

## Network Codes

Organization for Cross-regional Coordination of Transmission Operators, Japan

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## Network Codes (2022)

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## Chapter 1 General Provisions

### (Purpose)

#### Article 1

The purpose of these Network Codes (hereinafter “Codes”) is to establish the basic provisions on transmission network use and other business on the transformation, transmission, and distribution of electricity by general transmission and distribution companies, transmission companies and distribution companies to exercise such provisions properly and smoothly based on the provisions of Item 3, Article 28-40 and Article 28-45 of the Electricity Business Act (Act No. 170, 1964, hereinafter “Act”).

### (Terms)

#### Article 2

The terms used in these Codes shall have the same meaning as those used in the Act, cabinet or ministerial orders issued according to the Act, the Articles and Operational Rules of Organization for Cross-regional Coordination of Transmission Operators, Japan (hereinafter “Organization”) in addition to the meanings defined specifically in these Codes.

### (Handling of period of time)

#### Article 3

When the last day of any period provided in these Codes is not a business day of this Organization, such a last day shall be treated in accordance with the Operational Rules.

## Chapter 2 Demand Forecast

(Demand forecast in general transmission and distribution company's regional service area)

### Article 4

1. General transmission and distribution companies, and distribution companies shall forecast the demand in their regional service areas based on the premises of demand forecasts with respect to the following period and subjects of forecast and shall submit the result to the Organization by January 20 of each year.
  - i. Forecast period
    - a. In principle, for 10 years from the first fiscal year
    - b. Forecast of electric energy requirement at the using-end and the sending-end, and of the peak demand in the first fiscal year shall be submitted monthly
    - c. Peak demand in the second fiscal year by month
  - ii. Subject of forecast
    - a. Electric energy requirement: Energy requirement at the using-end, demand-end, and sending-end
    - b. Peak demand: Average value of the three highest daily demand at the sending-end
2. When the general transmission and distribution companies, and distribution companies forecast the demand in regional service areas, they must consider economic forecasts and other information, recent demand trend, actual demand and individual conditions of the service areas published by the Organization based on Paragraph 2, Article 22 of the Operational Rules, and other necessary matters for proper demand forecasts.
3. When the general transmission and distribution companies, and distribution companies submit the forecasts of regional service areas according to Paragraph 1, they must submit the calculation basis along with the forecast in a format specified by the Organization.

(Verification of demand forecast in general transmission and distribution company's service area)

### Article 5

1. General transmission and distribution companies, and distribution companies must submit to the Organization information regarding actual demand in regional service areas and significance of influence such as weather on the actual demand, according to the classification specified in the following items by the deadlines specified in the same for each item.
  - i. Electric energy requirement for the second half of the previous fiscal year and previous fiscal year shall be submitted by the end of June of each year
  - ii. Electric energy requirement for the first half of the current fiscal year shall be submitted by the end of November of each year
  - iii. Peak demand for the summer of the current fiscal year shall be submitted by the end of October of each year.
  - iv. Peak demand for the winter of the previous fiscal year shall be submitted by the end of May of each year.
2. General transmission and distribution companies, and distribution companies shall compare the actual demand in regional service areas and the forecasted demand in the areas

submitted as an electricity supply plan and verify the differences between them according to Appendix 2-1, provided, however, that the actual demand and the forecasted demand out of the period specified in Appendix 2-1 shall also be compared and verified when the Organization requests it.

3. When the general transmission and distribution companies, and distribution companies compare and verify according to the preceding paragraph, they shall consider weather, population, economic trends, and other factors that may have an influence on the demand and the range of such influence.
4. The general transmission and distribution companies, and distribution companies shall submit a result of verification specified in Paragraph 2 in a format specified by the Organization according to the following items.
  - i. End of July of each year as for electric energy requirement of the previous year
  - ii. End of October in each year as for the summer peak demand of the current fiscal year
  - iii. End of May in each year as for the winter peak demand of the previous fiscal year
5. The general transmission and distribution companies, and distribution companies must reflect the result of the verification mentioned in Paragraph 4 on the demand forecasts in the regional service areas.

Appendix 2-1: Forecasted demand to be verified and the actual demand to be compared with

Actual demand to be compared with	Forecasted demand to be verified
Electric energy requirement in the previous fiscal year	First fiscal year of a plan of the previous fiscal year
Summer peak demand in the current fiscal year	First fiscal year of a plan of the current fiscal year
Winter peak demand in the previous fiscal year	First fiscal year of a plan of the previous fiscal year

(Forecast of retail demand)

#### Article 6

1. Retail companies and registered specified transmission, distribution and retail companies, (hereinafter, “retail companies, etc.”) shall forecast the demand of customers to which electricity will be retailed (hereinafter, “retail demand” in this Chapter) based on the premises of demand forecasts, and submit the result to the Organization as a part of a draft of electricity supply plan.
2. When the retail companies, etc. forecast the retail demand, they must consider plans on procurement of power supply, sales, and others in addition to matters specified in Paragraph 2 of Article 4.

(Verification of demand forecast of the retail company)

#### Article 7

1. Retail companies, etc. shall compare and verify the difference between the actual demand and the forecasted demand according to Paragraphs 2 and 3 of Article 5.

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2. Retail companies, etc. shall reflect the result of verification in the preceding paragraph on the forecast of demand from time to time.

## Chapter 3 Aggregation of Electricity Supply Plans

(Submission of a draft of the electricity supply plan)

### Article 8

1. Electric power companies specified in the following item must submit their drafts of the electricity supply plans to the Organization in a format equivalent with the one regulated by ordinance of the Ministry of Economy, Trade and Industry by the due date specified in each corresponding item.
  - i. February 10 in each year as for a draft of the electricity supply plan of transmission companies, specified transmission and distribution companies, retail companies, etc., generation companies and specified wholesale suppliers
  - ii. March 10 in each year as for a draft of the electricity supply plan of general transmission and distribution companies, and distribution companies
2. When the electric power companies are requested by the Organization to review the draft of the electricity supply plan and submit the reviewed draft according to Paragraph 1, Article 26 of the Operational Rules, they shall explain the reviewed contents to the Organization.

(Submission of the electricity supply plans)

### Article 9

1. Electric power companies specified in the following item must submit to the Organization their electricity supply plans according to the ordinance of the Ministry of Economy, Trade and Industry by the due date specified in each corresponding item.
  - i. March 1 in each year as for the electricity supply plan of transmission companies, specified transmission and distribution companies, retail companies, etc., generation companies and specified wholesale suppliers
  - ii. March 25 in each year as for the electricity supply plan of general transmission and distribution companies, and distribution companies
2. Electric power companies must explain to the Organization any variance between the draft of the electricity supply plans submitted to the Organization and the actual electricity supply plans.

(Submission of the electricity supply plans by companies that became electric power companies in the middle of any fiscal year)

### Article 10

Any companies who became electric power companies in the middle of any fiscal year must submit to the Organization their electricity supply plans for the fiscal year that includes the day when the companies became the electric power companies without delay after they became the one according to the ordinance of the Ministry of Economy, Trade and Industry.

(Amendment of the electricity supply plans)

### Article 11

Electric power companies must submit any amendments of their electricity supply plans to the

Organization without delay

(Submission of retirement plan of generation facilities)

Article 12

When the generation companies decided to retire generation facilities with 100,000 kW or more capacities, they must describe the details of such retirement in their electricity supply plans and submit them to the Organization immediately.

(Matters to be considered upon adjustment of drafts of electricity supply plans)

Article 13

Matters to be considered upon adjustment specified in Paragraph 1, Article 26 of the Operational Rules and review specified in Paragraph 2, Article 28 of the Operational Rules are as follows.

- i. Matters that should be considered in a draft of electricity supply plan submitted by the general transmission and distribution companies, and distribution companies (as for supply plans submitted by distribution companies, except for item d)
  - a. Existence and level of difference between the demand forecast specified in an electricity supply plan and the forecasted demand submitted according to Paragraph 1, Article 23 of the Operational Rules
  - b. Level of fluctuation of demand when comparing with the transition of actual demand and the demand forecast in past electricity supply plans
  - c. Existence of significantly irrational points in a calculation method of supply capacity in light of guidelines and entry guide defined by the Government (hereinafter “Guidelines on submission of supply plan”)
  - d. Whether the supply capacity is balanced with the demand as a result of an evaluation of demand and supply balance
  - e. Compatibility of specific facilities and the date of their commercial operation in a plan on formation of transmission and distribution facilities written on a draft of electricity supply plan with long-term development policy of cross-regional network and the cross-regional network development plan
  - f. Other matters to be considered from viewpoints of securing of stable electricity supply
- ii. Matters that should be considered in a draft of an electricity supply plan submitted by the generation companies and specified wholesale suppliers
  - a. Existence of significantly irrational points in a calculation method of supply capacity in light of the Guidelines on submission of supply plan
  - b. Existence of plan on supply capacity that significantly deteriorates the demand-and-supply balance in the service areas of general transmission and distribution companies where generation companies and specified wholesale suppliers provide their resources
  - c. Other matters to be considered from viewpoints of securing of stable electricity supply
- iii. Matters that should be considered in a draft of electricity supply plan submitted by the retail companies, etc.
  - a. Level of fluctuation of demand when comparing with the transition of actual demand and the demand forecast in the past electricity supply plans
  - b. Existence of significantly irrational points in a calculation method of supply capacity in light of the Guidelines on submission of supply plan
  - c. Whether the sufficient supply capacity and reserve capacity are secured for demand



- d. Probability of procurement of the supply capacity, if suppliers for any supply capacities are not secured
- iv. Matters that should be considered in a draft of electricity supply plan submitted by transmission companies and specified transmission and distribution companies
  - a. Compatibility of specific facilities and their commercial operation in a plan on transmission and distribution facilities written on a draft of electricity supply plan with long-term policy for cross-regional networks and the cross-regional network development plan
  - b. Other matters to be considered from viewpoints of securing of stable electricity supply

(Method of demand-and-supply balance evaluation)

#### Article 14

Evaluation of the demand and supply balance specified in item ii, Paragraph 2, Article 28 of the Operational Rules shall be conducted in accordance with the evaluation method of demand and supply balance that will be separately provided and published by the Organization, based on demand in regional service area of general transmission and distribution company forecasted by the general transmission and distribution companies, supply capacities secured by the retail companies, balancing capacity of the general transmission and distribution companies, and distribution companies, and supply capacity of the generation companies and specified wholesale suppliers of which purchasers are not defined.

(Contribution to the Organization in compiling of electricity supply plans)

#### Article 15

1. When the electric power companies are heard about drafts of the electricity supply plans and basis and concepts of such electricity supply plans submitted in accordance with Paragraph 1 of Article 26 or Paragraph 1 of Article 28 of the Operational Rules, they must respond to it immediately.
2. When the electric power companies are asked to provide necessary information or other help by the Organization for evaluation of demand and supply balance based on Paragraph 3, Article 28 of the Operational Rules, they must respond to it immediately.

## Chapter 4 Capacity Market and Safeguard Measures of Generator Procurement

### *Section 1 Capacity Market*

(Use of capacity market system)

#### Article 15-2

Business that can be conducted through the capacity market system shall be the following business related to the capacity market.

- i. Registration, amendment, and cancellation of company information
- ii. Registration, amendment, and cancellation of capacity resources information
- iii. Registration, amendment, and cancellation of the expected capacity
- iv. Registration, amendment, and cancellation of bidding information of capacity auction
- v. Confirmation of information on capacity contracts executed with the Organization and submission of materials
- vi. Registration, amendment, and cancellation of replaceable capacity resource information
- vii. Confirmation of information on the capacity market notified and published by the Organization
- viii. Other business related to the capacity market

(Compliance with manuals)

#### Article 15-3

Eligible market participants, general transmission and distribution companies, and distribution companies must comply with the capacity market system manual prepared by the Organization under Article 32-4 of the Operational Rules and the capacity market operation manual prepared by the Organization under Article 32-5 of the Operational Rules.

(Conditions on participation in the capacity auction)

#### Article 15-4

1. Conditions on participation in the main auction held by the Organization under Item i, Paragraph 1, Article 32-2 of the Operational Rules shall be as specified in any of the following each item (except for capacity resources which are compensated by compensation money through generator procurement or other systems and capacity resources that cannot be calculated into the supply capacity in general transmission and distribution companies' regional service areas in the delivery year).
  - i. Participants shall be companies who provide the stable supply capacity and the expected capacity of no less than 1,000 kW from the capacity resources falling under any of the following items or companies who intervene with such provision of supply capacity as their business (hereinafter "stable resource provider").
    - a. Hydro power generation (limited to those that can provide with supply capacity constantly)
    - b. Thermal power generation
    - c. Nuclear power generation
    - d. Renewable energy power generation (limited to those that can provide with supply capacity constantly)

- ii. Participants shall be companies who provide the stable supply capacity and the expected capacity of no less than 1,000 kW (including the case of combining multiple capacity resources of the expected capacity of less than 1,000 kW belonging to the same general transmission and distribution company's regional service area) from the capacity resources falling under either of the following items or companies who intervene with such provision of supply capacity as their business (hereinafter "variable resource provider").
    - a. Hydro power generation (except for those that can provide with supply capacity constantly)
    - b. Renewable energy power generation (except for those that can provide with supply capacity constantly)
  - iii. Participants shall be companies who provide the supply capacity of which the expected capacity is no less than 1,000 kW (including the case of combining multiple capacity resources belonging to the regional service area of the same general transmission and distribution companies) from the capacity resources falling under any of the following items or by specified curtailment request (specified curtailment defined in Item vii of Paragraph 2 of Article 1 of the Ministerial Ordinance for Enforcement of the Electricity Business Act [Ordinance no. 77 of the Ministry of Trade and Industry, 1995]) or other means (except for company who provides capacity resources specified in a. or b. in the preceding item, or solely combining those capacity resources, hereinafter "order based operation resources provider" )
    - a. Electrical facilities for power generation that is difficult to supply electricity constantly.
    - b. Specified curtailment request
    - c. Generation facilities with expected capacity less than 1,000 kW
2. Conditions on participation in an additional auction held by the Organization under Item ii, Article 32-2 of the Operational Rules shall be as specified in any of the following items (except for capacity resources which are compensated by compensation money through generator procurement or other systems and capacity resources that cannot be calculated into the supply capacity in general transmission and distribution companies' regional service areas in the delivery year).
- i. When an incremental auction is held under Item ii-a, Article 32-2 of the Operational Rules: Participants shall be companies specified in any of the following and satisfy the conditions specified in the same items.
    - a. Companies falling under any of items i to iii of the preceding paragraph: Bidding by the company at the main auction covering the delivery year of the incremental auction was not successful, or the company could not participate in the main auction covering the delivery year of such incremental auction due to inevitable reasons, such as construction of new facilities (as for companies falling under Item iii of the preceding paragraph, limited to companies whose verified capacity is confirmed).
    - b. Stable resource provider who provides the supply capacity for non-utility electrical facilities for power generation: A provider executed a capacity contract covering the delivery year of the incremental auction with the Organization and became able to provide with supply capacity exceeding the capacity contract amount, because of the fact that the forecast of the generation and sales plan becomes clear from the time of execution of the contract or other reasons.
    - c. Order based operation resources provider: Providers who executed a capacity contract covering the delivery year of the incremental auction with the Organization and whose

verified capacity exceeded the capacity contract amount.

- ii. When the release auction is held under Item ii-b, Article 32-2 of the Operational Rules: Bidding by the company at the main auction covering the delivery year of release auction falling under any of the items i to iii of the preceding paragraph was successful, and such a company has become a capacity resources provider (as for a company falling under Item iii of the preceding paragraph, only a company whose verified capacity is confirmed).

(Application for registration of eligible market participant's basic information)

Article 15-5

1. When the eligible market participants wish to bid at a capacity auction held by the Organization, they must apply for registration of their basic information specified in the following items in advance.
  - i. Registration of company information
  - ii. Registration of capacity resources information
2. When the general transmission and distribution companies, and distribution companies are asked by the Organization to submit information necessary for the evaluation of the application for registration of capacity resources information, such companies must provide the information.

(Application for amendment or cancellation of eligible participant's basic information)

Article 15-6

1. When an eligible market participant wishes to change or cancel the content of eligible market participant's basic information registered on the capacity market system, such a participant must immediately apply for amendment or cancellation to the Organization.
2. When the general transmission and distribution companies, and distribution companies are asked by the Organization to provide the information necessary for the evaluation related to the procedures of amendment or cancellation of the capacity resources information, such companies must provide the information.

(Procedures for solicitation of capacity resource providers at a main auction)

Article 15-7

Procedures for solicitation of capacity resource providers at a main auction shall be as specified in each item of the following.

- i. Drawing-up and publication of a main auction outline: The Organization shall draw-up and publish a main auction outline based on Article 32-12 of the Operational Rules.
- ii. Drawing-up and publication of a demand curve for main auction: The Organization shall draw-up and publish a demand curve for main auction based on Article 32-13 of the Operational Rules.
- iii. Registration of the expected capacity: An eligible market participant who wishes to bid at a main auction shall register its expected capacity during a reception period of the application for registration of the expected capacity specified in the main auction outline. After registration of the expected capacity, amendment or cancellation of the expected capacity can be applied only during a reception period of the expected capacity.

- iv. Bidding: Eligible main auction participants may submit bidding information during a reception period of bids specified in the main auction outline. After submission of the bidding information, such bidding information may be amended or cancelled only during a reception period of bids.

(Cooperation in evaluation of the expected capacity)

Article 15-8

When the members are asked by the Organization to provide the information necessary for the evaluation related to the application for registration of the expected capacity, they must provide the information.

(Application mutatis mutandis of provisions on main auction to the incremental auction)

Article 15-9

1. Provisions of Article 15-7 shall be applied mutatis mutandis to the incremental auction (except for Item ii of Article 15-7). In such cases, the term, “main auction,” shall be replaced with the term, “incremental auction.”
2. Among companies falling under Item i-a, Paragraph 2 of Article 15-4, stable resource providers or variable resource providers whose bidding at the main auction was not successful may not amend the expected capacity registered upon bidding at the main auction.

(Application mutatis mutandis of provisions on main auction to the release auction)

Article 15-10

Provisions of Article 15-7 shall be applied mutatis mutandis to the release auction (except for Item ii and iii of Article 15-7). In such cases, the term, “main auction” and “capacity resource provider” shall be replaced with the term, “release auction” and “capacity resource releaser,” respectively.

(Obligation to respond to amendment or cancellation of capacity contract)

Article 15-11

When a capacity resource provider is requested to amend or cancel its capacity contract by the Organization under Paragraph 3, Article 32-19 of the Operational Rules, such a provider must respond to the request.

(Conditions on capacity providers subject to capacity verification)

Article 15-12

Conditions on capacity providers subject to capacity verification specified in Paragraph 1, Article 32-24 of the Operational Rules shall be as specified in each item of the following.

- i. Order based operation resources providers who executed a capacity contract with the Organization after successful bidding at a main auction and became a capacity resource provider
- ii. Order based operation resources providers who wish to participate in the incremental

auction

(Application for registration of the capacity resources list)

Article 15-13

1. Capacity providers subject to capacity verification must apply for registration of the capacity resources list during a reception period of the application for registration of the capacity resources list specified by the Organization.
2. When the general transmission and distribution companies, and distribution companies are requested by the Organization to provide the information necessary for the evaluation related to the application for registration of the capacity resources list, such companies must provide the information.
3. Capacity providers subject to capacity verification must use the form prepared by the Organization under Paragraph 3, Article 32-24 of the Operational Rules for preparation of their capacity resources list.
4. The general transmission and distribution companies, and distribution companies will receive information on the capacity resources list registered or amended from the Organization.

(Application for amendment or cancellation of the capacity resources list)

Article 15-14

Capacity providers subject to capacity verification may apply for amendment or cancellation of the capacity resources list only during periods specified in each item of the following.

- i. During a reception period of the application for registration of the capacity resources list
- ii. During a certain reception period specified separately by the Organization immediately before the start of the delivery year
- iii. During the delivery year

(Procedures for the verification test)

Article 15-15

1. Procedures for the verification test shall be as specified in each item of the following.
  - i. Report of the schedule for the verification test: Capacity providers subject to the capacity verification test shall coordinate the schedule for the verification test with general transmission and distribution companies or distribution companies (hereinafter, “cooperative general transmission and distribution companies, etc.”) of service areas related to the capacity providers subject to the capacity verification test based on a request from the Organization and report the confirmed schedule to the Organization.
  - ii. Conduct of verification test: Capacity providers subject to the capacity verification test shall conduct the verification test by complying with the schedule reported to the Organization under the preceding item.
  - iii. Submission of a verification test result: Capacity providers subject to the capacity verification test shall submit a verification test result to the Organization based on a request from the Organization after the verification test.
2. In spite of the provision of the preceding paragraph, capacity providers subject to the

capacity verification test may omit the procedures specified in the respective item of the preceding paragraph, when the conditions specified in Article 32-33 of the Operational Rules are satisfied.

