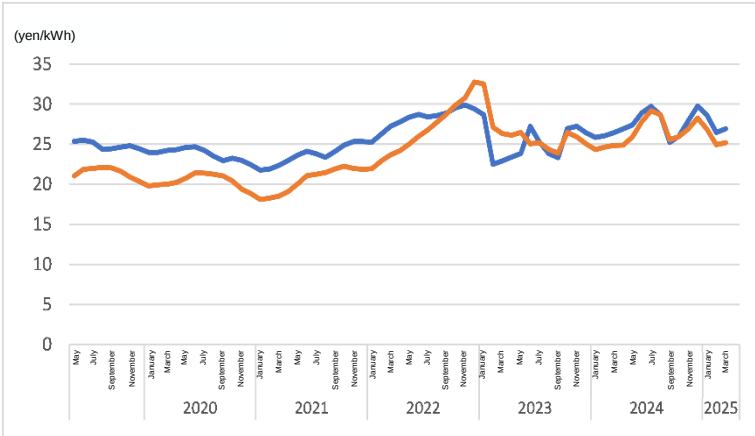
(Note 1) Low voltage: Calculations are based on the number of contracts (sum of the monthly numbers of switched contracts for the fiscal year ÷ monthly average number of low-voltage contracts for the fiscal year × 100).

(Note 2) The data on switching is based on the sum of the number of contracts that have been switched in different combinations, such as from general electric utilities to new entrants, etc., from new entrants, etc., to general electric utilities, and from new entrants, etc., to new entrants, etc.

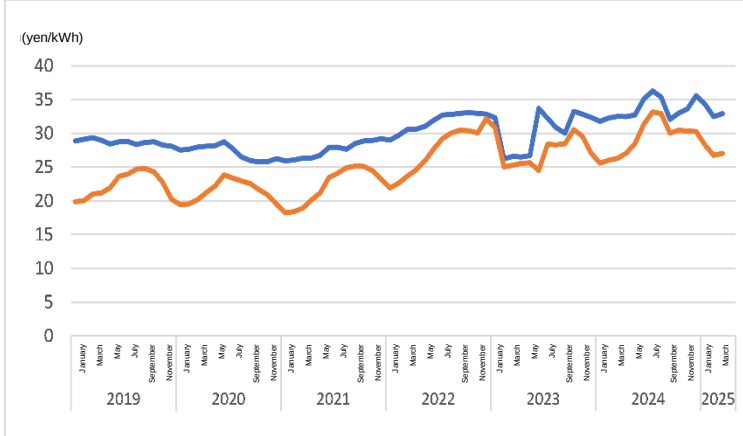
Trends in average unit price of low-voltage rates (by area) (1)

- Trends in regulated tariffs and voluntary rates show that regulated tariffs have recently been at the same level as or higher than voluntary rates in all areas, since the regulated tariffs were revised upward in 2023. (In some areas, fuel cost-adjusted regulated tariffs remain above the upper limit)