3. When the capacity providers subject to the capacity verification test register the verification test result in Item iii of Paragraph 1 above, such providers must use the form prepared by the Organization under Paragraph 2, Article 32-29 of the Operational Rules.

(Cooperation to conduct of verification test)

Article 15-16

Cooperative general transmission and distribution companies, etc. must cooperate with capacity providers subject to the capacity verification test in matters specified in each item of the following related to the verification test conducted by such capacity providers based on a request from the Organization.

- i. Coordination of the schedule for the verification test with the capacity provider subject to the capacity verification test
- ii. Confirmation of the verification test result
- iii. Other matters necessary for the conduct of verification test

(Assessment)

Article 15-17

1. Assessment conducted against capacity resource providers by the Organization under Article 32-34 of the Operational Rules shall be as specified in each item of the following.

- i. Confirmation of the capacity resources list: The Organization shall request submission of a capacity resources list from the capacity provider subject to capacity verification specified in Item i of Article 15-12 and confirms the contents of the list.
- ii. Confirmation of the verification test result: The Organization shall request a report of adjustment of the schedule for the verification test from the capacity provider subject to the verification test two years before the start of the delivery year and confirm the verification test result under such schedule.
- iii. Confirmation of undefined matters upon registration of capacity resources information and expected capacity: The Organization shall confirm undefined matters from the capacity resource provider who has undefined matters by the start of the delivery year upon registration of capacity resources information and expected capacity.
- iv. Confirmation of existence of corresponding FIP and FIT generators: The Organization shall confirm the existence of corresponding FIP and FIT generators as needed from the registered capacity resources information. (The Organization shall request the provision of necessary information from the government.)
- v. Confirmation of securing status and actual provision of supply capacity according to characteristics of capacity resource providers and situations of demand and supply: The Organization shall confirm them by the following procedures a to c with regard to the capacity resource providers within the delivery year.
  - a. The Organization shall confirm the possibility of tightness of the demand and supply balance across the nation and general transmission and distribution companies' regional service areas from Monday to Friday of the next week in accordance with a plan on the

- demand and supply capacity in the regional service areas and the balancing capacity (weekly plan) to be submitted every Thursday from the general transmission and distribution companies, and distribution companies specified in the Appendix 8-4.
- b. The Organization shall confirm the securing status and actual provision of supply capacity according to the characteristics of the capacity resource providers and the situations of demand and supply based on the information necessary for the assessment submitted from the capacity resource providers or the general transmission and distribution companies, and distribution companies.
  - c. The Organization shall notify the capacity resource providers of the assessment results confirmed in Item b above.
- 2. The general transmission and distribution companies, and distribution companies must submit information necessary for the assessment in the preceding paragraph in accordance with a request from the Organization.
  - 3. The general transmission and distribution companies, and distribution companies will receive information on capacity resource providers in the relevant regional service areas from the Organization to cooperate with the Organization in the assessment in accordance with Paragraph 3, Article 32-20 of the Operational Rules.

(Conditions on registration of replaceable capacity resources information)

Article 15-18

- 1. When a replaceable capacity resources provider is a stable or variable resource provider, registration of the replaceable capacity resource information can be applied only when the replaceable capacity resources fall under all the following items.
  - i. The capacity resources shall satisfy conditions on participation in an incremental auction specified in Item i-a. or b., Paragraph 2 of Article 15-4. Provided, however, that, where an incremental auction has been held, this provision shall be limited to cases in which a bid that has been submitted to the incremental auction has failed or in which participation in the incremental auction was not possible due to new construction or for an otherwise unavoidable reason.
  - ii. After a successful bid at a main auction or incremental auction in the applicable fiscal year of actual supply and demand, the power source to be replaced is replaced by a power source as the source of replacement.
- 2. When a replaceable resource provider is an order-based operation resources provider, registration of replaceable capacity resources can be applied only when the replaceable capacity resources fall under all of the following items.
  - i. The resources shall satisfy conditions on participation in the incremental auction specified in Item i-c, Paragraph 2 of Article 15-4. Provided, however, that, where an incremental auction has been held, this provision shall be limited to cases in which a bid that has been submitted to the incremental auction has failed.
  - ii. After a successful bid at a main auction or incremental auction in the applicable fiscal year of actual supply and demand, the power source to be replaced is replaced by a power source as the source of replacement
- 3. Notwithstanding the preceding two (2) paragraphs, the provider of a power source to be replaced as listed in any of the following items shall be unable to apply to register information on a power source to be replaced unless the condition corresponding to the



applicable item is satisfied:

- i. Provider of a power source to be replaced as prescribed in paragraph 1 hereof: The expected capacity for the applicable fiscal year of actual supply and demand has been registered;
  - ii. Provider of a power source to be replaced as prescribed in the preceding paragraph: The expected capacity for the applicable fiscal year of actual supply and demand has been determined through the registration of a power source list or the submission of the results of effectiveness testing.
4. When it becomes necessary to amend or cancel the replaceable capacity resource information registered on the capacity market system, such replaceable capacity resource providers must amend or cancel it properly.

(Replacement of capacity resources)

Article 15-19

Capacity resource providers may apply for registration of replacement of capacity resources only when the following both items are applied.

- i. A capacity resource provider to be replaced is a replaceable capacity resource provider registered on the capacity market system.
- ii. Consent from the replaceable capacity resource provider is gained.

## *Section 2 Safeguard Measures of Generator Procurement*

(Request for consideration of procurement of generating facilities by general transmission and distribution companies)

Article 16

When the demand and supply balance is constantly expected to become tight due to unscheduled outages of major generating facilities, and when it seems difficult to improve the demand and supply balance by methods other than procuring generating facilities by the Organization, general transmission and distribution companies or distribution companies may ask the Organization to consider procurement of generating facilities defined in Item ii, Paragraph 1, Article 35 of the Operational Rules.

(Consideration of necessity of procuring generation facilities and matters to be considered upon evaluation)

Article 17

Matters to be considered upon consideration of the necessity of procuring generation facilities shall be as follows.

- i. Verification of demand and supply across the nation and in each regional service area of general transmission and distribution company
- ii. Securing condition of supply capacity of the members
  - a. Securing condition of supply capacity of retail companies, etc. (which are limited to companies whose influence on evaluation of demand and supply balance across the nation and in each regional service area of general transmission and distribution company is significant, hereinafter, the same shall apply in this article)

- b. Operation performance and operation plans of electric facilities for power generation owned by generation companies and specified wholesale suppliers (limited to companies whose influence on evaluation of demand and supply balance across the nation and in each regional supply area of general transmission and distribution company is significant), and other supply capacity
- c. Securing condition of balancing capacity of general transmission and distribution companies, and distribution companies
- iii. Actual demand and demand forecast of retail companies, etc.
- iv. Risk analysis of demand and supply fluctuation with respect to risk management
  - a. Risk of major unscheduled outage or risk on fuel procurement due to natural disaster, changes in social conditions and other special circumstances
  - b. Other matters that have influence on demand and supply balance across the nation or in specific regional service areas of general transmission and distribution companies
- v. Procuring condition of supply capacity in capacity market (only in case implementing special conditional auction.)

(Basic requirements to be described upon procuring generation facilities)

#### Article 18

Basic requirements to be described upon procurement of generation facilities shall be as follows.

- i. Service areas subject to the procuring generation facilities
- ii. Business regarding maintenance and operation of power generators subject to the procuring generation facilities
- iii. Power generators subject to the procuring generation facilities (except cases where the companies that build electric facilities for power generation are recruited)
- iv. Conditions such as frequency adjustment function required to the generating facilities subject to the procuring generation facilities
- v. Amount and period of provision of supply capacity from companies that maintain and operate generating facilities
- vi. Procedures for the procuring generation facilities
- vii. Conditions required to become a company that can maintain and operate generation facilities
- viii. Payment terms of compensation for generator procurement
- ix. Conditions on sales of electricity
- x. Upper limits of compensation for generator procurement
- xi. Solicitation schedule
- xii. Other matters necessary for the procuring generation facilities

(Conditions of applicants for the procuring for generating facilities)

#### Article 19

Electric power suppliers (including companies that seek to become one, hereinafter, the same shall apply in this Chapter) may apply for the recruitment by the Organization based on Article 38 of the Operational Rules, only when the companies satisfy all of the conditions specified below.

## Network Codes (2022)

- i. Companies must maintain electric facilities for power generation and have technological skills to operate them
- ii. Companies must have the will and capability to bear the costs of maintenance and operation of generating facilities (excluding compensation for generator procurement)
- iii. Companies must have the will and capability to continuously provide supply capacity during a period when supply capacity is provided
- iv. Companies can abide by the Act and other laws and regulations
- v. Companies must satisfy other conditions specified in the basic requirements of the procuring generation facilities

(Appointment of applicants for procuring generation facilities)

### Article 20

1. Any electric power suppliers appointed by the Organization as applicants for the procuring generation facilities based on Paragraph 2, Article 38 of the Operational Rules must apply for the procurement except when there are special reasons.
2. When the companies appointed by the Organization as applicants for procuring generation facilities are not able to apply for the procurement, they must explain the reasons in writing to the Organization.

(Procedures for soliciting companies that maintain and operate generation facilities)

### Article 21

Procedures for soliciting companies that maintain and operate generation facilities shall be as follows.

- i. Publication of the initiation of procuring generation facilities The Organization will publish the initiation of procuring generation facilities when it started the procurement according to Paragraph 3, Article 36 of the Operational Rules
- ii. Drawing-up and publication of request for proposal (RFP) The Organization shall draw up and publish the request for proposal(RFP) that provides the solicitation schedule, service areas subject to the procurement, business details of maintenance and operation of generating facilities, period of the business, procedures for the procurement, conditions to procurement, payment terms of compensation for generator procurement, conditions of sales of electricity by the companies that maintain and operate generating facilities, and other necessary matters based on the basic requirements of the procurement. The Organization shall hear opinions of the members upon drawing-up of the RFP in principle, and review the contents to be published based on Paragraph 2, Article 5 of the Operational Rules.
- iii. Holding of briefing session The Organization shall hold a briefing session regarding solicitation as necessary for companies seek to apply for the procuring generation facilities.
- iv. Submission of necessary documents electric power suppliers that apply for the procuring generation facilities shall submit the necessary documents specifying the offering price and others by the deadline specified in the RFP.

(Evaluation items of applicants)

Article 22

Evaluation items of applicants for the procuring generation facilities shall be as follows.

- i. Compatibility with laws and ordinance of the Government
- ii. Offering price (toward upper limits)
- iii. Technical liability: Unscheduled outage risk, frequency control functions, etc.
- iv. Business feasibility: Time schedule when provision of supply capacity is possible, risk of process delay, feasibility of construction or repair, assurance of procuring fuel
- v. Business continuity: Financial soundness of the company, experience on maintenance and operation of generation facilities, structure for maintenance and operation
- vi. Economic efficiency: Construction costs (including costs for reinforcement of the network), fuel costs, repair costs
- vii. Environmental influence
- viii. Other matters specified in the RFP

(Report regarding maintenance and operation of generating facilities by the successful procurer)

Article 23

Companies that maintain and operate generating facilities must periodically report the process for new or additional construction or restoration of electric facilities for power generation, provision of supply capacity, and other business related to maintenance and operation of generating facilities specified by the Organization by the due date specified by the Organization.

## Chapter 5 Security of Balancing Capacity

(Plans on security of balancing capacity and submitting reports of actual performance)

### Article 24

1. The general transmission and distribution companies, and distribution companies shall annually prepare and submit to the Organization a plan on securing of balancing capacity according to the form specified by the Organization for the next fiscal year before the start of such a fiscal year.
2. Matters specified in the following items shall be written in a plan on balancing capacity mentioned in Paragraph 1.
  - i. Necessary amount of balancing capacity
  - ii. Specific contents of balancing capacity
  - iii. Reasons of necessity of balancing capacity
3. The general transmission and distribution companies, and distribution companies shall annually submit a report to the Organization on actual utilization of balancing capacity compared to the plan for the previous year mentioned in the preceding paragraphs.

(Securing balancing capacity)

### Article 25

1. General transmission and distribution companies, and distribution companies shall strive to secure balancing capacity necessary for network operation (specified in Article 150) in advance.
2. When the general transmission and distribution companies, and distribution companies secure balancing capacity, standards of balancing capacity published in accordance with Article 181 of the Operational Rules, conditions and significance of actually expected risk of demand-and-supply fluctuation shall be considered.

(Preparation for open solicitation of companies to supply balancing capacity)

### Article 26

A general transmission and distribution company, and distribution company shall, in principle, procure balancing capacity according to a method for which the fairness and transparency of solicitation and of procurement from the balancing market have been secured and shall not give preferential treatment to specific types of power generation facilities or specific companies that install power generation facilities.

(Preparation of Request for Proposal)

### Article 27

In soliciting balancing capacity or engaging in procurement from the balancing market, a general transmission and distribution company and a distribution company shall, in principle, formulate and publish requirements to be satisfied in terms of balancing capacity, schedules for solicitation or transactions, and implementation guidelines for solicitation or transaction regulations for the balancing market scheme setting forth key contractual conditions and other

necessary matters.

(Procedures for open solicitation)

Article 28

1. In soliciting balancing capacity, a general transmission and distribution company, and distribution company shall solicit balancing capacity in accordance with the formulated guidelines for implementation and determine successful bidders by comprehensively evaluating bid amounts, performance in terms of balancing capacity, and the necessity of network operations.
2. In procuring balancing capacity from the balancing market, a general transmission and distribution company, and distribution company shall present the required amount of balancing capacity in accordance with the formulated transaction regulations and determine successful bidders through an auction based on bid amounts, restrictions on network operations, and other factors.
3. A general transmission and distribution company, and distribution company shall, as requested by the Organization, report the names of successful bidders in a solicitation of balancing capacity, requirements for balancing capacity procured from such successful bidders, the results of agreements concerning the balancing market scheme, and other matters requested by the Organization to the Organization.

(Concluding agreements on the provision of balancing capacity)

Article 29

1. A general transmission and distribution company, distribution company and successful bidder in a solicitation of balancing capacity shall, after the conclusion of procedures for soliciting balancing capacity, conclude an agreement on the use of balancing capacity for which an application was made by the successful bidder in accordance with the implementation guidelines for solicitation or the bidding results. Provided, however, that this provision shall not apply where the general transmission and distribution company, distribution company and the successful bidder are the same company.
2. A general transmission and distribution company, distribution company and company engaged in transactions in the balancing market shall conclude an agreement on the use of balancing capacity agreed to in the balancing market in accordance with the transaction regulations for the balancing market scheme.

(Publication of result of solicitation)

Article 30

A general transmission and distribution company, and distribution company must publish the results of procedures for soliciting balancing capacity or the results of an agreement concerning the balancing market scheme.

(Notifying the upper limit of transactions pertaining to interconnection lines and reporting the amount of capacity secured)

Article 30-2

## Network Codes (2022)

A general transmission and distribution company, and distribution company shall execute any transaction spanning supply areas of general transmission and distribution companies to the extent of the capacity of interconnection lines that can accommodate balancing capacity transactions in the balancing market for which a notification has been received from the Organization and report the capacity of the interconnection lines to be secured as margin based on the agreement results to the Organization.

## Chapter 6 Network System Development

(Cooperating with the Cross-Regional Network Development Committee)

Article 31.

An electric power supplier must, in accordance with a request by a standing committee on the formation of facilities for cross-regional networks established pursuant to the provisions of Article 47 of the Operational Rules (hereinafter referred to as “Cross-Regional Network Development Committee”), cooperate in connection with the operations of the Cross-Regional Network Development Committee.

(Entries in long-term policy of cross-regional network development)

Article 32

Long-term policy of cross-regional network development shall include matters specified in the following items.

- i. Basic concept on cross-regional interconnection network development
  - a. Matters on future electricity demand and supply across the nation
  - b. Matters on an ideal state of future cross-regional interconnection network across the nation
- ii. Matters to be considered of basic concept on cross-regional interconnection network development across the nation
  - a. Matters to be considered of a of Item i above
    - (a) States of electricity demand and supply until the previous fiscal year
    - (b) Forecast of electricity demand and supply based on changes in social or economic conditions
    - (c) Characteristic of regional service areas of general transmission and distribution companies
  - b. Matters to be considered of b of Item ii
    - (a) Forecast of development of environment for cross-regional electricity trade
    - (b) Supply reliability level upon occurrence of major accidents or disasters
    - (c) Characteristic of regional service areas of general transmission and distribution companies
    - (d) Information on aging of transmission and distribution facilities, progress of technology development and other technical information
- iii. Other matters on direction of development and updating of cross-regional interconnection network

(Conditions for the start of consideration on planning process by a proposal from the Organization)

Article 33

1. Conditions for the start of the study of planning process defined in Item i, Article 51 of the Operational Rules shall be as follows, provided, however, that in cases specified in Paragraph 2, Article 52 of the Operational Rules, the study of planning process will not be started.



- i. Conditions for the start of consideration about stable supply
  - a. In a case where the unplanned outage of multiple power generators actually occurred and led to a significant loss of supply capacity beyond reserve capacity in regional service areas of the general transmission and distribution companies, and the interruption of supply occurred, even though interconnection lines were used up to the total transfer capability (TTC) (except cases where the electrical circuit was re-broken automatically, and the interruption of supply ceased, hereinafter “supply disturbance”).
  - b. In a case where the necessity of securing of stable electricity supply is recognized as a result of analysis of influence from possible major accidents and disasters
- ii. Conditions for the start of consideration on development of environment for cross-regional trade
  - a. Actual usage of interconnection lines: In a case where, in the actual use of interconnection lines, the number of hours when the available transfer capability (ATC) for the total transfer capability became 5% or less for the past one year is 20% or more of the total hours for the past one year. Provided, however, that power flow which is able to flow around into other interconnection lines shall be treated as flow into other interconnection lines upon calculation of ATC of interconnection lines (the same shall apply in d).
  - b. Situation of market trade: Upon a spot trade operated by Japan Electric Power eXchange (JEPX), the number of commodities which became a subject to a market segmentation (which means a case where the integrated capability of contract capability of sales between regions surpasses the ATC of interconnection lines as a result of process of a contract and such a contract is processed again by specifying such an ATC as a constraint condition) became 20% or more of the total commodities for the past one year.
  - c. Actual constraint on output through constraint on bulk electric system within service areas: In a case where the actual ATC of the bulk electric system within service areas at the time when the annual peak demand occurred or the annual lowest demand occurred in each regional service area of the general transmission and distribution companies became not more than 5% of the TTC, or where the electric power suppliers report that output of power generation facilities are constrained in response to a request for submission of information from the Organization, and if it was found out that the continuous constraint (except for constraint complied with a transmission network usage contract or other constraint which is a precondition of network interconnection) on power generation by the electric power suppliers occurred due to constraint of bulk electric systems within service areas.
  - d. Needs for the reinforcement of network from electric power suppliers: In a case where the TTC is requested to increase by electric power suppliers who plan to engage in multiple cross-regional electricity trade (when such companies plan to install a generation facility or upgrade the maximum receiving power of its existing generation facility, only electric power suppliers who received a response of system impact study) within the past three years surpasses the transfer capacities to be upgraded as a basic requirement defined in the past planning process (limited to those which have not reached to the upgraded capability on the cross-regional network interconnections).
  - e. Network access with a direct impact on interconnection lines: Where the Organization receives a report as provided for in paragraph 1 of Article 91 hereof and where a cross-regional interconnection network subject to an application for an agreement or the

reinforcement of a collective study process for generator interconnections is deemed to constitute a distribution facility that has a direct impact on the computation or operations of the operational capacity of cross-regional interconnection lines. Provided, however, that this provision shall not apply where an application for an agreement has been made by a network interconnection applicant in accordance with a cross-regional network development plan or the results of a collective study process for generator interconnections.

- f. In other cases where there is a high possibility that the necessity of environmental development for cross-regional trade is recognized, and when the rationality that the Organization should consider the development of cross-regional network is recognized
2. When the Organization judges the applicability of conditions specified in Item ii of Paragraph 1, if any influence of malfunction of transmission and distribution facilities due to disasters, a long-term unavailability of the transmission and distribution facilities and other events which are expected to occur accidentally only during such an outage period and are not expected to occur after such a period are recognized, it shall judge the applicability without regard to such influence.
3. Regardless whether the planning process has been started according to the provision of Paragraph 1, the Organization shall compile the applicability of conditions specified in the following items at a frequency specified in the following items and report and publish them to the Cross-regional Network Development Committee.
  - i. Once a quarter as for conditions specified in Items ii-a, b and d of Paragraph 1
  - ii. Once a year as for conditions specified in Item ii-c of Paragraph 1
4. When the Organization confirmed whether it should start the planning process or not based on Item ii-e of Paragraph 1 above, it shall notify the general transmission and distribution company or distribution company, and applicants for network interconnection who applied for contract about the result of such confirmation. A general transmission and distribution company or distribution company that has been notified of the results associated with a report as provided for in any of items ii through iii of paragraph 1 of Article 91 hereof shall notify the fact thereof to the network interconnection applicant subject thereto.

(Electric power suppliers who may request regarding the cross-regional network development)

#### Article 34

1. Electric power suppliers who fall under any of the following conditions may request regarding the cross-regional network development.
  - i. Request regarding stable supply: electric power suppliers should be general transmission and distribution companies
  - ii. Request regarding environmental development for cross-regional trade: Electric power suppliers shall fall under the following a and b
    - a. Electric power suppliers seek for cross-regional electricity trade using the existing generating facilities (except for facility which increases the maximum receiving capability)
    - b. Total capability of cross-regional power trade of which the companies seek to increase shall be not less than 10,000 kW

- c. Electric power suppliers shall have the intention and financial capability to share costs according to the cost-sharing ratio expected to be necessary for cross-regional network development
- iii. Request regarding installation of generation facilities: Electric power suppliers shall fall under the following a. to c.
  - a. Electric power suppliers seek to engage in the cross-regional electricity trade with the generation facilities which the companies plan to install (including a case where the maximum receiving capability of the existing generation facility is increased, hereinafter, the same shall apply)
  - b. Electric power suppliers have received a response on connection of generation facilities of which the companies plan to install (including a response that notifies the impossibility of interconnection)
  - c. Total capacity of the generation facilities which the companies plan to install (or the total capability of cross-regional trade which the companies seek to increase, in a case where the maximum receiving capability of the existing generation facility will be increased) is not less than 10,000 kW
  - d. Electric power suppliers shall have the intention and financial capability to share costs according to cost-sharing ratio expected to be necessary for cross-regional network development
- 2. Several electric power suppliers may jointly request regarding the cross-regional network development to the Organization. In such a case, satisfactions of conditions specified in Item ii-b and Item iii-c of the preceding paragraph shall be judged based on the capability in the cross-regional trade demanded by such several companies or total capacities from the generation facility of which the companies plan to install.

(Requests regarding the cross-regional network development)

Article 35

- 1. Electric power suppliers must make a request to the Organization regarding the cross-regional network development in a format defined and published by the Organization after revealing the matters specified in each following item.
  - i. Intention and financial capability to bare cost
  - ii. The electric capability of cross-regional trade that the companies seek to expand
  - iii. Timing of expansion of cross-regional trade of electricity which the electric power suppliers seek
  - iv. Regional service areas of general transmission and distribution companies that the electric power suppliers seek for as supply destination
  - v. Other matters that the Organization considers necessary
- 2. When the Organization solicits electric power suppliers who attempt to expand the usage of cross-regional interconnection network which is subject to the review of planning process through cross-regional electric power trading based on Paragraph 1, Article 57 of the Operational Rules, electric power suppliers who proposed matters specified in item ii or iii of Paragraph 1 of the preceding Article among electric power suppliers who claimed a consideration of cross-regional network development (hereinafter “claimant for consideration”) may respond to such solicitation. In such cases, if such electric power

suppliers do not respond to the solicitation, claims for the consideration of development of cross-regional network shall be deemed to have been withheld.

3. Claimant of consideration may take action as specified in the following items only when justifiable reasons are recognized before the Organization defines the beneficiaries and the cost allocation ratio according to Article 59 of the Operational Rules.
  - i. Withdrawing of requests regarding cross-regional network development
  - ii. Succeeding position of the claimant of consideration (only when the successor of the claimant has the intention to share the cost at the ratio expected to be necessary for the cross-regional network development, and submitted materials necessary for evaluation of its financial ability, and when the Organization considers the successor has the financial ability)
  - iii. Decrease of electricity of cross-regional trade when the suppliers seek expansion
  - iv. Postponement of period when the suppliers seek expansion of electricity trade
  - v. Other minor changes in matters that the Organization considers will not affect the planning process

(Procedure for the start of planning process by a request from electric power suppliers)

#### Article 36

Conditions for the start of the study of planning process based on Item ii of Article 51 of the Operational Rules shall be as follows, provided, however, that in cases specified in Paragraph 2, Article 52 of the Operational Rules, the study of planning process will not be started.

- i. Request regarding stable supply: such a request is recognized as necessary to consider from a viewpoint of stable supply specified in Item i, Paragraph 1, Article 33 after confirmation of the request regarding the cross-regional network development
- ii. Request regarding the environmental development for cross-regional trade and the installation of generation facility: Following a. to c. shall be satisfied.
  - a. The capacities, which the claimant of consideration wishes to trade, surpasses the capability for the existing facilities of the cross-regional interconnection network by 10,000 kW or more
  - b. Claimant of consideration has an intention to share the cost by the allocation ratio defined by the Organization according to Article 59 of the Operational Rules and financial capability, which confirms such an intention
  - c. Transmission and distribution facilities subject to the consideration of development are cross-regional interconnection network.

(Procedure for the start of planning process based on a request from the Government)

#### Article 37

When the Organization is requested to consider on the cross-regional network development by the Government or national board of councilors, it shall start the planning process according to Item iii, Paragraph 1, Article 51 of the Operational Rules.

(Decisions on how to proceed with planning process)

#### Article 38

1. When the planning process is started, the Organization shall decide how to proceed with the process after confirming and considering matters specified in the following items.
  - i. Crosscheck with other projects
    - a. Crosscheck with the past considered project: Reasons of the starting crosscheck and equality between a project related to a new planning process (hereinafter “new consideration project”) and projects considered in a past planning process (only projects which did not reach a decision to start the cross-regional network development plan). When the equality is recognized, existence of changes in situations from those at the time of the past consideration of project and the level of such changes.
    - b. Crosscheck with projects under consideration or projects to be considered: Reasons of crosscheck and equality between a new consideration project and other projects currently under consideration in the planning process or scheduled to be considered. When the equality is recognized, the necessity of consideration of the cross-regional network development in addition to such other projects.
  - ii. Necessity of continuance of planning process: Result of confirmation specified in a and b of Item i and other matters related to the necessity of continuance of planning process
  - iii. Consideration schedule: A period from the decision on how to proceed with the planning process to the decision on cross-regional network development according to Article 60 of the Operational Rules
2. Standard period for consideration of the planning process shall be as follows
  - i. 18 months – when the reinforcement plans and the operating entities are solicited
  - ii. 12 months – when the reinforcement plans and the operating entities are not solicited
3. When the planning process of the project was started based on a request from the electric power supplier, the Organization shall notify such companies in writing about the matters specified in Paragraph 1 of Article 55 of the Operational Rules after defining how to proceed with the planning process.
4. When the Organization considers that there is no need to continue the planning process as a result of consideration according to Paragraph 1, the reason which Organization recognizes that it is proper to conduct consideration of the new consideration project along with the other projects as a result of cross-check between projects under consideration and scheduled to be considered, it shall take account of the reasons of the start of such consideration and contents of the new consideration project upon the consideration of such other projects.

(Decisions on basic requirements)

Article 39

1. When the Organization considers that there is a need to continue the planning process as a result of confirmation and consideration according to Paragraph 1 of Article 38, it shall consider the necessity of implementation of the cross-regional network development after considering the matters specified in the following items upon consideration of the basic requirements and beneficiaries of the cross-regional network development.
  - i. Alternative method for the cross-regional network development (new generator interconnection, upgrade capability of the existing generation facilities, etc.)
  - ii. Cost needed for the cross-regional network development
  - iii. Influence of the cross-regional network development on stable electricity supply

- iv. Existence and level of contribution to vitalization of electricity trade by the cross-regional network development
  - v. Existence and level of contribution to integration of renewable energy generating facilities by the cross-regional network development
  - vi. Other influence of the cross-regional network development on social benefits
2. When the Organization considers that there is a need to implement cross-regional network development as a result of consideration, it shall define the basic requirements of cross-regional network development and the range of beneficiaries taking into account the matters specified in following items.
- i. Opinions from claimant of consideration (only when the planning process was started based on Item ii of Article 51 of Operational Rules)
  - ii. Contents of request from the Government (only when the planning process was started based on Item iii of Article 51 of Operational Rules)
  - iii. Opinions from relevant electric power suppliers and candidates of beneficiaries
3. Basic requirements of cross-regional network development shall be the matters specified in following each item.
- i. Purpose and expected beneficiaries of reinforcement
  - ii. The necessary upgrade of capacities
  - iii. Timing needed for the cross-regional network development
  - iv. Method of cross-regional network development (summary of construction work, brief route, estimated construction cost, estimated construction period, etc.)
  - v. Estimation of specified cost allocation calculated from the estimated construction cost based on Guidelines on cost allocation of network reinforcement for generator installment
  - vi. Estimated schedule

(Procedure for solicitation and application for electric power suppliers)

#### Article 40

1. Upon consideration according to Article 57 in Operational Rules, the Organization may solicit for Electric Power Suppliers who plan to expand the utilization of transmission and distribution facilities subject to the consideration of the planning process through cross-regional electricity trade, if the Organization considers such solicitation is necessary for the purpose of search of reinforcement needs, consideration of the capability increase and other purposes.
2. Electric power suppliers may apply for the solicitation specified in Paragraph 1 above, only when they have the intention and financial capability to share the costs according to the allocation ratio defined according to the costs expected to be necessary for cross-regional network development.
3. Electric power suppliers shall apply for solicitation specified in Paragraph 1 above based on an application summary defined in each process and published by the Organization after revealing matters specified in the following items.
  - i. Intention and financial ability to bare costs
  - ii. The capability of electricity of cross-regional trade that the suppliers seek to expand
  - iii. Timing of expansion of cross-regional trade that the suppliers seek
  - iv. Service areas of General transmission and distribution companies that the suppliers seek for as supply destination

- v. Other matters that the Organization considers necessary
- 4. Among electric power suppliers who applied(hereinafter, “applicant company”), electric power suppliers who plan to install a generation facility or upgrade the maximum receiving capability of the existing generation facility and who have not applied a system impact study must apply for the system impact study immediately after such application to the Organization. If such electric power suppliers fail to apply for the system impact study within one month from the application, such application will be treated as void.
- 5. Applied companies may take action as specified in the following items only when justifiable reasons are recognized before the Organization defines the beneficiaries and the allocation ratio according to Article 59 of the Operational Rules. Withdrawing of requests regarding cross-regional network development
  - i. Withdrawing of requests regarding cross-regional network development
  - ii. Succeeding position of the Applied companies (only when the successor of the Applied companies reveals that it has the intention to share the costs, submit materials necessary for evaluation of its financial capability to the Organization, and when the Organization considers the successor has the financial ability)
  - iii. Reducing capability of cross-regional trade which the suppliers seek expansion
  - iv. Postponement of period when the suppliers seek the expansion of electricity trade
  - v. Other minor changes in matters that the Organization considers will not affect the planning process

(Decision on necessity of solicitation for reinforcement plans)

#### Article 41

When the Organization defined the basic conditions of the cross-regional network development, it shall decide whether it will solicit for reinforcement plans and operating entities based on opinions from the Cross-regional Network Development Committee.

(Eligible applicants for reinforcement plans)

#### Article 42

Eligible applicants for soliciting reinforcement plans and operating entities shall be any of the following.

- i. General transmission and distribution companies
- ii. Transmission companies
- iii. Companies which plan to gain approval to become transmission companies (In a case where the company seeks to gain a certification through a corporation to be newly founded, a company which plans to invest in such a corporation) and have enough financial and technical capabilities.

(Implementation of solicitation for reinforcement plans)

#### Article 43

The Organization shall solicit for reinforcement plans and operating entities according to the procedure specified in the following items when it decided to do it according to Article 41.

- i. Publication of solicitation for reinforcement plans The Organization shall publish that it decided to solicit for reinforcement plans.
- ii. Drawing-up and publication of Request For Proposal (RFP) The Organization shall draw up and publish request for proposal that specify the application qualification, necessary upgrade transfer capability, timing when the cross-regional network development becomes necessary, method of the development, submission deadline of reinforcement plans, selection schedule of reinforcement plans and operating entities, evaluation method of reinforcement plans and operating entities, entries in the reinforcement plan and other necessary matters based on the basic requirements of the cross-regional network development defined in Article 39. When the Organization draws up such RFP, it shall hear opinions from the members, if necessary, and shall consider the contents to be published according to Paragraph 2, Article 5 of the Operational Rules
- iii. Confirmation of intention to propose companies which plan to propose reinforcement plans, shall submit documents that reveal their intention to propose according to the RFP.
- iv. Examination of eligibility for the proposal The Organization shall confirm that those companies, which revealed their intention to propose as specified in Item iii, are eligible applicants specified in Article 34 and satisfy the other qualifications for proposal defined in the RFP.
- v. Procedure when there are no companies who have intention to propose When it is found out that there are no companies which satisfy the qualifications for proposal (hereinafter “qualified applicant”) as a result of confirmation in Item iv, it shall terminate the solicitation for reinforcement plans. In such a case, the Organization shall select a company from whom the Organization request the submission of a reinforcement plan among general transmission and distribution companies or transmission companies which will maintain and operate transmission lines to which the transmission lines to be installed based on the summary of construction defined in the basic requirements of the cross-regional network development will be connected and shall request such submission. Provided, however, that when the Organization considers that it is proper to request submission of a reinforcement plan from other general transmission and distribution companies or transmission companies in light of the basic requirements of cross-regional network development, the Organization shall request the submission from such companies.
- vi. Holding of briefing session The Organization shall hold a meeting for briefing of RFP for the qualified applicants, if necessary.
- vii. Providing of information necessary for the proposal When the Organization is requested to submit information specified in the following items a. to g. from the qualified applicants for preparation of a reinforcement plan, the Organization shall receive information from the relevant electric power suppliers within the range that the Organization considers such information is necessary for preparation of a reinforcement plan, and provide such information to the qualified applicants. In this case, the Organization shall impose a duty to keep the information confidential on the qualified applicants, and execute a separate written pledge to prohibit the use of such information out of its purpose.
  - a. Diagram of transmission and distribution network (diagram of transmission and distribution route, load dispatching network, etc.)



- b. Summary of existing generating station (single-line wiring diagram, a ground plan of layout of equipment, etc.)
- c. Various data of facilities (voltage, installed capacities/operational capacities, impedance, etc.)
- d. Diagram of estimate power flow
- e. Data for network analysis (thermal capacity, synchronous stability, voltage stability, short circuit capacity, etc.)
- f. Data analyzed by the Organization upon consideration of the basic requirements
- g. Other technical information necessary for preparation of a reinforcement plan
- viii. Submission of a reinforcement plan; when the qualified applicants submit reinforcement plans, they shall submit them to the Organization before the submission deadline specified in the RFP mentioned in Item ii. In a case where the Organization did not receive any proposal from the qualified applicants, it shall request the submission of reinforcement plan from the general transmission and distribution companies or transmission companies according to Item v.

(Procedure when solicitation for reinforcement plans will not be implemented)

Article 44

1. When the Organization considers that implementation of solicitation for reinforcement plans is not reasonable, it shall define the entity from whom the Organization requests the submission of reinforcement plans based on consideration by the Cross-regional Network Development Committee and based on the reasons not to implement solicitation.
2. Entities which were requested submission of a reinforcement plan according to the provision of Paragraph 1 above must draw up the plan and submit to the Organization by the deadline defined by the Organization.

(Solicitation of reinforcement plan)

Article 45

1. Entities that plan to submit reinforcement plans to the Organization (hereinafter, “candidates of operating entities”) must draw up the plans and submit them by following the application summary prepared by the Organization.
2. If the reinforcement plans of the candidates of operating entities contain or might contain reinforcement or remodeling of existing electric facilities maintained and operated by other electric power suppliers (hereinafter, such facilities shall be called “facilities of other entities”), or contents of the plans might affect the maintenance and operation of facilities of other entities, such applicants must confirm from the entities of such other facilities about the existence of influence and such influence on the facilities upon drawing up of the plans.

(Evaluation method of reinforcement plans and operating entities)

Article 46

1. The Organization shall evaluate the reinforcement plans and operating entities in respect of matters specified in the following items.

- i. Applicability to the RFP: Securing of necessary transfer capacities to be reinforced, timing of completion of reinforcement, satisfaction of the standards of electric network performance (defined in Article 61, hereinafter, the same shall apply), applicability to laws or ministry orders.
  - ii. Economy: construction cost, cost for maintenance and operation of transmission and distribution facilities, loss of transmission, etc.
  - iii. Stability of electric network: improvement of operational flexibility of electric network, risk analysis of accident, etc.
  - iv. Effect of measures: contribution to stable supply, vitalization of electricity trade, greater integration of renewable energy generators, etc.
  - v. Feasibility of project: experience on construction of transmission and distribution facilities of electric companies (including land acquisition), risk of land acquisition, difficulty of construction, etc.
  - vi. Continuity of project: financial solvency of electric power suppliers, experience on maintenance and operation of transmission and distribution facilities of those suppliers, structures for maintenance and operation, etc.
  - vii. Other matters necessary for evaluation of validity of the reinforcement plans
2. The Organization shall consult with the applicants of reinforcement plans about correction of such plans based on the review of Cross-regional Network Development Committee when the Organization considers it necessary for improvement of economy, stability of networks or feasibility of project or for proper comparing and evaluation of the submitted reinforcement plans upon evaluation of the reinforcement plans. Provided, however, the Organization may consult the applicants for minor revision without the review of Cross-regional Network Development Committee.
  3. Except for a case where the consultation is conducted according to Paragraph 2, applicants of reinforcement plans may not correct the contents of their reinforcement plans. Provided, however, that cases where the reinforcement plan will be improved and the Cross-regional Network Development Committee approved such correction are exception.
  4. When the Organization recognizes that contents of reinforcement plans include or might include the enhancement and improvement of existing electric facilities maintained and operated by electric power suppliers other than applicants of reinforcement plans, or that such contents of reinforcement plans might affect the maintenance and operation of the facilities of other electric power suppliers, the Organization shall confirm the following matters from the electric power suppliers who maintain and operate such facilities.
    - i. Validity of method and result of consideration regarding existence of reinforcement and improvement of existing electric facilities
    - ii. Validity of contents and estimated cost of reinforcement and improvement of existing electric facilities (only when the reinforcement and improvement of existing electric facilities are included)
    - iii. Existence of influence on maintenance and operation of existing electric facilities (and its countermeasures when there are influence)

(Decision on cost allocation ratio)

Article 47

1. As for the cost necessary for the cross-regional network development, beneficiaries shall share the costs according to the level of benefit, in principle, and the Organization shall define the ratio of the cost allocation for the cross-regional network development based on laws, Guidelines on cost allocation of network reinforcement for generator installment, and other guidelines defined by the Government.
2. The Organization shall show the result of consideration to all the electric power suppliers to whom the Organization considers that it is proper to ask for cost allocation of the cross-regional network development as a result of the discussion according to Paragraph 1 (hereinafter “candidate of cost allocation”) and must seek opinions individually by inviting them to the Cross-regional Network Development Committee as observers, hearing in writing or other methods from time to time.
3. The Organization shall discuss and decide the cost allocation ratio at the Cross-regional Network Development Committee based on opinions from the candidate of cost allocation and shall notify the candidates.
4. When the Organization received consent in writing on the cost allocation ratio notified according to the provision of Paragraph 3 from all the candidates of cost allocation, it shall define on the cost allocation ratio. When the candidates of cost allocation withdrew the request or the application according to the provision of Paragraph 2 of Article 35 or Paragraph 5, Article 40 or otherwise it is revealed that the candidates have no intention to share the cost, the Organization shall exclude such candidates and re-discuss the cost allocation ratio according to the provisions of the preceding items.

(When there are objections against the result of discussion of cost allocation ratio)

Article 48

1. Candidates of cost allocation who are dissatisfied with the contents of notice according to the provision of Paragraph 3 of Article 47 (including the notice after re-discussion specified in the latter provision of Paragraph 4 of the same article) may request the Organization to re-discuss the cost allocation ratio by presenting the contents of objection and its reasons.
2. When the Organization received the request for re-discussion of the allocation ratio, it shall re-discuss according to the provision of Article 59 of the Operational Rules and the preceding article at the Cross-regional Network Development Committee, based on the contents of objection and reasons, and shall notify the result of re-discussion.

(Contents of cross-regional network development plan)

Article 49

A cross-regional network development plan shall include the following matters.

- i. Background of a study pertaining to the formulation of a cross-regional network development plan and the contents thereof
- ii. Distribution facilities to be developed or upgraded
- iii. Method by which distribution facilities are to be developed or upgraded
- iv. The estimated amount of construction costs, the estimated amount of operation and maintenance costs, the ratio at which the burden of costs is apportioned, and the thinking with respect thereto

- v. Scheduled timing of the completion of construction work to develop or upgrade distribution facilities
- vi. Operating entity
- vii. Other matters on cross-regional interconnection network development

(Handling of extension of planning process)

Article 50

1. When the Organization cannot define the cross-regional network development plan within a schedule defined in a method of proceeding with the planning process, it shall define a new schedule, prepare an interim report, and publish such a new schedule and interim report within an original schedule.
2. The Organization shall notify the new schedule and the interim report mentioned in Paragraph 1 in writing to the claimants of consideration (except claimants who withdrew the request, the same shall apply in Paragraph 3 of the next article) or requester of consideration according to Article 37, applying companies (except for companies who withdrew the proposal, the same shall apply in Paragraph 3 of the next article) and the candidates of cost allocation.