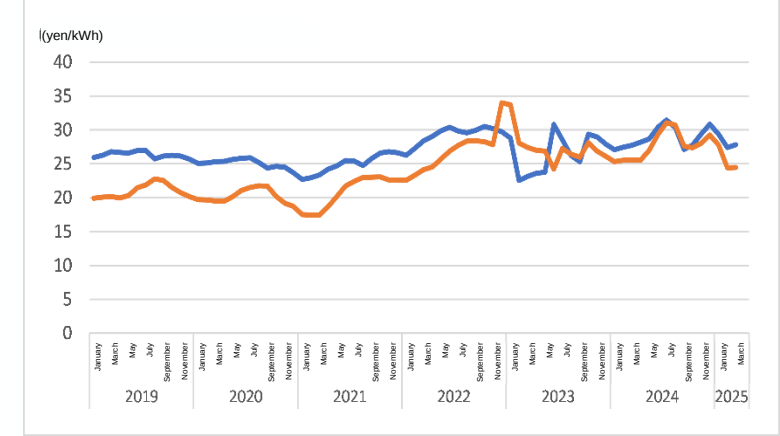
All areas



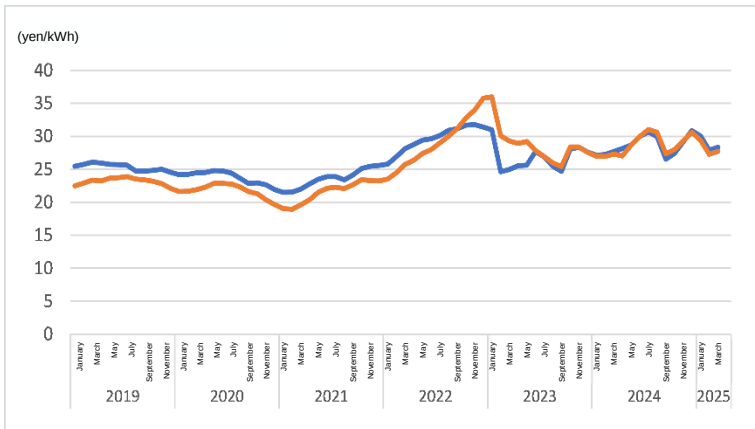
Hokkaido area



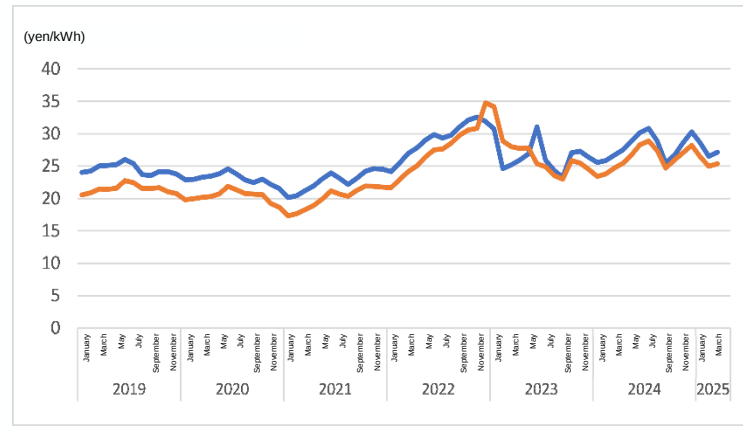
Tohoku area



Tokyo area



Chubu area

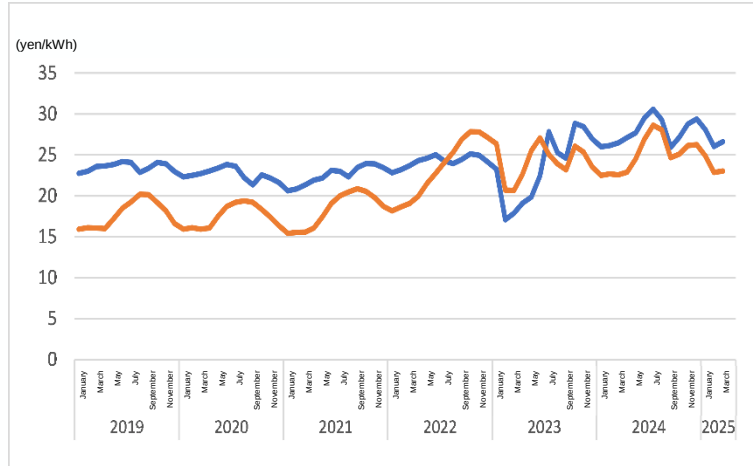


Legend

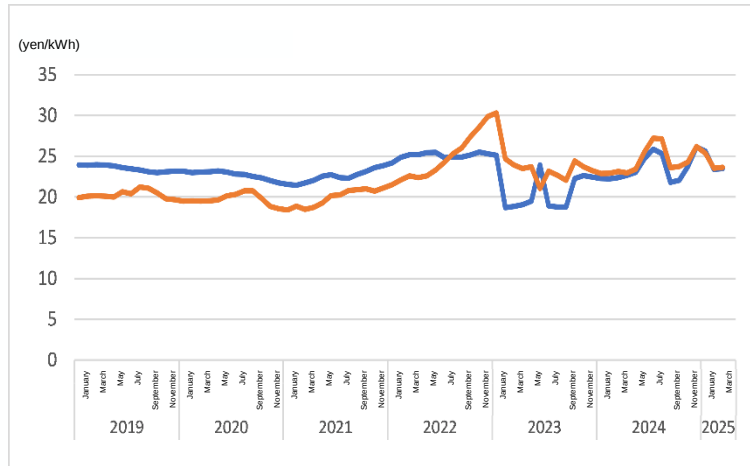
Voluntary rates Regulated tariffs

Trends in average unit price of low-voltage rates (by area) (2)