(End of planning process)

Article 51

1. In addition to cases when the Organization completed drawing-up of cross-regional network development plan, in cases specified in the following items, the Organization shall end the planning process.
  - i. In cases where the Organization decided there are no need to continue planning process according to the provision of Paragraph 1 of Article 38
  - ii. In cases where the Organization decided there are no need to conduct cross-regional network development as a result of the consideration in Paragraph 1 of Article 39, and the Organization did not define the basic requirements of cross-regional network development and the range of beneficiary
  - iii. In cases where all the candidates of cost allocation revealed that they have no intention to share the cost
  - iv. In other cases where it is recognized that drawing-up of the cross-regional network development plan is difficult based on opinions from the Cross-regional Network Development Committee.
2. Regardless of the provision of Item iii or iv of Paragraph 1 above, when the cross-regional network development plan is expected to reach the drawing-up stage by reviewing the basic requirements or reinforcement plans, the Organization shall continue the planning process according to the provisions from Articles 39 to 50 after reviewing the requirements, and reinforcement plans.
3. When the Organization ends the planning process, it must hear opinions from the claimants of consideration or requester of consideration according to the provision of Item iii of Article 51, applied entities and candidates of cost allocations.

(Measures for facilities of other entities)

Article 52

When the cross-regional network development plan includes construction, maintenance, and operation of facilities of other entities, the electric power suppliers that maintain and operate such facilities must provide help in necessary construction, maintenance, operation and other necessary matters for actualization of the plans according to requests from operating entity.

(Submission of information after making decision on the cross-regional network development plan)

Article 53

1. A person who was elected as an operating entity shall submit the following information by the time specified in each item below.
  - i. Immediately after the decision of the cross-regional network development plan: Main process of the plan
  - ii. Quarterly: Information necessary for the Organization to grasp the present and future of the plan
2. The Organization shall confirm the progress of the cross-regional network development plan based on information submitted according to Paragraph 1 in accordance with provisions of Paragraph 1, Article 62 of the Operational Rules.

(Notifying the amount of costs incurred to install and maintain distribution facilities installed pursuant to a cross-regional network development plan)

Article 53-2.

1. The operating entity as provided for in a cross-regional network development plan that has been notified pursuant to the provisions of Article 61-3 of the Operational Rules shall be entitled to be granted subsidies as prescribed in item v-2 of paragraph 1 of Article 28-40 of the Act (hereinafter referred to as “cross-regional network development subsidies”).
2. In being granted cross-regional network development subsidies as provided for in the preceding paragraph, the operating entity must, in each fiscal year from the start of the use of and for the useful life of distribution facilities (which means useful life as enumerated in Table 1 or 2 of the Ministerial Ordinance Concerning the Useful Life of Depreciable Assets (Ordinance of the Ministry of Finance No. 15 of 1965)) installed pursuant to cross-regional network development plans, notify the Organization of the amount of costs incurred to install and maintain such distribution facilities for each cross-regional network development plan in the preceding fiscal year in which depreciation occurred.

(Notification of the cost for installation and maintenance of transmission and distribution facilities installed in accordance with supply plans)

Article 53-3

1. A company responsible for implementation of cross-regional network development plans reported pursuant to the provision of Article 61-3 of the Operational Rules may receive

subsidies provided for in Paragraph 1 of Article 28 of the FIP Act (hereinafter “network installation subsidies”) when benefits are expected to be generated by renewable energy power generation facilities from such plans.

2. A general transmission and distribution company or a transmission company must notify the Organization annually of the amount of cost required for installation and maintenance of the transmission and distribution facilities (limited to those related to the cross-regional network development plan subject to a grant of the network installation subsidies) installed in accordance with supply plans for each cross-regional network development plan in a fiscal year preceding to the year when depreciation is carried out during a period from the fiscal year containing the day on which the transmission and distribution facilities are started to be used until the fiscal year containing the last day of useful life (useful life defined in the Appendix 1 or 2 of the Ministerial Ordinance Concerning Useful Life of Depreciable Assets (Ordinance no. 15 of Finance Ministry, 1965)) to receive network installation subsidies prescribed in the preceding paragraph.

(Start of consideration on development of transmission and distribution facilities)

#### Article 54

In cases of the following each item, the general transmission and distribution companies, and distribution companies shall start the consideration on development of transmission and distribution facilities (except for interconnection lines, herein after the same shall apply in this section).

- i. In a case where applications for a contract on generation facilities or demand facilities are received
- ii. In a case where even if the existing facilities are utilized to the maximum, electric networks are expected not to be able to meet the standard of electric network performance because of demand trend, new installation, cross-regional utilization or retirement of generation facilities, etc.
- iii. In a case where economic rationality is recognized in the reinforcement of transmission and distribution facilities because of loss of electricity transmission or high cost of maintenance of the existing transmission and distribution facilities
- iv. In other cases where development of transmission and distribution facilities

(Drawing-up of development plan of transmission and distribution facilities)

#### Article 55

General transmission and distribution companies, and distribution companies shall consider the following matters (and their probabilities as for matters related to future forecast) and draw-up the reasonable development plan of transmission and distribution facilities of which reinforcement deems economically reasonable, while being based on the long-term policy of cross-regional network.

- i. Demand forecast (including forecast of conservation and demand response)
- ii. Development plan of generation facilities
- iii. Update plan of transmission and distribution facilities
- iv. Situations of network access study

- v. Situations in areas where interconnected generator with transmission networks (excluding interconnection lines) is constrained
- vi. Situations of transmission and distribution facilities (excluding interconnection lines) which constrain the TTC of interconnection lines
- vii. Satisfaction of electric network performance standard
- viii. Restrictions by the ministerial ordinance that establishes technical standards concerning electrical equipment (Ordinance of the Ministry of Economy, Trade and Industry No. 52, March 27, 1997) and other laws and governmental and ministerial ordinances
- ix. Compatibility with a long-term policy of cross-regional network development, a cross-regional network development plan and other future plans
- x. Costs which will be generated, increased or decreased by development of transmission and distribution facilities (including construction cost, maintenance and operation cost, loss of transmission and distribution of electricity)
- xi. Influence of transmission and distribution facilities development on stability of electric networks (including improvement of operational flexibility of electric networks, influence of maintenance work on supply reliability level during construction)
- xii. Risk of outage of transmission and distribution facilities due to natural disasters (thunder, landslide disaster, tsunami, flood, etc.)
- xiii. Feasibility of construction (risk of acquisition of land, difficulty of construction)
- xiv. Maintainability of transmission and distribution facilities (including response at the outage of transmission and distribution facilities)
- xv. Influence on service quality of electricity
- xvi. Other matters necessary for formation, maintenance and operation of reasonable transmission and distribution facilities

(Completion time of development of transmission and distribution facilities)

#### Article 56

The general transmission and distribution companies, and distribution companies shall strive to complete the development by the time when the development should be completed by considering the following matters and estimating duration needed for completion of the development of transmission and distribution facilities.

- i. A period needed for procedures based on the Act and other laws
- ii. A period needed for land acquisition
- iii. A period needed for procurement of materials and equipment
- iv. Maintenance work of electric facilities, nature conditions and other constraint on implementation of construction
- v. The necessity of collaborated construction with other construction (including construction conducted by other persons, such as public works) which might affect feasibility and economic performance of development of transmission and distribution facilities
- vi. The necessity to develop the transmission and distribution facilities in a phased manner from a viewpoint of securing the ability to design and construct in a case where the scale of the development of transmission and distribution facilities is large or covers a wide area

- vii. Other periods needed for implementing development of transmission and distribution facilities

(Various preconditions of development of transmission and distribution facilities)

#### Article 57

Various preconditions of development of transmission and distribution facilities shall be defined based on concepts specified in following each item in principle.

- i. Electric system

- a. In case of high voltage and extra high voltage: It shall be AC three-phase three-wire system. Provided, however, that DC system can be adopted in cases where the AC three-phase three-wire system is technically difficult to adopt, the cost for development of the DC system is lower or other cases where economic rationality is recognized
- b. In case of low voltage: It should be AC three-phase three-wire system, AC three-phase four-wire system, AC single-phase three-wire system or AC single-phase two-line system

- ii. Standard frequency: It should be 50 or 60 Hz

- iii. Voltage class: It should be defined by considering compatibility with existing facilities as well as demands and scale of generation facility

- iv. Neutral grounding system

- a. In a case of AC network of which voltage is 170,000 volt and higher: It should be direct grounding system.
- b. In a case of other AC networks: It should be resistance grounding system, reactor grounding system or non-grounding system. Provided, however, that adoption of the compensation reactor grounding system shall be considered, when the power cable is used. Grounding impedance shall be defined by considering the suppression of excess voltage upon outage and the secure performance of protective equipment.

- v. The number of circuit lines

- a. Extra high voltage lines

- (a) It should be two circuit lines except for cases of the following (b) to (d)
- (b) Transmission line which seems to be influenced only partially by the interruption of supply or power generation (excluding the interruption of power generation due to outage of such generator only in a case of interruption due to outage of electric facilities, specified in b. item 2, in paragraph 2 of Article 64, the same shall apply in this Chapter) at the time of single equipment outage: It should be one circuit line.
- (c) Distribution line (except for a case where the adoption of a supply system with two or more circuit lines is agreed based on a contract): It should be one circuit line.
- (d) In cases where a supply system by spot network is adopted, and where multi-terminal unit system is adopted for underground transmission network: It should be three circuit lines.

- b. High voltage line: It should be one circuit line.

- vi. The number of terminals on transmission line: The number of terminals for development and for the joint use without opening the circuit breaker at the time of operation shall be defined by considering the influence of supply disturbance or generation disturbance which might occur upon outage of network, ease of maintenance work, constraint by protective method, economic performance and other matters.



- vii. Acceptable levels of short-circuit current and grounding fault current: They shall be defined within the maximum acceptable level for each voltage class defined by the general transmission and distribution companies or distribution companies.
- viii. Bus line scheme at substation and switching station: It should be defined by considering the supply reliability level, operational flexibility of network, operation and maintenance and economic performance.
- ix. Relay protection system: It should be defined by considering voltage class, network configuration (defined in Article 151, hereinafter, the same shall apply) and conformity with neutral grounding system and existing relay protection system.

(Concepts on scale of transmission and distribution facilities)

#### Article 58

Scale of transmission and distribution facilities (diameter of lines, capacity of transformer, etc.) shall be defined by considering the following matters.

- i. Trend of demand and generation facilities, future network configuration and other forecast
- ii. Scale of short-circuit and grounding fault currents, stability of electric network, voltage control against connection to or disconnection from the electric network by electric facilities, voltage drop due to power flow and other technical matters to consider
- iii. Cost which will be generated, increased or decreased by development of transmission and distribution facilities (including construction cost, maintenance and operation cost, loss of transmission and distribution of electricity)

(Concepts on forms and routes of transmission and distribution lines)

#### Article 59

Forms and routes of transmission and distribution lines shall be defined based on concepts specified below.

- i. A form of transmission line: It should be overhead transmission line, provided, however, that in a case where there are judicial or technical restrictions, the land acquisition is difficult, or excessive cost will be generated, or in other cases where construction of overhead transmission line is difficult, it should be an underground transmission line.
- ii. A form of distribution line: In a case where the road where the distribution line is installed is specified as a road where a common-use cable tunnel should be constructed by the Act on Special Measures on Preparation for Common-Use Cable Tunnel (Act No. 39 of March 23, 1995) or where the removal of utility poles is conducted according to Act on promoting underground distribution cable (Act No. 112 of Dec. 16, 2016), an underground distribution line or other forms which do not use utility poles shall be adopted, and in other cases, overhead distribution lines shall be adopted except when there are judicial or technical restrictions or the construction of overhead distribution lines is difficult.
- iii. Routes of transmission and distribution lines: They shall be defined by considering the following matters (Items e and f below will be applied only when installing the underground lines).
  - a. Forecast: future network configuration, trend of demand distribution, etc.

- b. Aspect of land and environment: nature conditions, harmony with social environment, difficulty of land acquisition, influence of various disasters, such as tsunami or landslide
- c. Aspect of construction and maintenance: difficulty of construction, maintainability of facilities, etc.
- d. Economic performance: construction cost, etc.
- e. Conformity with urban planning: conformity with urban planning based on the City Planning Act (Act No. 100 of Jun 15, 1968), plans on construction of common-use tunnels under the Act on Special Measures on Preparation for Common-Use Tunnel and (Act No. 81 of April 1, 1963), plans on development of common-use cable tunnel under the Act on Special Measures on Preparation for Common-Use Cable Tunnel (Act No. 39 of March 23, 1995)
- f. Technical aspect: Influence on transfer capacities of transmission and distribution on other under-ground transmission and distribution lines on the same route

(Concepts on location of substation and switching station)

#### Article 60

Substations and switching stations shall be built on the locations where the long-term and effective electricity supply is possible by considering the following matters.

- i. Forecast: future network configuration, trend of demand distribution, etc.
- ii. Aspect of design: difficulty of pulling the lines into a substation or a switching station, types (outdoor, indoor or underground types) and area necessary for each types of stations
- iii. Aspect of land and environment: nature conditions, harmony with social environment, difficulty of land acquisition, influence of various disasters, such as tsunami or landslide
- iv. Aspect of construction and maintenance: transportation of heavy weight equipment, etc.
- v. Economic performance: construction cost, etc.

(Power system performance requirements)

#### Article 61

When the general transmission and distribution company, and distribution company forms the transmission and distribution facilities, the company must satisfy the requirements defined in Article 63 to 65 (hereinafter “power system performance requirements”) to control or prevent the supply disturbance or generation disturbance.

(Preconditions of sufficiency evaluation for power system performance requirements)

#### Article 62

Sufficiency evaluation for power system performance requirements shall be conducted on the premise of power supply configuration, generation capacities, demand and network configuration under which the worst evaluation result is expected within the normally expected range under the completion of formation of transmission and distribution facilities.

(Requirements for sound facilities)

#### Article 63

Under the sound operation of electric facilities, requirements for which the electric network should satisfy shall be as follows.

- i. Thermal capacity: Power flow, which flows into each transmission and distribution facility, should not surpass the thermal capacity that allows the continuous utilization of the facilities.
- ii. Voltage: Voltage of the electric network shall be properly maintained from the following viewpoints.
  - a. Voltage of transmission and distribution facilities is maintained within the range defined by the general transmission and distribution companies or distribution companies.
  - b. Stability of voltage can be maintained
- iii. Synchronized stability: Stability of integrated operation of generation facility shall be maintained when the subtle disturbance is occurred to the electric networks

(Requirements for outage of single electric facility)

#### Article 64

1. Upon outage of one transmission or distribution circuit line, one transformer, one generating facility or other single electric facility (hereinafter “N-1 outage”), requirements which the electric network must satisfy with shall be as follows.
  - i. Thermal capacity: Power flow in each transmission and distribution facility after the part where the N-1 outage occurred is isolated from the electric network shall not surpass the short-term thermal capacity (which means a value of power flow under which the temperature of the facility at the time when the current flows into the facility becomes the upper limit of the temperature under which such facility can be used for only short period of time, hereinafter, the same shall apply).
  - ii. Voltage stability: Stability of voltage shall be maintained even after the part where the N-1 outage occurred is isolated from the electric network
  - iii. Synchronized stability: Synchronized stability of generation facilities shall be maintained even after the part where the N-1 outage occurred is isolated from the electric network.
2. Even when the performances specified in each item of Paragraph 1 are not sufficient, in a case where all the requirement in each following item are satisfied, performance specified in Paragraph 1 above shall be treated as sufficient.
  - i. In a case where the interruption of supply does not occur, or social influence from the interruption of supply is limited even when the interruption occurs (including a case where the interruption of supply occurs due to N-1 outage of single-circuit distribution line at the place of demand where the electricity is received from such distribution line)
  - ii. In a case where the interruption of power generation does not occur, or when the following requirements are satisfied when the disturbance occurs
    - a. Influence of interruption of power generation on voltage stability of electric network, synchronized stability and frequency is limited
    - b. Electric power suppliers who maintain and operate the generation facilities subject to the power generation shedding (suppression of output from generation facilities or electrical separation from electric network of the facilities in accordance with load-dispatch instruction (specified in Article 189, hereinafter, the same shall apply) hereinafter, the same shall apply) agree on the shedding upon N-1 outage and such companies have a system and ability to shed power generation (including a case where

the companies can shed power generation certainly by protection relays) according to the load-dispatching instruction based on such an agreement

- c. Other cases where risks on electricity supply and public safety from allowing the power generation shedding are not big

(Requirements upon outage, such as short-circuit)

Article 65

Fault current in electric network should not surpass the acceptable capacity of each distribution facility upon outage of three-phase short-circuit, provided, however, that as for a network of direct grounding system, the fault current should not surpass the acceptable capacity of each distribution facility even upon single-phase ground fault.

(Measures against outage accompanied by simultaneous loss of two parts of electric facilities)

Article 66

When the outage accompanied by simultaneous loss of two parts of transmission and distribution lines, transformers, power generators or other electric facilities occurs, the Organization, the general transmission and distribution companies, or distribution companies shall consider the scale of the interruption of supply or power generation and the influence on stability of electric networks accompanying with such outage and shall discuss about the measures to mitigate social influence, if they concern that such influence might become critical.

(When the transmission companies develop the transmission and distribution facilities)

Article 67

When the transmission companies develop the transmission and distribution facilities, Articles 54 to 66 shall be applied mutatis mutandis, except cases not related to the business of the transmission companies.

(Publication of details)

Article 68

The general transmission and distribution companies, and distribution companies shall define and publish the details of development of transmission and distribution facilities based on concepts specified in Articles 54 to 66.

## Chapter 7 Network Access

### *Section 1 Network Access Operation*

#### <Subsection 1 General Provisions>

##### (Conduct of network access operation)

###### Article 69

The general transmission and distribution companies, and distribution companies shall conduct operations regarding reception of, consideration of, and responding to applications for preliminary consultation, system impact study and contracts from applicants who seek for interconnection of generation facilities (except generation facilities which will not transmit electricity to the transmission network, hereinafter, the same shall apply in this Chapter except Subsection 4) and demand facilities with transmission networks.

##### (Contact for application)

###### Article 70

Applicants for network interconnection shall apply for network access to the general transmission and distribution companies or distribution companies specified in the following items.

- i. Network access operation related to generation facilities: general transmission and distribution companies or distribution companies operating transmission network to which the generation facilities the applicants seek for interconnection will be connected
- ii. Network access operation related to demand facilities: general transmission and distribution companies or distribution companies operating transmission network to which the demand facilities will be connected.

##### (Application for preliminary consultation and system impact study to the Organization)

###### Article 71

Provided, however, that a network interconnection applicant linked to transmission networks operated by a general transmission and distribution company or a distribution company operating transmission networks to which the applicant seeks to connect (hereinafter “general transmission and distribution company, etc.” in this chapter) that constitutes the same juridical person or a parent/subsidiary company must apply to the Organization for a preliminary consultation or system impact study related to specified generation facilities.

##### (Publication of network information)

###### Article 72

1. When the general transmission and distribution company, etc. was requested to make network information available or to explain about the network information from applicants for network interconnection, such a company shall respond to such a request immediately

and faithfully based on Guidelines on Network Information Disclosure defined by the Government.

2. When the general transmission and distribution company, etc. was requested from the applicants, the company shall suggest locations of transmission and distribution facilities which can be a subject of interconnection with generation facilities or demand facilities of the applicants and the situations of transmission and distribution facilities around locations where such demand facilities or generation facilities are located on a network diagram, and shall explain according to requests from the applicants.
3. Where it is not possible to accommodate a request as provided for in the preceding paragraph in accordance with the Network Information Guidelines, a general transmission and distribution company, etc. shall provide an explanation of the applicable reason and present information to the extent that information can be presented to the network interconnection applicant.

<Subsection 2 Network Access Operation for generation facilities>

(Application for preliminary consultation)

Article 73

Applicants for network interconnection of generation facilities with high-voltage or extra-high-voltage transmission networks may apply for preliminary consultation before system impact study.

(Reception of the application for preliminary consultation)

Article 74

1. When the general transmission and distribution company, etc. received an application document for preliminary consultation from an applicant for network interconnection of generation facilities, the company shall confirm the necessary entries are included in the application document before accepting the application for preliminary consultation. If there are any inadequacies in the document, the company shall ask for correction of the document and accept the application after confirming there are no inadequacies
2. When the general transmission and distribution company, etc. accepted the application for preliminary consultation, it shall immediately notify the applicant for network interconnection of generation facilities as a date within the response period specified in Article 78 is scheduled date of response.
3. In a case where the general transmission and distribution company, etc. might not be able to respond by the scheduled date of response, it shall notify the applicant for network interconnection of generation facilities about its reasons, progress and forecast of the situation (including the scheduled date of response after extension of the schedule) immediately after such a possibility was found out and shall explain individually according to a request from the applicant.
4. When a general transmission and distribution company, etc. received an application for preliminary consultation from an applicant for network interconnection, it shall immediately request consideration of the preliminary consultation from the relevant other

general transmission and distribution companies or distribution companies based on the contents of an application.

(Reception of the application for preliminary consultation from applicants for network interconnection of specified generation facilities and the share of information on response situations)

#### Article 75

1. When the general transmission and distribution company, etc. received an application for preliminary consultation from an applicant for network interconnection of specified generation facilities, the company shall report to the Organization of such reception, date of reception and scheduled date of response immediately after receiving the application.
2. When the general transmission and distribution company, etc. responded to the application of Paragraph 1, it shall report to the Organization of the summary of such response and the date of response immediately after the response.
3. Where it becomes possible that a response cannot be made by the scheduled response date as provided for in paragraph 1 hereof as notified to the specified network interconnection applicant, a general transmission and distribution company, etc. shall report the fact thereof (including the scheduled response date) to the Organization promptly upon the ascertainment of the fact thereof and provide separate explanations as requested by the Organization. The same shall apply even where it becomes possible that a response cannot be made by the extended scheduled response date.

(Consideration in response to application for preliminary consultation)

#### Article 76

After receiving the application for preliminary consultation, the general transmission and distribution company, etc. shall consider the matters necessary for a response specified in Article 77 below.

(Response about preliminary consultation)

#### Article 77

1. When the general transmission and distribution company, etc. completed the study specified in in Article 76, they shall give a response about the following matters and give necessary explanation to the applicants for network interconnection of generation facilities.
  - i. In a case where the voltage interconnected which the applicant seeks for is extra high voltage
    - a. Existence of constraint on interconnection attributable to thermal capacity of transmission network (excluding interconnection lines, the same shall apply in this item) for the maximum power interconnected that the applicant for network interconnection of generation facilities sought. If there are constraints on networks, the maximum power interconnected which is calculated from the thermal capacity of the transmission networks.
    - b. Straight-line distance from the expected interconnection point to the location of installation of generation facilities
  - ii. In a case where the voltage interconnected which the applicant seeks for is high voltage

with substation for distribution

- a. Existence of network constraint on the maximum power interconnected the applicant for network interconnection of generation facilities sought that is attributable to the thermal capacity of transformer for distribution at the substation, which is scheduled to be interconnected. If there are network constraints, the maximum power interconnected which is calculated from the thermal capacity of the transformer at the substation which is scheduled to be interconnected.
  - b. Existence of network constraint on the maximum power interconnected the applicant for network interconnection of generation facilities sought that is accompanying with occurrence of reverse power flow in the bank at the substation for distribution which is scheduled to be interconnected (power flow that flows from the side of high voltage to the side of extra high voltage of the transformer at the substation, the same meaning shall apply in this item). If there are network constraints, the maximum power interconnected without construction work for countermeasures against reverse power flow in the bank at the substation, which is scheduled to be interconnected.
  - c. Route length of existing high-voltage distribution facilities from the scheduled interconnection points to the substation for distribution which is scheduled to be interconnected
- iii. In a case where the network locates on a part of isolated island, etc. where the voltage interconnected that the applicant seeks is high voltage and the transmission network has no substation for distribution
- a. Existence of network constraint on the maximum power interconnected that the applicant for network interconnection sought that is attributable to the thermal capacity of high voltage transmission and distribution facilities. If there are constraints on the network, the maximum power interconnected which is calculated from the thermal capacity of the high voltage transmission and distribution facilities.
  - b. Route distance of existing high-voltage transmission and distribution facilities from the expected interconnection point to the electric facility as a starting point
2. When the general transmission and distribution company, etc. gives a response according to Paragraph 1, the company shall present the estimation of unit cost and construction period for installation of standardized power connection lines based on the Guidelines on the Network Information Disclosure defined by the Government according to a request from the applicant for network interconnection of generation facilities.

(Response period for preliminary consultation)

#### Article 78

The general transmission and distribution company, etc. shall respond to the application for preliminary consultation within one month from the date of reception of the application in principle.

(Application for system impact study)

#### Article 79

1. In the following cases, applicants for network interconnection of generation facilities with the high-voltage or extra-high-voltage transmission network must apply for system impact



study prior to the application for a contract.

- i. In a case of new installation or expansion of generation facilities
  - ii. In a case of modification of all or part of generation facilities or ancillary equipment (including updating, hereinafter, shall be called “Modification of generation facilities”), except where such generation facility prior to modification satisfies the latest technical requirements for network interconnection (which means technical requirements related to facilities to be interconnected with the network as set forth separately in the Wheeling Service Provisions; same hereunder) and falls under a or b below:
    - a. In a case where entries on an application form of system impact study will not be changed
    - b. In a case where the general transmission and distribution company, etc. considers that system impact study is not necessary based on the following Article
  - iii. In a case where the quantity of power flow into the transmission network will increase along with decrease of demand at the site of power generation facilities or along with changes in operation of power generation facilities.
  - iv. In a case where the applicants seek for changes in transmission network that will be interconnected with the existing power generation facilities (except for cases that do not involve changes in transmission network which should secure the capability)
2. Applicants for network interconnection of generation facilities with the high-voltage or extra-high-voltage transmission network may apply for system impact study in other cases as well in addition to the cases specified in each item of Paragraph 1 above.

(Confirmation of necessity of system impact study along with modification of generation facilities)

Article 80

1. In a case where the generation facilities are modified, and in any of the following cases, applicants for network interconnection may confirm the necessity of system impact study from the general transmission and distribution company, etc.
  - i. In a case where the maximum power interconnected is not changed
  - ii. In a case where the maximum power interconnected is decreased
  - iii. In a case where power receiving facilities, transformers, protection equipment, communication facilities and other ancillary equipment are changed
  - iv. In other cases where modification of generation facilities are subtle
2. Regardless of the preceding paragraph, applicants for the specified network interconnection may confirm the necessity of system impact study from the Organization, provided, however, that when applicants for network interconnection who has gained permission for general transmission and distribution business or distribution business from the Minister of Economy, Trade and Industry or who has a general transmission and distribution company, etc. as a parent company seek for the confirmation of the necessity of system impact study related to specified generation facilities, they must confirm the necessity from the Organization.
3. When the general transmission and distribution company, etc. received the request for confirmation of the necessity of the system impact study, the company, etc. shall review the necessity of the study. In such a case, the general transmission and distribution company may deem the system impact study to be unnecessary only where such generation facility prior to modification satisfies the latest technical requirements for network interconnection and where it is clear that there will be no new network reinforcement work or operational

constraints due to factual changes associated with modifications to generation facilities.

4. The general transmission and distribution company, etc. shall notify the applicants for network interconnection who requested confirmation of the necessity of the system impact study about the result of confirmation immediately after the completion of the confirmation as specified in Paragraph 3 above.
5. Applicants for network interconnection who confirmed the necessity of system impact study must provide necessary information according to the request from the general transmission and distribution company, etc.

(Reception of the application for system impact study)

#### Article 81

1. When the general transmission and distribution company, etc. received an application document for system impact study from an applicant for network interconnection of generation facilities, the company shall confirm that the necessary matters are entered in the document and whether the consideration fee defined in Article 83 has been paid (except for a case such fee is not needed) before accepting the application. Provided, however, that if there are inadequacies in the application document, the company shall ask for correction of the document and accept the application after confirming there are no inadequacies in the document.
2. When there are difficult matters to be entered in the application document for the applicant for network interconnection of generation facilities, but still it is possible to consider the application for system impact study without entries of such difficult matters by using an alternative data, the general transmission and distribution company, etc. shall allow omitting of such entries. In such a case, the applicant must notify the company, etc. immediately after the information regarding such omitted matters is revealed.
3. When the general transmission and distribution company, etc. received an application for system impact study, the company shall immediately notify the applicant for network interconnection of generation facilities about such reception, as a date within the response period specified in Article 86 is scheduled date of response.
4. When the general transmission and distribution company, etc. might not able to respond within the scheduled date of response, the company shall notify the applicant for network interconnection of generation facilities about reasons, progress and forecast of situation (including the scheduled date of response after extension of the schedule) immediately after such a possibility was found out and shall explain individually according to a request from the applicant. The same shall apply when the Organization may not be able to give a response by the scheduled date of response after such an extension of the schedule.
5. When a general transmission and distribution company, etc. received an application for system impact study from an applicant for network interconnection, it shall immediately request consideration of the system impact study from the relevant other transmission and distribution companies or distribution companies based on the contents of an application.

(Reception of the application for system impact study from applicants for network interconnection of specified generation facilities and the share of information on response situations)

Article 82

1. When the general transmission and distribution company, etc. received an application for system impact study from an applicant for network interconnection of specified generation facilities, the company shall report to the Organization of such reception, date of reception and scheduled date of response immediately after receiving the application.
2. When the general transmission and distribution company, etc. responded to the application in Paragraph 1, the company shall report to the Organization of the summary of such response and the date of response immediately after such a response.
3. Where it has become possible that a response cannot be made by the scheduled response date as provided for in paragraph 1 hereof as notified to the specified network interconnection applicant, the general transmission and distribution company, etc. shall report the fact thereof (including the extended scheduled response date) to the Organization promptly upon the ascertainment of the fact thereof and provide separate explanations as requested by the Organization. The same shall apply even where it becomes possible that a response cannot be made by the extended scheduled response date.

(Fee for system impact study)

Article 83

1. When the general transmission and distribution company, etc. received an application for system impact study, the company shall notify the applicant for network interconnection of generation facilities about study fee defined by the company, etc. and send documents necessary for payment of such fee. Provided, however, that the study fee will be waived in a case falling under either of the following items:
  - i. Where a system impact study is to be completed through a simplified study or otherwise where no substantive study is required;
  - ii. Where an application for a system impact study under item iii of paragraph 1 of Article 89 hereof is accepted within one (1) year of the response date for an initial system impact study for which a study fee was paid.
2. When applicants for network interconnection of generation facilities received the documents mentioned in Paragraph 1, they must immediately pay the study fee and notify the general transmission and distribution company, etc. after payment.

(Consideration in response to the application for system impact study)

Article 84

1. After receiving an application for system impact study, the general transmission and distribution company, etc. shall consider the matters necessary for a response regarding system impact study.
2. The general transmission and distribution company, etc. may ask for submission of information in addition to the entries in the application documents necessary for consideration in Paragraph 1, if any, from the applicant for network interconnection of generation facilities. In such a case, the company, etc. must explain to the applicant why they need such information.

(Response regarding system impact study)

Article 85

1. When the general transmission and distribution company, etc. completed the study in Paragraph 1 of the preceding Article, the company shall give a response regarding the following matters in writing and necessary explanation to the applicant for network interconnection of generation facilities.
  - i. Possibility of interconnection for the maximum power interconnected, which the applicant sought. (In a case where the interconnection is not possible, its reasons and alternative plans. When it is impossible to present the alternative plans, its reason.)
  - ii. Summary of construction of network interconnection (design specifications or outline figure of construction, if the applicant for network interconnection of power generation facilities requests them)
  - iii. Estimated construction cost (including breakdown) and basis of calculation
  - iv. Estimated amount of allocation to the construction cost (including breakdown) and basis of calculation
  - v. Necessary period of construction
  - vi. Measures necessary for the applicant for network interconnection of generation facilities
  - vii. Measures necessary for the applicant for network interconnection of generation facilities
  - viii. Constraints on operation (including reasons of such constraints)
2. If the result of study according to Paragraph 1 of the preceding Article 84 falls under any of the following, the general transmission and distribution company, etc. must specify the matters of each item below in the response document.
  - i. In a case where the construction for network interconnection involves the construction for reinforcement of the cross-regional interconnection network: Matters specified in Item i, Paragraph 3, Article 72 of the Operational Rules
  - ii. Where it is possible that, in light of the scale of the network interconnection work, the applicable transmission network is subject to a collective study process for generator interconnections from an efficient network development standpoint
  - iii. In a case where the connection is based on the suspension or suppression of power generation of the existing power generation facilities that generate more than 100,000 kW: A result of confirmation whether the maximum receiving power of the new power generation facilities is within the range of existing inter-connectable power (inter-connectable power of transmission facilities [except for generator connection lines relevant to the existing power generation facilities on which suspension or suppression of power generation is conducted] under the condition which such existing power generation facilities are interconnected)
3. When the conditions specified in Item i. of Paragraph 2 above are applied, the general transmission and distribution company, etc. must report such a fact as well as summaries of application and response to the Organization prior to the response to the applicant for network interconnection of generation facilities. Provided, however, that the result of system impact study also falls under the condition specified in Item ii of the same paragraph, the general transmission and distribution company, etc. must report such a fact as well.
4. When the result of the study according to Paragraph 1 of the preceding article does not fall under the condition specified in Item i of Paragraph 2, but falls under Item ii of Paragraph 2, the general transmission and distribution company, etc. shall give the applicant for network interconnection of generation facilities a necessary explanation regarding the

possibility that the applicant might become a candidate of collective study process for generator interconnection and the procedure for such process according to Item ii, Paragraph 3, Article 72 of the Operational Rules.

(Period for response regarding the system impact study)

Article 86

The general transmission and distribution company, *etc.* shall give a response about system impact study according to the classification specified in the following items within the period specified below in principle.

- i. In a case where the applicant for network interconnection of generation facilities seeks the interconnection of generation facilities (limited to facilities of which the capacity is under 500 kW and which use a reverse transformer) with a high-voltage transmission network: Within two months from the date of reception of application
- ii. In a case where the preceding item does not apply: Within three months from the date of reception of application

(Application for a contract of generator interconnection)

Article 87

1. Applicants for network interconnection of generation facilities with transmission networks must apply for a contract.
2. In cases specified in the following items, the applicant for network interconnection must withdraw an application for a contract regarding the power generation facilities or change the contents of application as described in the same item.
  - i. In a case where the development plan of power generation facilities which the applicant seeks, the interconnection was canceled along with relinquishment of business or changes in business plans in accordance with the Act, the Environmental Impact Assessment Act and other laws: Withdraw of the application for a contract
  - ii. Contents of the application for a contract was changed due to changes in construction schedule for power generation facilities, situations of the site of construction, laws or changes in business plans: Changes of contents of the application for a contract

(Reception of the application for a contract of generator interconnection)

Article 88

1. Where an application document for an application for an agreement concerning generation facilities is received, a general transmission and distribution company, *etc.* shall accept the application for an agreement upon confirming the contents specified in the following each item (including confirmation of relevant other transmission and distribution companies or distribution companies provided for in Paragraph 5) depending on categories of the following each item. Provided, however, that, where there are any deficiencies in the application document, the general transmission and distribution company shall ask to have the application document corrected and will then accept the application for an agreement upon confirming that there are no deficiencies.
  - i. Where an applicant for network interconnection (except for a selected company (selected

company prescribed in Item x of Paragraph 2 of Article 13 of the Act on Offshore Power Generation, hereinafter the same meaning shall apply) seeks for interconnection with transmission network: It shall confirm that required fields in the application document have been completed and that the security deposit as prescribed in Article 88-2 hereof has been remitted (unless no security deposit is required).

ii. Where a selected company seeks for interconnection with transmission network: It shall confirm that required fields in the application document have been completed and that the security deposit as prescribed in Article 88-2 hereof has been remitted (unless no security deposit is required) and that the connection impact study fee has been remitted when the amount of such a fee is notified in accordance with the provision of Paragraph 3 of Article 111 hereof.

2. When there are difficult matters to be entered in the application document for the applicant for network interconnection of power generation facilities, but still it is possible to consider the application for a contract of generator interconnection without entries of such difficult matters by using an alternative data, the general transmission and distribution company, etc. shall allow the omitting of such entries. In such a case, the applicant must notify the company, etc. immediately upon the information regarding such omitted matters is revealed.
3. When the general transmission and distribution company, etc. received an application for a contract of generator interconnection, it shall immediately notify the applicant for network interconnection of generation facilities about such reception, as the scheduled date of response is within a period of response defined in Article 98.
4. When the general transmission and distribution company, etc. might not be able to respond within the scheduled date of response, it shall notify the applicant for network interconnection of generation facilities about reasons, progress and forecast of situation (including the scheduled date of response after extension of the schedule) immediately after such a possibility was found out and shall explain individually according to a request from the applicant. The same shall apply when general transmission and distribution company might not be able to respond within the scheduled date of response after such an extension of the schedule.
5. Where a general transmission and distribution company, etc. received an application for an agreement concerning power generation facilities, etc. from an applicant for network interconnection, it shall immediately request consideration of the application for an agreement from relevant other transmission and distribution companies or distribution companies.

(Security deposit for an application for an agreement concerning generation facilities)  
Article 88-2.

1. Where an application document for an application for an agreement concerning generation facilities is received, a general transmission and distribution company, etc. shall notify the network interconnection applicant of the amount of the security deposit determined in accordance with the calculation method as prescribed in Article 74-2 of the Operational Rules and send documents required for the payment of the security deposit to the network interconnection applicant unless no security deposit is required.
2. Where the document as provided for in the preceding paragraph is received, the network interconnection applicant must promptly pay the security deposit and thereafter notify the

general transmission and distribution company, etc. of the fact thereof.

3. A security deposit paid by the network interconnection applicant shall be applied to the burden charge for construction to be assumed by such network interconnection applicant.
4. Where a situation coming under any of the following items arises prior to the conclusion of an agreement concerning the allocated cost for construction and the network interconnection applicant withdraws its application for an agreement or the connection agreement is terminated by way of cancelation, the general transmission and distribution company, etc. shall refund the security deposit paid by the network interconnection applicant:
  - i. The amount of the allocated cost for construction has increased from the amount indicated in the response sheet for the system impact study;
  - ii. The required construction period has become longer than the period stated in the response sheet for the system impact study;
  - iii. A valid reason similar or comparable to either of the preceding items has otherwise arisen.

(Handling when the application for system impact study is not submitted)

Article 89

1. Notwithstanding paragraph 1 of Article 88 hereof, a general transmission and distribution company, etc. shall refrain from accepting an application for an agreement concerning generation facilities and shall ask the applicant to apply for a system impact study or otherwise take appropriate action where any of the items below applies in a case coming under paragraph 1 of Article 79 hereof:
  - i. In a case where the applicant for network interconnection of generation facilities has not submitted an application for system impact study (including a case where the applicant has submitted an application of study, but has not received a response to it)
  - ii. In a case where the contents of the application for a contract of generator interconnection does not reflect the contents of response regarding the system impact study
  - iii. In a case where the prerequisite facts of the system impact study have been changed, such as a case where the situation of transmission network was changed because the transfer capability of transmission network was secured for other applicants for network interconnection of generation facilities after giving a response regarding the system impact study
  - iv. Where network interconnection construction work by the network interconnection applicant might be subject to a collective study process for generator interconnection;
  - v. Where, after a response to a system impact study is given, a collective study process for generator interconnection is commenced for the transmission network with which generation facilities shall be interconnected;
  - vi. Where one (1) year has passed since the response date for a conducted system impact study (except for a case of an application for an agreement from selected companies);
  - vii. In a case coming under item v of paragraph 1 of Article 120-4 hereof.
2. In a case coming under any of the items in the preceding paragraph, the general transmission and distribution company, etc. shall explain why it is seeking an application for a system impact review and other actions to the network interconnection applicant.
3. Regardless of Items ii and iii of Paragraph 1, when the general transmission and distribution company, etc. considers that it is clear that the difference between the contents of the application for a contract of generator interconnection and the contents of response or the

fluctuation of prerequisite facts for system impact study will not affect the contents of response regarding the technical study for the contract, the company may receive the application for a contract of generator interconnection.

(Reception of the application for contract regarding generator interconnection from applicants for the specified network interconnection and the share of information on response situation)

Article 90

1. When the general transmission and distribution company, etc. received an application for a contract regarding generator interconnection from an applicant for the specified network interconnection, the company shall report to the Organization about such a fact of reception, the reception date and the scheduled date of response immediately after the reception.
2. When the general transmission and distribution company, etc. responded to the application in Paragraph 1, it shall report to the Organization of the summary of such response and the date of response immediately after the response.
3. Where it has become possible that a response cannot be made by the scheduled response date as provided for in paragraph 1 hereof as notified to the specified network interconnection applicant, the general transmission and distribution company, etc. shall report the fact thereof (including the extended scheduled response date) to the Organization promptly upon the ascertainment of the fact thereof and provide separate explanations as requested by the Organization. The same shall apply even where it becomes possible that a response cannot be made by the extended scheduled response date.

(Confirmation of the necessity of a start of planning process)

Article 91

1. Where any of the following items applies, a general transmission and distribution company, etc. must promptly provide a report containing an outline of the network interconnection construction work to the Organization and confirm whether a planning process shall be commenced in accordance with item i of Article 51 of the Operational Rules:
  - i. An application for an agreement concerning generation facilities for which reinforcement work on a cross-regional interconnection network is included in network interconnection construction work is received from the network interconnection applicant;
  - ii. A collective study process for generator interconnections for which reinforcement work on a cross-regional interconnection network is included in network interconnection construction work shall be commenced pursuant to item i of paragraph 1 of Article 120-4 hereof;
  - iii. It has been determined through a study carried out in a collective study process for generator interconnections that reinforcement work on a cross-regional interconnection network is included in network interconnection construction work.
2. In a case of Paragraph 1, the general transmission and distribution company, etc. must notify the applicant for network interconnection of generation facilities in writing that the company is confirming from the Organization whether the planning process will be started.
3. The general transmission and distribution company, etc. shall discuss and respond to the application for a contract of generation facilities after receiving the notice that the planning process will not be started from the Organization, and the response, which was given before receiving of such a notice according to Paragraph 4 of Article 33, shall become void.