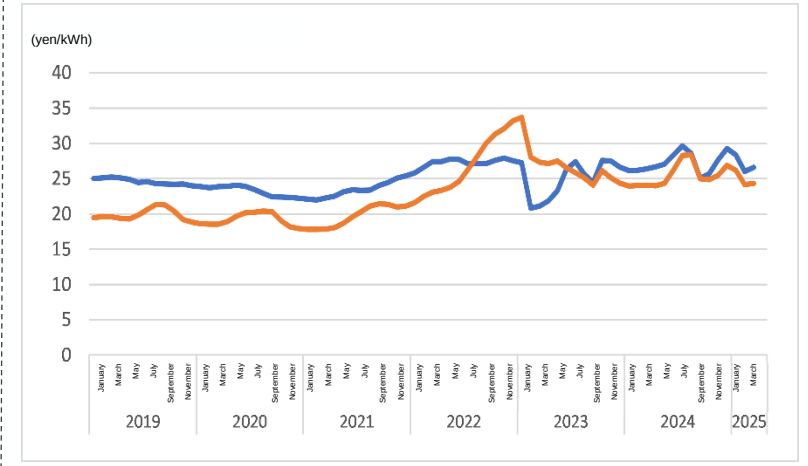
Hokuriku area



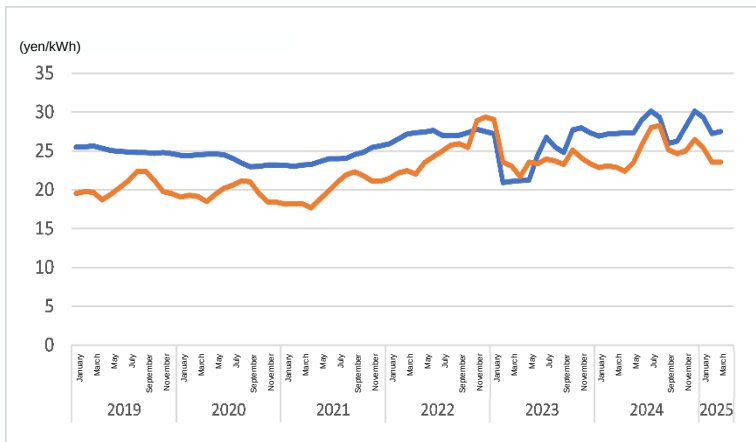
Kansai area



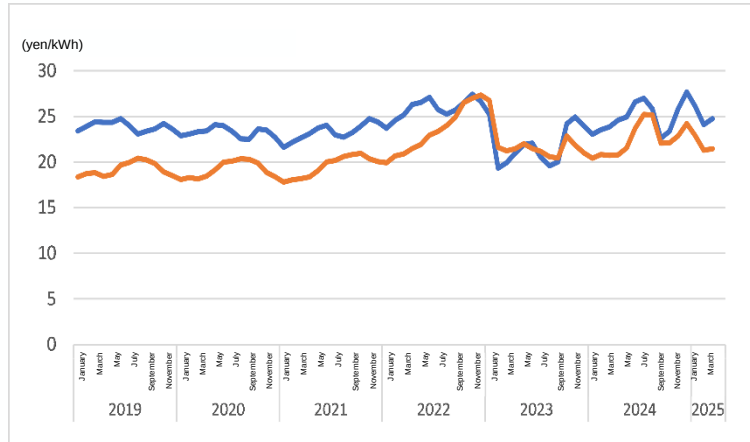
Chugoku area



Shikoku area



Kyushu area



【 Quarterly report 】

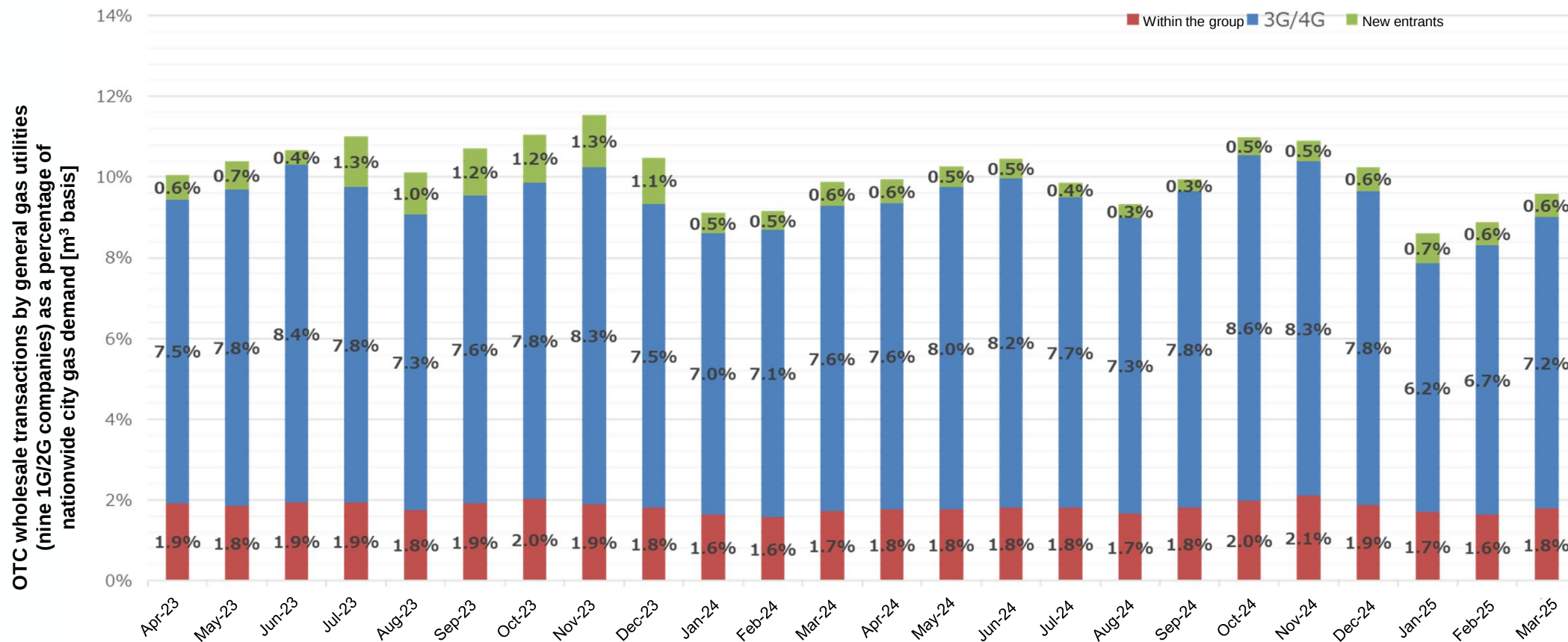
- **Wholesale electricity market**
 - JPEX market
 - Day-Ahead market
 - Intraday market
 - Forward transaction market
- **Voluntary efforts by general electric utilities, etc.**
 - Supply of surplus electricity to JEPX market
 - Trading status and sell bid withdrawal status in the intraday market
 - Status of block selling bidding
 - Supply of power source to the market for wholesale electricity utilities
 - Status of bidding, etc. for public hydroelectricity business
 - Status of OTC transactions