(Temporal securing of allocated capability of transmission network)

Article 92

1. The general transmission and distribution company, and distribution company shall treat the generation facilities of which an application for a contract of generator interconnection has been received as interconnected with the transmission network (excluding network lines, hereinafter, the same shall apply) upon reception of such an application in other network access businesses which will be accepted after such an application, and shall temporarily secure the allocated capability of transmission networks. Provided, however, that this will not apply, if it is clear that the applicants' interests will not be harmed in light of the contents of the application for a contract of generator interconnection even if the allocated capability for the transmission networks is not secured.
2. Where a general transmission and distribution company, etc. received an application for a contract concerning power generation facilities, it must immediately notify other relevant transmission and distribution companies or distribution companies based on the contents of an application.

(Special case of temporal securing of transfer capability)

Article 93

Notwithstanding the provisions of the preceding Article, a general transmission and distribution company, and distribution company shall, in a case coming under any of the following items, temporarily secure capacity for the transmission network in accordance with the applicable item:

- i. Where a notice as provided for in Article 64 of the Operational Rules is received and where a notice as provided for in Paragraph 3 of the same article requested in accordance with Paragraph 1 of Article 68-2 is received from the Organization: Contents of such notification
- ii. Where a collective study process for generator interconnection is commenced in accordance with paragraph 1 of Article 120-4 hereof: Contents as prescribed in paragraph 1 of Article 121-2 hereof.

(Cancellation of securing of allocated capability of transmission network)

Article 94

In cases specified below, the general transmission and distribution company, and distribution company may cancel the securing of the whole or part of allocated capability of transmission networks that was implemented temporary according to Articles 92 and 93.

- i. In a case where the applicant for contract of generator interconnection made a change which decreases the maximum power interconnected specified in the application for a contract of generator interconnection (including a case where the application for a contract of generator interconnection was withdrawn).
- ii. In a case where the general transmission and distribution company, etc. gave a response which notifies that interconnection which the applicant for network interconnection of generation facilities seeks for is not acceptable according to Article 96
- iii. In a case where the whole or part of business related to the application for a contract

regarding generator interconnection was canceled in accordance with the Act, the Environmental Impact Assessment Act and other laws

- iv. In a case where it becomes necessary to change the contents of construction for network interconnection due to changes in contents of the application for a contract regarding generator interconnection (except minor changes)
- v. In a case where a notice as provided for in Paragraph 2 of Article 68-2 of the Operational Rules requested in accordance with Paragraph 2 of the same article is received

(Consideration in response to the application for a contract of generator interconnection)

Article 95

1. The general transmission and distribution company, etc. shall conduct consideration in response to the application for a contract of generator interconnection according to Paragraph 1 of Article 84 after receiving the application.
2. When the general transmission and distribution company, etc. needs information for the consideration in Paragraph 1 in addition to the entries in the application document, the company may request submission of such information from the applicant for network interconnection of generation facilities. In such a case, the general transmission and distribution company, etc. must explain the reasons of necessity of such information to the applicant.

(Response to the application for a contract of generator interconnection)

Article 96

1. When the consideration in Paragraph 1 of Article 95 is completed, the general transmission and distribution company, etc. shall notify the applicant for network interconnection of generation facilities of a response to the application for a contract of generator interconnection in writing and give necessary explanation.
2. The general transmission and distribution company, etc. are not allowed to give a response of rejection of an application for a contract of generator interconnection without due reasons.

(Confirmation of the transfer capability of transmission network)

Article 97

1. If the response in Article 96 or 123-4 is a response of acceptance of interconnection which the applicant for network interconnection of generation facilities seeks for (hereinafter “Acceptance of Interconnection”), the general transmission and distribution company, and distribution company shall confirm the allocated capability of transmission networks temporarily secured according to Article 92 upon the notice of the acceptance of interconnection.
2. In cases specified in the following items, the general transmission and distribution company, and distribution company shall cancel the securing of allocated capability of the transmission networks that has been implemented according to Paragraph 1 above.
  - i. In a case where the applicant for network interconnection fails to conclude a contract of allocated construction cost beyond one month after an acceptance of interconnection.
  - ii. In a case where the applicant for network interconnection fails to pay the allocated

construction cost defined in the contract of allocated construction cost

- iii. In cases where the applicant for network interconnection rejects interconnection after an acceptance of interconnection according to items ii to v, Paragraph 1 of Article 105.

(Response period to the application for a contract of generator interconnection)

#### Article 98

The general transmission and distribution company, etc. shall give a response to the application for a contract of generator interconnection according to the following classification within the period specified below in principle.

- i. In a case where the applicant for network interconnection with generation facilities seeks the interconnection at the low-voltage transmission network: Within one month from the date of reception of the application for a contract of generator interconnection
- ii. In cases other than a case of Item i: Within six months from the date of reception of the application for a contract of generator interconnection or within a period agreed with the applicant for network interconnection of generation facilities

(Handling when the result of consideration regarding the application for a contract of generator interconnection is different from the response regarding the system impact study)

#### Article 99

1. When the result of consideration regarding the application for a contract of generator interconnection is different from the response regarding the system impact study, the general transmission and distribution company, etc. must explain the fact of difference and why such a difference occurred to the applicant for network interconnection with generation facilities.
2. If the case in Paragraph 1 is the case of which a response regarding the system impact study has been given to the applicant for network interconnection with generation facilities, the general transmission and distribution company, etc. shall submit the result of consideration regarding the application for a contract of generator interconnection and explain to the Organization why such a difference in the result of considerations has occurred prior to the response to the applicant. Provided, however, that the difference in the result of considerations is a minor difference without either increase of allocated construction cost, extending construction period or additional measures for facility installment of the applicant for network interconnection with specified generation facilities, submission to the Organization of documents on summary of such a difference after the response to the applicant is sufficient.
3. When the Organization recognizes that reconsideration of the application for a contract of generator interconnection is needed as a result of confirmation and verification in Paragraph 3, Article 97 of the Operational Rules, the general transmission and distribution company, etc. shall reconsider according to Paragraph 1 of Article 95 and report the result of reconsideration to the Organization.
4. When the Organization considers that the result of consideration is valid as a result of confirmation and verification specified in Paragraph 1, Article 97 of Operational Rules and notify the general transmission and distribution company, etc., the company must immediately provide response regarding the result of the consideration to the applicants for the specified

network interconnection, except when response was given as specified in proviso of Paragraph 2 above.

*Article 100 Deleted*

*Article 101 Deleted*

*Article 102 Deleted*

(Conclusion of contract of the allocated construction cost)

Article 103

1. An applicant for network interconnection must conclude a contract specifying the amount of allocated construction cost, payment condition of such cost and other necessary matters regarding construction necessary for interconnection (hereinafter, “contract of allocated construction cost”) within a month after acceptance of interconnection.
2. The allocated construction cost shall be paid in a lump before the general transmission and distribution company, etc. starts the construction necessary for interconnection. Provided, however, that when the construction necessary for interconnection takes long time, the applicant for network interconnection may ask the general transmission and distribution company, etc. for consultation about the change of payment condition.
3. The general transmission and distribution company, etc. shall respond to the change of payment condition up to the extent rational based on the result of consultation in proviso of Paragraph 2.

(Implementation of interconnection)

Article 104

An applicant for network interconnection with generation facilities and the general transmission and distribution company, etc. shall discuss and define the various conditions regarding interconnection before the start of interconnection, after that, the company shall start the interconnection of generation facilities with the transmission network.

(Cases when it is possible to reject interconnections after accepting interconnection)

Article 105

1. The general transmission and distribution company, etc. may reject the interconnection in cases specified in the following items, or with due reasons after accepting the interconnection.
  - i. In cases where the general transmission and distribution company cancels the securing of allocated capability of the transmission networks according to items i. and ii., Paragraph 2 of Article 97.
  - ii. In a case where the contract of interconnection was terminated because of early termination, etc.
  - iii. In a case where the business related to application for a contract regarding generator interconnection was canceled in accordance with the Act, the Environmental Impact Assessment Act and other laws
  - iv. In a case where it becomes necessary to change contents of construction works for

interconnection (except minor changes) along with changes in the application for a contract regarding generator interconnection

- v. In other case where it became impossible or significantly difficult to interconnect after acceptance of interconnection because of facts, such as amendment of laws, extremely significant fluctuation of the situation of electric demand and supply or significant change of transmission and distribution facilities due to collapse or loss or failure of negotiation on land acquisition (including the case where exclusive use of sea area is unauthorized).
2. When the general transmission and distribution company, etc. rejects the interconnection, it shall explain the reasons to the applicant for network interconnection with generation facilities in writing

(Allocated construction cost in operation for system impact study of generation facilities)

Article 106

1. Among the construction cost necessary for the network interconnection with generation facilities, the amount allocated to the applicant for network interconnection with generation facilities shall be defined according to classification specified in the following items.
  - i. In cases other than cases of the next item and item iii below: The amount calculated based on the ministerial order regarding the cost for connecting lines (Order of the Ministry of Economy, Trade and Industry No. 119, December 20, 2014) and Guidelines on cost allocation of network reinforcement for generator installment
  - ii. In the case of a collective study process for generator interconnections: Amount determined according to procedures as prescribed by the Organization in accordance with Article 80 of the Operational Regulations and other matters (hereinafter referred to as “procedures for a collective study process for generator interconnections”)
  - iii. In a case where the Organization decided the allocation ratio among beneficiaries based on Article 59 of the Operational Rules: The amount calculated based on such a decision
2. General transmission and distribution company, and distribution company shall define and publish the calculation method of cost allocation according to the Item i. of the preceding paragraph.

(Change in contents of a contract of interconnected generation facilities)

Article 107

In a case where persons who installed the generation facilities decreased the maximum power interconnected to the interconnected generation facilities, or decided to abolish generation facilities due to laws or changes in business plans, such persons must immediately take procedures regarding change in contents of or termination of the contract.

(When interconnection with generation facilities are requested to the general transmission and distribution company that is the same company with the requester)

Article 108

As for generation facilities maintained and operated by an applicant for network interconnection, if such an applicant seeks to interconnect with the transmission networks operated by itself as a general transmission and distribution company, etc., provisions of this

Section shall be applied by replacing the term, “applicants for a contract,” with the term, “applicants for network interconnection,” provided, however, that Article 83, 103 and 111 shall not be applied.

(Sharing information on reception and response for operation for system impact study)

Article 109

1. The general transmission and distribution company, and distribution company must report to the Organization about the dates of reception and response for operation for system impact study (limited to projects of power generation facilities of which the maximum power interconnected is 500 kW or more) of which application has been received by those companies by each voltage class (and if the response was not able to made by the scheduled response date, reasons of such delay) , according to the order from the Organization so as to regularly compile and publish the information on operation for system impact study defined in Paragraph 2, Article 100 of Operational Rules.
2. In a case where the general transmission and distribution company, and distribution company is requested by the Organization to submit information necessary for analysis of information on operation for system impact study by the Organization other than a case of Paragraph1 above, the company must respond to such a request immediately.

<Subsection 3 System impact study related to generation facilities requested to the Organization>

(Consideration of preliminary consultation requested to the Organization)

Article 110

1. When the general transmission and distribution company, etc. is required to conduct preliminary consultation requested to the Organization according to Paragraph 1, Article 69 of the Operational Rules, such a company shall conduct the study accordingly and submit the results of the study to the Organization at least five business days before the scheduled date of response from the Organization to the Applicant for the specified network interconnection.
2. If the general transmission and distribution company, etc. fails to submit the results of the study before five business days as specified in Paragraph 1, such a company shall report to the Organization the reasons of such delay, progress, and forecast of the situation in writing.
3. If the general transmission and distribution company, etc. was requested to restudy the project of which study result was submitted, the company must submit the result of the restudy to the Organization.

(Notification of study fee related to system impact study requested to the Organization)

Article 111

1. When the general transmission and distribution company, etc. received a notice specified in Paragraph 1, Article 71 of the Operational Rules from the Organization, the company shall notify the applicant for the specified network interconnection about the amount of study fee

and send documents necessary for payment of such study fee to the applicant.

2. When the general transmission and distribution company, etc. confirmed the payment of study fee from the applicant for the specified network interconnection, the company shall notify the Organization.
3. Where a general transmission and distribution company, etc. received a request from the Organization in accordance with the provision of Paragraph 2 of Article 71 of the Operational Rules in a case provided for in Item ii of the same paragraph, it shall give notice of the amount of a fee for system impact study to a selected company when such a selected company is selected and shall send documents required for payment of such a fee, except when such a fee is not required as provided for in Paragraph 1 of Article 83.

(System impact study requested to the Organization)

Article 112

1. Where a request under paragraph 2 of Article 71, paragraph 2 of Article 81, or paragraph 2 of Article 82 of the Operational Rules is received in connection with a system impact study accepted by the Organization, a general transmission and distribution company, etc. must conduct a system impact study and submit the results of this study to the Organization by no later than seven (7) business days prior to the scheduled date for the provision of a response by the Organization to the specified network interconnection applicant.
2. If the general transmission and distribution company, etc. fails to submit before the seven business days as specified in Paragraph 1, such company shall report to the Organization the reasons for the delay, progress, and forecast of the situation in writing.
3. If the general transmission and distribution company, etc. requested a restudy of a project of which the study result was submitted, the company must submit the result of the restudy to the Organization.

(Confirmation of the necessity of the system impact study requested to the Organization)

Article 113

1. If the general transmission and distribution company, etc. was requested to confirm the necessity of the system impact study that was originally requested to the Organization based on Paragraph 1, Article 74 of the Operational Rules, the company must immediately confirm the necessity of the study and submit the result of such confirmation to the Organization.
2. If the general transmission and distribution company, etc. was requested to reconfirm the project of which the result of confirmation of necessity of the system impact study was submitted, the company must submit the result of the reconfirmation to the Organization.

<Subsection 4 Network Access Operation for demand facilities>

(Application and reception regarding preliminary consultation)

Article 114

1. Applicants for interconnection of demand facilities who seek for interconnection with high-voltage or extra-high-voltage transmission networks may apply for preliminary consultation

before applying for a contract of demand facilities, except for a case where such interconnection is accompanied by new installation, change, or retirement of generation facilities locating on the demand facility side.

2. When the general transmission and distribution company, etc. received an application for preliminary consultation, it shall give a response about the preliminary consultation within two weeks from the date of such a reception in principle. If the response might not be able to be given within two weeks, the company shall notify the applicant for interconnection of demand facilities of reasons of delay and progress and forecast of situation (including the scheduled date of response after extension of the schedule) immediately after such a possibility was found out and give individual explanation according to a request from the applicant. The same shall apply when the Organization may not be able to give a response by the scheduled date of response after such an extension of the schedule.
3. Where a general transmission and distribution company, etc. received an application for preliminary consultation from an applicant for network interconnection, it shall immediately request a preliminary consultation from other relevant transmission and distribution companies or distribution companies based on the contents of the application.

(Consideration and response regarding application for preliminary consultation)

Article 115

1. The general transmission and distribution company, etc. shall consider the necessity of access facilities, watt-hour meter, communication facilities, and construction work necessary for electricity supply and the subject of construction, if the construction is necessary, after receiving the application for preliminary consultation.
2. When the general transmission and distribution company, etc. completed the consideration of Paragraph 1, it shall give the applicant for interconnection of demand facilities a response about the result of the study and necessary explanation.

(Application for a contract of demand facilities and the reception of the application)

Article 116

1. An applicant for interconnection of demand facilities who seeks the interconnection with the transmission network (including cases accompanied by new installation, changes or retirement of power generation facilities on the demand facility side) must apply for a contract (hereinafter “application for a contract for a demand facility”).
2. When the general transmission and distribution company, etc. received an application for a contract for a demand facility, it shall consult with the applicant for network interconnection and relevant general transmission and distribution companies or distribution companies prescribed in Paragraph 4 and define the scheduled date of response to the application specified in Paragraph 1.
3. If the response might not be able to be given within the scheduled date of response, the general transmission and distribution company, etc. shall notify the applicant for interconnection of demand facilities of reasons of delay and progress and forecast of the situation (including the scheduled date of response after extension of the schedule) immediately after such a possibility was found out and give individual explanation according a request from the applicant. The same shall apply when the response might not be able to



be given within the scheduled date of response after such an extension of the schedule.

4. When a general transmission and distribution company, etc. received an application for a contract concerning demand facilities from an applicant for network interconnection, it shall immediately request consideration on the application for a contract from other relevant transmission and distribution companies or distribution companies based on the contents of an application.

(Consideration and response regarding the application for a contract of demand facilities)

Article 117

1. The general transmission and distribution company, etc. shall consider the matters necessary for a response specified in Paragraph 2 below after receiving an application for a contract of demand facilities
2. When the general transmission and distribution company, etc. completed the consideration of Paragraph 1, it shall give a response regarding the matters specified in the following item and necessary explanation to the applicant for interconnection of demand facilities.
  - i. Possibility of interconnection to the contracted capability, which the applicant for interconnection of demand facilities sought. (If the interconnection is impossible, its reasons and alternative plans. If it is impossible to present the alternative plans, its reasons.)
  - ii. Summary of construction for network interconnection (design specification or outline figure of construction, if the applicant requests them)
  - iii. Approximate amount of allocated construction cost (including breakdown) and calculation basis
  - iv. Necessary period for construction
  - v. Necessary measures for interconnecting the applicants
  - vi. Preconditions (network-related data used for study)
  - vii. Operational constraint (including basis of constraint)
  - viii. Measures necessary for interconnection of power generation facilities (only when there are power generation facilities (except for facilities which will not be interconnected with the transmission network) on the side of demand facilities)

(Allocation to the construction cost for operation for system impact study of demand facilities)

Article 118

1. Among the construction cost necessary for the construction for network interconnection of demand facilities, the amount of cost allocated by the applicant for interconnection of demand facilities shall be the amount beyond the standard construction cost necessary for the construction for network interconnection of demand facilities in principle.
2. The general transmission and distribution company, and distribution company shall define and publish the specific calculation method of standard construction cost specified in Paragraph 1.

(When the general transmission and distribution company, etc. supply electricity to the demand facilities of the same company)

Article 119

When the general transmission and distribution company, etc. seek for new electric supply or upgrade of contract capability for the demand facilities interconnected to the transmission networks operated by themselves, provisions of this section shall be applied by replacing the term, “application for a contract” with the term, “application for network interconnection.” Provided, however, that Article 118 will not be applied.

*Section 2 Solicitation process for the generator interconnection*

(Application for the start of solicitation process for the generator interconnection from the applicant for network interconnection)

Article 120

1. Where a network interconnection applicant receives a response to the effect that network interconnection construction work could be subject to a collective study process for generator interconnections as part of the response provided in a system impact study, the network interconnection applicant may, irrespective of whether the respondent in the system impact study is the Organization or a general transmission and distribution company, etc., submit an application for the commencement of a collective study process for generator interconnections to a general transmission and distribution company, etc..
2. Notwithstanding the preceding paragraph, the network interconnection applicant may not apply for a collective study process for generator interconnections in a case coming under any of the following items:
  - i. Where reinforcement work on a cross-regional interconnection network is included in network interconnection construction work and where the network interconnection applicant has made a request related to cross-regional network development in accordance with item ii of Article 51 of the Operational Rules;
  - ii. Where, after a response to a system impact study is given, a collective study process for generator interconnections is commenced for the transmission network with which generation facilities shall be interconnected;
  - iii. Where one (1) year has passed since the response date for a conducted system impact study.

(Accepting applications for the commencement of a collective study process for generator interconnections)

Article 120-2

1. Where an application document for the commencement of a collective study process for generator interconnections is received from a network interconnection applicant, a general transmission and distribution company, etc. shall accept the application for the commencement of the process after confirming that required fields in the application document have been completed and that the study fee for commencing the process as prescribed in the following Article has been received. Provided, however, that, where there are any deficiencies in the application document, the general transmission and distribution company shall ask to have the application document corrected and will then accept the application upon confirming that there are no deficiencies.

2. When a general transmission and distribution company, etc. received an application for a start of collective study process for generator interconnections from an applicant for network interconnection and when the extra-high-voltage transmission network (including transformers interconnecting extra-high-voltage lines with high-voltage lines; hereinafter the same meaning shall apply in this Section) subject to the process to be constructed (excluding cases in which power generation control is implemented with protective relays; hereinafter the same meaning shall apply in this Section) is not the transmission network operated by the general transmission and distribution company, etc. who received such an application for a start, it shall immediately ask other transmission and distribution companies or distribution companies to decide whether the collective study process for generator interconnections should be started in accordance with the provision of Item i of Paragraph 1 of Article 120-4 hereof.

(Study fee for commencing a collective study process for generator interconnections)  
Article 120-3.

1. Upon receiving an application for the commencement of a collective study process for generator interconnections, a general transmission and distribution company, etc. shall provide a notification of the amount of the study fee for commencing the process as prescribed in paragraph 3 hereof and send documents required for payment of the study fee for commencing the process to the network interconnection applicant.
2. Where the documents as provided for in the preceding paragraph are received, the network interconnection applicant must promptly pay the study fee for commencing the process and, after paying the study fee for commencing the process, notify the fact thereof to the general transmission and distribution company, etc.
3. The study fee for commencing the process shall be the same amount as the study fee for a system impact study as prescribed in Article 83 hereof and shall be applied to the study fee associated with an application for a system impact study in the same process based on Article 122 hereof as made by the network interconnection applicant.
4. Where a collective study process for generator interconnections is not commenced, the general transmission and distribution company, etc. shall refund the study fee for commencing the process as paid by the network interconnection applicant.

(Commencing a collective study process for generator interconnections)  
Article 120-4.

1. Where any of the following items applies, a general transmission and distribution company, and distribution company shall commence a collective study process for generator interconnections in connection with construction work on an extra-high-voltage transmission network:
  - i. Where the general transmission and distribution company, and distribution company, after receiving an application under the provisions of paragraph 1 of Article 120-2 hereof, deems it necessary to commence a collective study process for generator interconnections from the standpoint of efficient network development as concerns the transmission network subject to the application;
  - ii. Where the general transmission and distribution company, and distribution company

- deems it necessary to commence a collective study process for generator interconnections from the standpoint of efficient network development based on prior consultations carried out in the past and the state of the application for a system impact study;
- iii. Where a request in accordance with paragraph 1 of Article 75 of the Operational Rules has been received from the Organization;
  - iv. Where the general transmission and distribution company and the distribution company considered that the maximum power interconnected of power generation facilities that are expected to be interconnected exceeds the current interconnection capacity from the standpoint of the situation of the past application for the preliminary consultation and system impact study and other matters during a period specified in Paragraph 2 of Article 124 hereof.
  - v. Where the general transmission and distribution company and the distribution company received an application documents prescribed in Paragraph 1 of Article 88 hereof targeting the transmission networks subject to a procedure for suspension or retirement of power generation facilities (including a case where the maximum power interconnected was decreased because of the procedure specified in Article 107, hereinafter “procedure for maintenance or retirement”) within a period specified in Paragraph 2 of Article 124 hereof and considered that the collective study process for generator interconnections is necessary from the perspective of fairness of information acquisition among applicants for network interconnection.
  - vi. Where the general transmission and distribution company and the distribution company considered that the capacity provisionally secured on transmission networks in accordance with a notice specified in Paragraph 3 of Article 68-2 of the Operational Rules requested in accordance with Paragraph 1 of the same article exceeds the current interconnection capacity.
2. Where a general transmission and distribution company, and distribution company, after accepting an application under Article 120-2 hereof, deems that the commencement of a collective study process for generator interconnections is not necessary from the standpoint of efficient network development, the general transmission and distribution company shall notify the fact thereof and provide a necessary explanation to the network interconnection applicant.
  3. Where a collective study process for generator interconnections is commenced in accordance with any of the items of paragraph 1 hereof or is not commenced in accordance with paragraph 2 hereof, the general transmission and distribution company, and distribution company shall report the fact thereof and provide an explanation of the applicable reason to the Organization.

(Complying with procedures for a collective study process for generator interconnections)  
Article 121.

1. A general transmission and distribution company, distribution company and network interconnection applicant participating in a collective study process for generator interconnections shall comply with procedures for a collective study process for generator interconnections.
2. A general transmission and distribution company and a distribution company must mutually cooperate for implementation of the collective study process for generator

interconnections.

(Formulating preconditions for a collective study process for generator interconnections)

Article 121-2.

1. In commencing a collective study process for generator interconnections, a general transmission and distribution company, and distribution company shall study and set forth an outline of the reinforcement of the transmission network subject to the process, area subject to solicitation, capacity to be provisionally secured for the transmission network as required for the connection of power sources, and other preconditions for the process.
2. A general transmission and distribution company, and distribution company shall solicit network interconnection applicants wishing to interconnect with a transmission network subject to solicitation.

(Applications for the solicitation process for the generator interconnection)

Article 122

Where a collective study process for generator interconnections has commenced, network interconnection applicants wishing to interconnect with a transmission network subject to the process shall submit applications for the process and for a system impact study to the Organization or a general transmission and distribution company, etc.

(Accepting applications for a collective study process for generator interconnections from network interconnection applicants)

Article 122-2

1. A general transmission and distribution company, etc. shall accept applications from network interconnection applicants wishing to interconnect with a transmission system subject to solicitation.
2. A general transmission and distribution company, etc. shall accept applications for system impact studies in a collective study process for generator interconnections when it accepts applications as provided for in the preceding paragraph.
3. Where an application document for a system impact study in a collective study process for generator interconnections is received from a network interconnection applicant, the general transmission and distribution company, etc. shall accept the application for a system impact study after confirming that required fields in the application document have been completed and that the study fee for commencing the process as prescribed in Article 83 hereof has been received (except where a study fee is not required). Provided, however, that, where there are any deficiencies in the application document, the general transmission and distribution company, etc. shall ask to have the application document corrected and will then accept the application upon confirming that there are no deficiencies.
4. Where an application document for a system impact study in a collective study process for generator interconnections issued by a network interconnection applicant for the Organization is received, the general transmission and distribution company, etc. shall provide a notification of the fact thereof to the Organization after confirming that required fields in the application document have been completed and that the study fee for

commencing the process as prescribed in Article 83 hereof has been received (except where a study fee is not required). Provided, however, that, where there are any deficiencies in the application document, the general transmission and distribution company, etc. shall ask to have the application document corrected and will then provide a notification upon confirming that there are no deficiencies.

5. Where there are matters concerning which a network interconnection applicant finds it difficult to include in the application document, the general transmission and distribution company, etc. shall allow such matters to be excluded if an application for a system impact study in a collective study process for generator interconnections can still be reviewed without the inclusion of such matters, as might be the case if alternative data can be used. In such a case, the network interconnection applicant must promptly provide a notification of information related to the excluded matters to the general transmission and distribution company, etc. once such information is clarified.
6. Where an application for a system impact review in a collective study process for generator interconnections is accepted, the general transmission and distribution company, etc. shall promptly provide a notification thereof to the network interconnection applicant with a date within the response period as prescribed in Article 122-5 hereof constituting the scheduled response date.
7. Where it has become possible that a response cannot be made by the scheduled response date as provided for in the preceding paragraph, the general transmission and distribution company, etc. shall provide a notification of the applicable reason, status of progress, and future outlook (including the extended scheduled response date) to the network interconnection applicant promptly upon the ascertainment of the fact thereof and provide separate explanations as requested by the network interconnection applicant. The same shall apply even where it becomes possible that a response cannot be made by the extended scheduled response date.

(Reviewing an application for a system impact study in a collective study process for generator interconnections)

Article 122-3

1. A general transmission and distribution company, and distribution company shall conduct a review of matters required for a response to a system impact study on the basis of all applications for a system impact study accepted by the Organization, general transmission and distribution company, and distribution company in a collective study process for generator interconnections.
2. The general transmission and distribution company, etc. may ask a network interconnection applicant to provide matters to be included in an application document as well as any available information required for a review as provided for in the preceding paragraph. In such a case, the general transmission and distribution company, etc. must provide an explanation of why the information being sought is required to the network interconnection applicant.

(Responding to a system impact study in a collective study process for generator interconnections)

Article 122-4

Where a review as provided for in paragraph 1 of the preceding Article has been completed, the general transmission and distribution company, etc. shall provide the network interconnection applicant with a written response in accordance with paragraph 1 of Article 85 hereof as well as any necessary explanations.

*2. Deleted*

(Response period for a system impact study in a collective study process for generator interconnections)

Article 122-5

A general transmission and distribution company, etc. shall, in principle, provide a response to a system impact study in a collective study process for generator interconnections within three (3) months from the commencement date for the system impact study as prescribed in the procedures applicable to the collective study process for generator interconnections.

(Soliciting network interconnection applicants based on a response to a system impact study in a collective study process for generator interconnections)

Article 122-6

A general transmission and distribution company, and distribution company shall solicit network interconnection applicants who wish to interconnect with a transmission system subject to solicitation based on a response to a system impact study in a collective study process for generator interconnections made as provided for in Article 122-4 hereof.

(Applying for additional system impact study in a collective study process for generator interconnections)

Article 122-7

1. Where a network interconnection applicant who has received a response as provided for in Article 122-4 hereof wishes to interconnect with a transmission network subject to solicitation based on the response, it shall submit an application for additional system impact study to the Organization or a general transmission and distribution company, etc.
2. A network interconnection applicant who has submitted an application as provided for in the preceding paragraph shall, at the time of the application, provide a declaration of the maximum amount of the allocated cost for construction that it can assume (hereinafter referred to as “maximum allocated cost amount”) and pay a security deposit as prescribed in Article 122-9 hereof to the general transmission and distribution company, etc.

(Accepting an application for additional system impact study from a network interconnection applicant)

Article 122-8

1. A general transmission and distribution company, etc. shall accept an application for additional system impact study by a network interconnection application wishing to interconnect with a transmission network subject to solicitation under paragraph 1 of the preceding Article.

2. Where an application document for additional system impact study as provided for in paragraph 1 of the preceding Article is received from a network interconnection applicant, the general transmission and distribution company, etc. shall accept the application for additional system impact study after confirming that required fields in the application document have been completed, that the maximum allocated cost amount for construction as prescribed in paragraph 2 of the preceding Article has been declared, and that the security deposit as prescribed in Article 122-9 hereof has been remitted (except where a security deposit is not required). Provided, however, that, where there are any deficiencies in the application document, the general transmission and distribution company, etc. shall ask to have the application document corrected and will then accept the application for additional system impact study upon confirming that there are no deficiencies.
3. Where an application document for additional system impact study as provided for in paragraph 1 of the preceding Article issued by a network interconnection applicant for the Organization is received, the general transmission and distribution company, etc. shall provide a notification of the fact thereof to the Organization after confirming that required fields in the application document have been completed, that the maximum allocated cost amount for construction as prescribed in paragraph 2 of the preceding Article has been declared, and that the security deposit as prescribed in Article 122-9 hereof has been remitted (except where a security deposit is not required). Provided, however, that, where there are any deficiencies in the application document, the general transmission and distribution company, etc. shall ask to have the application document corrected and will then accept the application for additional system impact study upon confirming that there are no deficiencies.
4. Where there are matters concerning which a network interconnection applicant finds it difficult to include in the application document, the general transmission and distribution company, etc. shall allow such matters to be excluded if an application for additional system impact study can still be reviewed without the inclusion of such matters, as might be the case if alternative data can be used. In such a case, the network interconnection applicant must promptly provide a notification of information related to the excluded matters to the general transmission and distribution company, etc. once such information is clarified.
5. Where an application for additional system impact study is accepted, the general transmission and distribution company, etc. shall promptly provide a notification thereof to the network interconnection applicant who submitted an application as provided for in the preceding Article with a date within the response period as prescribed in Article 122-12 hereof constituting the scheduled response date.
6. Where it has become possible that a response cannot be made by the scheduled response date as provided for in the preceding paragraph, the general transmission and distribution company, etc. shall provide a notification of the applicable reason, status of progress, and future outlook (including the extended scheduled response date) to the network interconnection applicant promptly upon the ascertainment of the fact thereof and provide separate explanations as requested by the network interconnection applicant. The same shall apply even where it becomes possible that a response cannot be made by the extended scheduled response date.

(Security deposit for a collective study process for generator interconnections)



Article 122-9

1. A general transmission and distribution company, etc. shall send document necessary for payment of security deposit in accordance with the calculation method prescribed in Article 82-2 of the Operational Rules to an applicant for network interconnection in the following respective case.
  - i. Where the general transmission and distribution company, etc. respond to an applicant for network interconnection (except for selected companies) in accordance with the provision of Article 122-4 hereof.
  - ii. Where a selected company is selected.
2. Where a person fallen under any of the following items makes an application specified in the same item after receiving the document prescribed in the preceding Paragraph 1, such a person must immediately pay security deposit and then give notice to the general transmission and distribution company after the payment, except for a case where the security deposit is not required.
  - i. Applicant for network interconnection (except for selected companies): In a case of an application for additional system impact study prescribed in Article 122-7
  - ii. Selected companies: In a case of an application for an agreement prescribed in Article 123 hereof
3. The security deposit paid by the applicant for network interconnection shall be applied to the allocated construction cost of the relevant applicant, or the security deposit of the allocated cost of the contract agreed by the provisions of the Article 123.
4. Where a situation coming under any of the following items arises or any other valid reason arises prior to the conclusion of an agreement concerning the allocated cost for construction, the general transmission and distribution company, etc. shall refund the security deposit paid by the network interconnection applicant.
  - i. The amount of the allocated cost for construction exceeds the maximum allocated cost as declared in paragraph 2 of Article 122-7 hereof;
  - ii. A collective study process for generator interconnections is declined on the grounds that the required construction period in the responses to additional system impact study and application for an agreement has become longer than the period stated in the most recent received response;
  - iii. It has become impossible or difficult to carry out interconnections due to a reduction in the scale of the reinforcement work;
  - iv. The collective study process for generator interconnections has been suspended.

(Reviewing an application for additional system impact study in a collective study process for generator interconnections)

Article 122-10

1. A general transmission and distribution company, and distribution company shall conduct a review of matters required for a response to additional system impact study on the basis of all applications for additional system impact study accepted by the Organization, general transmission and distribution company, and distribution company.
2. The general transmission and distribution company, etc. may ask a network interconnection applicant to provide matters to be included in an application document as well as any available information required for a review as provided for in the preceding paragraph. In

such a case, the general transmission and distribution company, etc. must provide an explanation of why the information being sought is required to the network interconnection applicant.

3. The amount of the allocated cost for construction to be assumed in additional system impact study shall be calculated in accordance with procedures applicable to a collective study process for generator interconnections.

(Response to additional system impact study in a collective study process for generator interconnections)

#### Article 122-11

Where a review as provided for in the preceding Article has been completed, the general transmission and distribution company, etc. shall provide the network interconnection applicant with a written response in accordance with paragraph 1 of Article 85 hereof as well as any necessary explanations. Provided, however, a response to the effect that it has become impossible or difficult for the network interconnection applicant to carry out interconnections because the amount of the allocated cost for construction exceeds the declared maximum allocated cost amount as a result of the review shall be provided thereto.

(Response period for additional system impact study in a collective study process for generator interconnections)

#### Article 122-12

A general transmission and distribution company, etc. shall, in principle, provide a response to additional system impact study in a collective study process for generator interconnections within three (3) months from the commencement date for another system impact study.

(Application for an agreement in a collective study process for generator interconnections)

#### Article 123

1. Where a network interconnection applicant who has received a response as provided for in Article 122-11 hereof wishes to interconnect with a transmission network subject to solicitation based on the response, it must submit an application for an agreement in a collective study process for generator interconnections to the general transmission and distribution company, etc.
2. The network interconnection applicant who submits an application as provided for in the preceding paragraph must conclude an agreement concerning compensation for the allocated cost for construction with the general transmission and distribution company, etc. as necessitated by the application.

(Accepting an application for an agreement in a collective study process for generator interconnections)

#### Article 123-2

1. Where an application document for an application for an agreement in a collective study process for generator interconnections as provided for in the preceding article is received, the general transmission and distribution company, etc. shall accept the application for an

agreement after confirming the contents specified in the following each item according to the category in the same item. Provided, however, that, where there are any deficiencies in the application document, the general transmission and distribution company shall ask to have the application document corrected and will then accept the application for an agreement upon confirming that there are no deficiencies.

- i. When an applicant for network interconnection (except for selected companies) seeks an interconnection with transmission networks: It shall confirm that required fields in the application document have been completed, and that the security deposit has been remitted in a case where a part of procedure of the collective study process for generator interconnection is omitted pursuant to the provision of Article 123-9 hereof, except for a case where the security deposit is not required as provided for in Article 88-2 hereof.
  - ii. When a selected company seeks for interconnection with transmission networks: It shall confirm that required fields in the application document have been completed, and that the security deposit prescribed in Article 122-9 is remitted (unless no security deposit is required), and that a fee of for the system impact study has been paid when the amount of such a fee is noticed pursuant to Paragraph 3 of Article 111 hereof.
2. Where there are matters concerning which a network interconnection applicant finds it difficult to include in the application document, the general transmission and distribution company, etc. shall allow such matters to be excluded if an application for an agreement can still be reviewed without the inclusion of such matters, as might be the case if alternative data can be used. In such a case, the network interconnection applicant must promptly provide a notification of information related to the excluded matters to the general transmission and distribution company once such information is clarified.
  3. Where an application for an agreement is accepted, the general transmission and distribution company, etc. shall promptly provide a notification thereof to the network interconnection applicant with a date within the response period as prescribed in Article 98 hereof constituting the scheduled response date.
  4. Where it has become possible that a response cannot be made by the scheduled response date as provided for in the preceding paragraph, the general transmission and distribution company, etc. shall provide a notification of the applicable reason, status of progress, and future outlook (including the extended scheduled response date) to the network interconnection applicant promptly upon the ascertainment of the fact thereof and provide separate explanations as requested by the network interconnection applicant. The same shall apply even where it becomes possible that a response cannot be made by the extended scheduled response date.

(Reviewing an application for an agreement in a collective study process for generator interconnections)

#### Article 123-3

1. A general transmission and distribution company, etc. shall, after accepting an application for an agreement in a collective study process for generator interconnections, conduct a review thereof in accordance with paragraph 1 of Article 84 hereof.
2. The general transmission and distribution company, etc. may ask a network interconnection applicant to provide matters to be included in an application document as well as any available information required for a review as provided for in the preceding paragraph. In

such a case, the general transmission and distribution company, etc. must provide an explanation of why the information being sought is required to the network interconnection applicant.

(Responding to an application for an agreement in a collective study process for generator interconnections)

Article 123-4

1. Where a review as provided for in paragraph 1 of the preceding Article has been completed, the general transmission and distribution company, etc. shall notify the network interconnection applicant with a written response as well as provide any necessary explanations. Provided, however, a response to the effect that it has become impossible or difficult for the network interconnection applicant to carry out interconnections because the amount of the allocated cost for construction exceeds the declared maximum allocated cost amount as a result of the review shall be provided thereto.
2. The general transmission and distribution company, etc. may not, without a valid reason, respond to the effect that an accepted application for an agreement will not be approved.

(Completion of a collective study process for generator interconnections)

Article 123-5

1. In a case coming under any of the following items, a general transmission and distribution company, and distribution company shall bring a collective study process for generator interconnections to a completion:
  - i. An agreement concerning the allocated cost for construction is concluded by and between the general transmission and distribution company, etc. and a network interconnection applicant (other than a network interconnection applicant for whom it has become impossible or difficult to carry out interconnections because the amount of the allocated cost for construction exceeds the declared maximum allocated cost amount as a result of the review) and it is confirmed that the amount of the allocated cost for construction has been remitted;
  - ii. It has become impossible or difficult for all network interconnection applicants who have applied for a collective study process for generator interconnections to carry out interconnections because the amount of the allocated cost for construction exceeds the declared maximum allocated cost amount;
  - iii. No application has been made by a network interconnection applicant in an application as prescribed in Article 122 hereof.
2. The general transmission and distribution company, and distribution company shall publish the results of a collective study process for generator interconnections and report to the Organization without delay upon the completion thereof.

(Splitting up an area subject to solicitation in a collective study process for generator interconnections)

Article 123-6.

Where the scale of reinforcement work in a collective study process for generator

interconnections has changed due to the withdrawal of a network interconnection applicant, a general transmission and distribution company, and distribution company may split up an area subject to solicitation if it is deemed that the division of part of the area subject to solicitation will have no impact from the standpoint of efficient network development. In such a case, the general transmission and distribution company, and distribution company shall treat the split-up area subject to solicitation as if an individual collective study process for generator interconnections has been commenced.

(Period of a collective study process for generator interconnections)

Article 123-7

A general transmission and distribution company, and distribution company shall, in principle, complete a collective study process for generator interconnections within one (1) year of the date of the commencement thereof.