【Medium- to long-term trend report】

- **Wholesale electricity market**
 - JPEX market
 - Trends in contracted volume
 - Trends in contracted price
 - Trends in the market splitting occurrence rate
 - JEPX spot price and fuel cost
- **Retail market**
 - Trends in new entrants share by area
 - Market share by area
 - Trends in electricity unit price
 - Trends in switching
 - Average unit price of low-voltage rates
- **Gas market**
 - Status of OTC transactions of general gas utilities
 - Usage status of Start-up wholesale measure

Status of OTC transactions of general gas utilities (9 companies: 1G/2G)

- In order to understand the actual status of wholesale transactions in the city gas sector, gas wholesale transactions of nine 1G/2G companies*¹ were monitored (covering data from January 2020 and showing data for the last two years available, from April 2023).
- As of the end of March 2025, the ratio of OTC wholesale supply of 1G/2G*³ to the retail supply of city gas nationwide*² was approximately 9%.
- The ratio of OTC wholesale supply to new entrants (companies that are not general gas utilities) was approximately 0.6%. (The share of retail sales volume by new entrants was approximately 17.5% [as of the end of March 2025].)



*1 1G: TOKYO GAS, Osaka Gas, Toho Gas 2G: Hokkaido Gas, Gas Bureau, City of Sendai, SHIZUOKA GAS, HIROSHIMA GAS, Saibu Gas, Nihon Gas (Kagoshima)

*2 Based on 45 MJ.

*3 Includes terminal exit wholesale, pipe connection point wholesale, demand point wholesale (One-touch wholesale/Start-up wholesale), and liquid wholesale (lorry, etc.) Regarding liquid wholesale, conversions were made on the assumption that 1 ton of liquefied natural gas $\approx$ 1,220 m³, and do not take into account calorific value adjustments, etc.

*4 3G/4G companies refer to general gas utilities that primarily receive wholesale gas supply from other business operators and provide retail supply through their own pipeline network.

*5 Group companies are defined as companies with a capital relationship of 20% or more.

Usage status of Start-Up Wholesale measure (as of the end of March 2025)

- To contribute to the goal of the gas system reform, the nine general gas utilities (1G/2G) began a voluntary initiative called “Start-Up Wholesale” in FY2020 to support the entry of new business operators.
- Regarding the Start-Up Wholesale, the number of inquiries made to wholesalers, the number of contracts concluded, the number of contract negotiations underway, and the number of contract negotiations completed are as follows (as of the end of March 2025).

Wholesaler name	No. of inquiries	Contracts concluded	Contracts under negotiation	Contract negotiations completed*
Tokyo Gas	24	4	2	18
Osaka Gas	15	4	4	7
Toho Gas	14	2	2	10
Hokkaido Gas	17	2	3	12
Shizuoka Gas	18	6	3	9
Saibu Gas	16	4	0	12
Hiroshima Gas	6	1	0	5
Gas Bureau, City of Sendai	9	0	3	6
Nippon Gas	5	1	0	4
Total	120	24	13	83

* The number of contract negotiations completed includes negotiations that were explicitly discontinued due to failure to reach an agreement, and cases in which an inquiry was received from a business operator considering use, but did not lead to negotiations. The number also includes cases in which there was no further contact, no initiation of contract negotiations, or no progress in negotiations for more than three months from the inquiry date.