(Suspending a collective study process for generator interconnections)

Article 123-8

1. A general transmission and distribution company, and distribution company may suspend a collective study process for generator interconnections upon consulting with the Organization in a case coming under either of the following items:
  - i. Where carrying out interconnections has been rendered impossible or difficult due to amendments made to a law or regulations, extensive changes to the state of the supply of and demand for electricity, significant changes in the state of distribution facilities caused by their destruction or loss, unsuccessful site negotiations, or other such circumstances arising subsequent to the commencement of the collective study process for generator interconnections;
  - ii. Where it is deemed that it is highly probable that interconnections cannot be carried out by any network interconnection applicant even if the collective study process for generator interconnections were to be continued in light of, among other factors, the scale of expected network reinforcement work (including the amount of the allocated cost for construction and construction period), prior consultations carried out in the past, and the state of applications for system impact studies.
2. Where a collective study process for generator interconnections is suspended, the general transmission and distribution company, and distribution company shall field opinions from process applicants.
3. Where a collective study process for generator interconnections is suspended, the general transmission and distribution company, and distribution company shall publish the state of progress in the process and the reason for suspending the process.
4. The general transmission and distribution company, and distribution company shall accommodate any request made by the Organization for the suspension or discontinuation of a collective study process for generator interconnections in accordance with Article 89 of the Operational Rules.

(Omitting a part of the procedures in a collective study process for generator interconnections)

Article 123-9

A general transmission and distribution company, and distribution company may omit a part of the procedures in a collective study process for generator interconnections where it is deemed that such omission for such reason as the fact that reinforcement work is no longer necessary in a collective study process for generator interconnections would not be detrimental to any network interconnection applicant and would not impair fairness among network interconnection applicants. In such a case, the general transmission and distribution company, etc. shall provide a written notification of the fact thereof and the procedures for submitting an application for an agreement in a collective study process for generator interconnections to network interconnection applicants.

(Handling cases in which the volume of interconnection capacity will increase by at least 100,000 kilowatts due to the suspension or retirement of a power source)

Article 124

1. Where it is definitely expected that the volume of interconnection capacity will increase by at least 1000,000 kilowatts due to procedures for the suspension or retirement of a power source, a general transmission and distribution company, and distribution company shall promptly publish on its own website the volume of interconnection capacity to be increased due to such procedures for suspension or retirement (hereinafter referred to as “increased volume of interconnection capacity”), the timing of the increase in the volume of interconnection capacity, and the transmission network for which the volume of interconnection capacity will increase in accordance with the Network Information Guidelines.
2. Notwithstanding the provisions of the preceding paragraph, the general transmission and distribution company, and distribution company shall, with respect to the application of the provisions of this Chapter, treat generation facilities subject to procedures for suspension or retirement as if they remained interconnected and running at the maximum level of electricity received prior to the implementation of procedures for suspension or retirement until such time that twelve (12) months shall have passed since the date on which publication is undertaken pursuant to the provisions of the preceding paragraph. Provided, however, that this provision shall not apply to a collective study process for generator interconnections for any transmission system subject to procedures for suspension or retirement.

*Article 125 Deleted*

*Article 126 Deleted*

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*Article 131 Deleted*

### *Section 3 Miscellaneous*

(Response of network access operation)

#### Article 132

1. Regardless of the scheduled date of response and response period defined in this Chapter, the general transmission and distribution company, and distribution company must strive to give response regarding network access operation as soon as possible, and must not unduly postpone the response.
2. The general transmission and distribution company, and distribution company must provide necessary information in addition to matters defined in this Chapter for response of network access operation based on Guidelines on network information disclosure.

(Form of application and response)

#### Article 133

1. The general transmission and distribution company, and distribution company must publish the forms of application and response for receiving applications for the operation of system impact study defined by the Organization on their website as well.
2. Regardless of Paragraph 1, when the applicant for network interconnection simultaneously applies for specified contract defined by the provisions of paragraph 5 of Article 2 of FIT Act and a contract of intra-regional transmission network use or a cross-regional transmission network use contract, the forms of application and response shall be published on the website of each general transmission and distribution company, and distribution company.

(Publication of application contact)

#### Article 134

General transmission and distribution companies, and distribution companies shall define their points of contact for presentation of information regarding system impact study and networks specified in Article 72, and shall publish clearly on their website.

(Technical requirements for network interconnection)

#### Article 135

Technical requirements for network interconnection must set forth, for generation facilities indicated in the following items (limited to generation facilities with a generation capacity at least equal to that indicated in the lower row of the Appendix 7-1 for each supply area of general transmission and distribution company indicated in the upper row of the same appendix), contents as indicated in Appendix 7-2 and Appendix 7-3 for each category of generation method as indicated in each appendix for each supply area of general transmission and distribution company as prescribed in the upper row of each of these appendices:

- i. Thermal power generation facilities
- ii. Mixed-combustion biomass power generation facilities (excluding local resource biomass power sources (which means power generation facilities that utilize resources present in a local area (unused thinned wood and other examples of biomass, methane fermentation gas, and general waste products) (excluding facilities for which output control is difficult to realize due to restrictions attributed to fuel storage or technological factors); same hereinafter).

Appendix 7-1. Power generation facilities for which the contents as indicated in Appendix 7-2 and Appendix 7-3 are prescribed in the technical requirements for network interconnection

Supply area of general transmission and distribution company	Hokkaido	Okinawa	Other than Hokkaido and Okinawa
Generation capacity	At least 100,000 kW	At least 35,000 kW	At least 100,000 kW

\* Applicable to new power sources and power generation facilities already interconnected with a network. Provided, however, that the above shall only apply to power generation facilities that are already interconnected with a network when such power generation facilities are replaced (which refers to the modification of power generation facilities in whole or in part (including upgrades)).

Appendix 7-2. Specifications of gas turbine and gas turbine combined cycle power generation facilities as prescribed in the technical requirements for network interconnection

Supply area of general transmission and distribution company	Hokkaido	Okinawa	Other than Hokkaido and Okinawa
Speed regulation of governor free (GF)	4% or less	4% or less	5% or less
GF range	more than 5%	more than 8%	more than 5%
Ramp rate at load frequency control (LFC)	5% or more per minute	5% or more per minute	5% or more per minute
LFC range	more than $\pm 5\%$	more than $\pm 8\%$	more than $\pm 5\%$
Ramp rate at economic dispatching control (EDC)	5% or more per minute	5% or more per minute	5% or more per minute
Ramp rate at simultaneous implementation of EDC and LFC	10% or more per minute	10% or more per minute	10% or more per minute
Minimum capacity required for EDC or LFC	50% or less	50% or less	50% or less
Daily Start and Stop (DSS)	Required (8 hours or less)	Required (3.5 hours or less)	Required (8 hours or less)
Frequency fluctuation compensation in non-conceivable zone	Required (within $\pm 0.1$ Hz)	Required (within $\pm 0.1$ Hz)	Required (within $\pm 0.2$ Hz)
Output maintaining function	Required	Required	Required

\* % figures indicate percentage of the rated output or standard frequency.



Appendix 7-3. Specifications of non-gas turbine and non-gas turbine combined cycle power generation facilities as prescribed in the technical requirements for network interconnection

Supply area of general transmission and distribution company	Hokkaido	Okinawa	Other than Hokkaido and Okinawa
Speed regulation of governor free (GF)	4% or less	4% or less	5% or less
GF range	more than 3%	more than 5%	more than 3%
Ramp rate at load frequency control (LFC)	1% or more per minute	2% or more per minute	1% or more per minute
LFC range	more than $\pm 5\%$	more than $\pm 5\%$	more than $\pm 5\%$
Ramp rate at economic dispatching control (EDC)	1% or more per minute	2% or more per minute	1% or more per minute
Ramp rate at simultaneous implementation of EDC and LFC	1% or more per minute	2% or more per minute	1% or more per minute
Minimum capacity required for EDC or LFC	30% or less	30% or less	30% or less
Daily Start and Stop (DSS)	—	Required (4 hours or less)	—
Frequency fluctuation compensation in non-conceivable zone	Required (within $\pm 0.1$ Hz)	Required (within $\pm 0.1$ Hz)	Required (within $\pm 0.2$ Hz)

\* % figures indicate percentage of the rated output or standard frequency.

(Publication of technical requirements for interconnection with transmission network)

Article 135-2

General transmission and distribution companies, and distribution companies must define and publish the technical conditions which the installers of generation facilities and demand facilities who interconnect to the transmission networks should comply with based on Guidelines on technical requirements for network interconnection and other rules related to securing electricity service quality.

(Cooperation for system impact study by the Organization)

Article 136

1. General transmission and distribution companies, and distribution companies and other electric power suppliers must respond to a request of submission of relevant information on system impact study or of other cooperation from the Organization in accordance with provisions of Article 103 of the Operational Rules and Article 90.
2. The general transmission and distribution company, and distribution companies and other electric power suppliers must cooperate with the Organization in reviewing of measures to improve business related to reception, study and response of system impact study defined in Article 101 of the Operational Rules to improve quality of system impact study according to requests from the Organization.

(Special provisions for a case where the construction work for electric facilities maintained and operated by persons other than general transmission and distribution companies or distribution companies are involved)

Article 137

1. When the work for interconnection of generation facilities or demand facilities involve works for electric facilities (including demand facilities in this article) maintained and operated by persons other than general transmission and distribution companies, or distribution companies, contents of a contract of allocation of construction cost shall be defined through discussion between relevant parties including general transmission and distribution companies or distribution companies.
2. Contents of a contract of allocating construction cost defined as specified in Paragraph 1 may be different from provisions of Article 103 and 118.

## Chapter 8 Submission of Plans for Monitoring Supply-demand State

(Submission of a plan from a contractor of cross-regional transmission network use)

### Article 138

1. Contractors of cross-regional transmission network (except for a general transmission and distribution company who enters into a contract for cross-regional transmission network with a distribution company for the last resort service in service areas of the distribution company) must submit demand plans, procurement plans, and sales plans specified in the Appendix 8-1 (hereinafter “demand procurement plan”) to the Organization by the due date defined in the same Appendix for each service area of a general transmission and distribution company.
2. The demand and its procurement plans must include the following matters defined in each item for each plan.
  - i. Demand plan: Demand forecast based on rational estimations (including demand reduction of customers)
  - ii. Procurement plan: Plan for procurement of supply capacity responding to the demand plan. (It must include plans for each supplier [including procurement through spot trading of the day-ahead and one-hour ahead market trading at JEPX, hereinafter, the same shall apply], and plans for the next day and later shall be corresponding with sales plans of suppliers and contract results at JEPX.) Provided, however, that when there is an agreement between suppliers to procure electricity across their service areas of general transmission and distribution companies, and when one supplier procures electricity across its service area of the above, the procurement plan before the weekly plan shall be planned for each such procurement.
  - iii. Sales plan: Plans to sell electricity regarding a procurement plan for each purchaser (It must include plans for each purchaser [including procurement through spot trading of the day-ahead and one-hour ahead market trading at JEPX, hereinafter, the same shall apply], and plans for the next day and later shall be corresponding with sales plans of suppliers and contract results at JEPX.) Provided, however, that when there is an agreement between suppliers to sell electricity across their service areas of general transmission and distribution companies, and when one supplier sells electricity across its service area of the above, the sales plan before the weekly plan shall be planned for each such sales.
3. Contractors of wheeling serve must match the difference between the procurement plan and the sales plan for the next day and later with the amount of electricity specified in the demand plan, in principle.
4. In cases where several contractors of cross-regional transmission network use (except persons who supply electricity to themselves, hereinafter, the same shall apply in this and next paragraphs) delegate authorities to consult with general transmission and distribution companies or distribution companies regarding contracts of cross-regional transmission network use and authorities for matters related to cross-regional transmission network use to the specific contractor of cross-regional transmission network use (hereinafter, “contractor representative”), regardless of Paragraph 1, such a contractor representative must compile demand and its procurement plans of several contractors and submit compiled plans.
5. When the contractor representative compiles and submits the demand and procurement plans, such a contractor must present breakdown of the plans of each contractor of cross-

regional transmission network use who delegates as specified in Paragraph 4.

#### Appendix 8-1 Submission of demand and its procurement plan

Plans to submit	Annual plan (First to Second fiscal year)	Monthly plan (Next month, the month after next)	Weekly plan (Next week, the week after next)	Next day plan	Current day plan (*1)
Due date	The end of October in each year	First day in each month	AM 10:00 on every Wednesday	12:00 a.m. on every day (*2)	One hour before the start of actual demand and supply for each 30 minutes
Contents					
Demand plan	Peak and bottom demand segmented by holidays and weekdays of each month	Peak and bottom demand segmented by holidays and weekdays of each week	Energy requirement of each day at the two points in time specified by the Organization	Energy requirement for each 30 minutes	Energy requirement for each 30 minutes
Procurement plan	Planned procurement for peak and bottom demand segmented by holidays and weekdays of each month	Planned procurement for peak and bottom demand segmented by holidays and weekdays of each week	Planned procurement of each day at the two points in time specified by the Organization	Planned procurement for each 30 minutes	Planned procurement for each 30 minutes
Sales plan	Planned sales for peak and bottom demand segmented by holidays and weekdays of each month	Planned sales for peak and bottom demand segmented by holidays and weekdays of each week	Planned sales of each day at the two points in time specified by the Organization	Planned sales for each 30 minutes	Planned sales for each 30 minutes

(\*1) This shall be submitted when there are changes in the plan for the next day

(\*2) This includes holidays

(Submission of plans from contractors of generation, general transmission and distribution companies, distribution companies and specified transmission and distribution companies)

Article 139

1. Contractors of generation, general transmission and distribution companies, distribution companies and specified transmission and distribution companies who procure and supply electricity generated from FIT generators must submit generation plans, procurement plans and sales plans specified in Appendix 8-2 for each service area of general transmission and distribution company (hereinafter, “generation and its sales plan”) to the Organization by the due date defined in the same appendix. Provided, however, that when a distribution company submits the plan and other information, such a distribution company may submit to the Organization together with the plans and other information to be submitted by the transmission and distribution company for each service area of the general transmission and distribution company for which such a distribution company conducts business.
2. Generation and its sales plan shall include the following matters defined in each item for each plan.
  - i. Generation plan: Plan related to generation for each unit set out in the contract on adjustment and supply of the amount of generation which corresponds to sales plan (including plan regarding electricity generated from FIT generators which is procured by general transmission and distribution companies or distribution companies)
  - ii. Sales plan: Plan on sales corresponding to a procurement plan of purchaser. (It must include plans for each purchaser, and plans for the next day and later shall be corresponding with procurement plans of purchaser and contract results at JEPX. Provided, however, that when there is an agreement between suppliers to sell electricity across their service areas of general transmission and distribution companies, and when one supplier sells electricity across its service area of the above, the sales plan before the weekly plan shall be planned for each such sales.)
  - iii. Procurement plan: Plan to procure insufficient part of generation plan corresponding to sales plan. (It must include plans for each supplier, and plans for the next day and later shall be corresponding with sales plans of supplier and contract results at JEPX. Provided, however, that when there is an agreement between suppliers to procure electricity across their service areas of general transmission and distribution companies, and when one supplier procures electricity across its service area of the above, the procurement plan before the weekly plan shall be planned for each such procurement.)
3. Contractors of generation, general transmission and distribution companies, distribution companies and specified transmission and distribution companies who procure and supply electricity generated from FIT generators must match the sum of electricity specified in a generation plan and a procurement plan with the amount of electricity specified in sales plan for the next day and later, in principle.
4. Regardless of item i of Paragraph 2, contractors of generation must show the breakdown of generation of each generation point or power generator in the generation plan in cases specified in the following items.
  - i. In a case that general transmission and distribution company or distribution company requests based on the necessity in light of network operation
  - ii. In a case that the Organization requests based on the necessity in light of capacity market operation

## Appendix 8-2: Submission of generation and its sales plan

Plans to submit	Annual plan (First to Second fiscal year)	Monthly plan (Next month, the month after next)	Weekly plan (Next week, the week after next)	Next day plan	Current day plan(*1)
Due date	The end of October in each year	First day in each month	AM 10:00 on every Wednesday	12:00 a.m. on every day (*2)	One hour before the start of actual demand and supply for each 30 minutes in principle
Contents					
Generation plan	Peak and bottom electric supply segmented by holidays and weekdays of each month	Peak and bottom electric supply segmented by holidays and weekdays of each week	Supply capacity of each day at two points in time specified by the Organizati on	Energy supply for each 30 minutes	Energy supply for each 30 minutes
Sales plan	Peak and bottom electricity sales segmented by holidays and weekdays of each month	Peak and bottom electricity sales segmented by holidays and weekdays of each week	Electricity sales of each day at two points in time specified by the Organization	Planned sales for each 30 minutes	Planned sales for each 30 minutes
Procurement plan	Planned procurement at the time of peak and bottom sales segmented by holidays and weekdays of each month	Planned procurement at the time of peak and bottom sales segmented by holidays and weekdays of each week	Planned procurement of each day at two points in time specified by the Organization	Planned procurement for each 30 minutes	Planned procurement for each 30 minutes

(\*1) This shall be submitted when there are changes in the plan for the next day

(\*2) This includes holidays

(Submission of plans from contractors of demand reduction)

Article 139-2

1. Contractors of demand reduction must submit demand reduction plans, procurement plans, sales plans, and the forecasted energy demand without demand reduction of each service area of general transmission and distribution company (hereinafter, “demand reduction plans, etc.”) defined in the Appendix 8-3 to the Organization by the due dates specified in the same Appendix.
2. Demand reduction plans, etc. must include matters specified in each item of the following for each plan as specified in each item of the following.
  - i. Demand reduction plan: Plans on the amount of demand to be reduced for each unit set out in the imbalance adjustment supply contract for demand reduction which corresponds to sales plan
  - ii. Sales plan: Plans to sell according to a procurement plan of sales destination. (It must plan for each sales destination, and plans for the next day and later shall be corresponding with procurement plans of sales destinations and contract results at JEPX. Provided, however, that when there is an agreement between suppliers to sell electricity across their service areas of general transmission and distribution companies, and when one supplier sells electricity across its service area of the above, the sales plan before the weekly plan shall be planned for each such sales.)
  - iii. Procurement plan: Plan to procure insufficient part of generation plan corresponding to sales plan. (It must include plans for each supplier, and plans for the next day and later shall be corresponding with sales plans of supplier and contract results at JEPX.) Provided, however, that when there is an agreement between suppliers to procure electricity across their service areas of general transmission and distribution companies, and when one supplier procures electricity across its service area of the above, the procurement plan before the weekly plan shall be planned for each such procurement.)
  - iv. Forecasted energy demand without demand reduction: Planned amount of electricity which becomes a base of imbalance adjustment supply for demand reduction
3. Contractors of demand reduction must make the procurement plans corresponding with the sales plans regarding plans for the next day and later in principle.

## Appendix 8-3: Submission of demand reduction plans, etc.

Plans to submit	Annual plan (First to Second fiscal year)	Monthly plan (Next month, the month after next)	Weekly plan (Next week, the week after next)	Next day plan	Current day plan(*1)
Due date	The end of October in each year	First day in each month	AM 10:00 on every Wednesday	12:00 a.m. on every day (*2)	One hour before the start of actual demand and supply for each 30 minutes in principle
Contents of submission					
Demand reduction plan	Demand reduced amount at the time of peak and bottom electricity in the demand reduction plan segmented by holidays and weekdays of each month	Demand reduced amount at the time of peak and bottom electricity in the demand reduction plan segmented by holidays and weekdays of each week	Demand reduced amount of each day at two points in time specified by the Organization	Demand reduced amount for each 30 minutes	Demand reduced amount for each 30 minutes
Sales plan	Peak and bottom electricity sales segmented by holidays and weekdays of each month	Peak and bottom electricity sales segmented by holidays and weekdays of each week	Electricity sales of each day at two points in time specified by the Organization	Planned sales for each 30 minutes	Planned sales for each 30 minutes
Procurement plan	Planned procurement at the time of peak and bottom sales in the sales plan segmented by holidays and weekdays of each month	Planned procurement at the time of peak and bottom sales in the sales plan segmented by holidays and weekdays of each week	Planned procurement of each day at two points in time specified by the Organization	Planned procurement for each 30 minutes	Planned procurement for each 30 minutes
Forecasted energy demand without demand reduction	—	—	—	Planned value for each 30 minutes	Planned value for each 30 minutes

(\*1) This shall be submitted when there are changes in the plan for the next day

(\*2) This includes holidays



(Special measures regarding generation plan of renewable energy)

Article 140

1. Contractors of power generation who seek to receive a notice or confirmation of planned value of generation plan (which means a plan for the next day in this article) of retail companies who receive supply based on contracts on wholesale of renewable energy electricity in a method defined in Item ii of Paragraph 1 of Article 17 of the FIP Act (provided, however, that if such a contractor has not received permission as a general transmission and distribution company or a distribution company, the contractor must conclude an imbalance adjustment contract for generators that require such a notice and confirmation with a general transmission and distribution company or a distribution company, hereinafter, such a contractor shall be called “exceptional contractor”) or contractors of power generation who are retail companies who concluded a specified contract defined in Paragraph 5 of Article 2 of the same Act before revision by the Act to revise parts of the FIP Act (Act No. 59 of June 3, 2016) and who seek to receive a notice or confirmation of planned value of a generation plan related to electricity received under such specified contract (provided, however, that if such a contractor has not received permission as a general transmission and distribution company or a distribution company, the contractor must conclude an imbalance adjustment contract for generators that require such a notice and confirmation with a general transmission and distribution company or a distribution company, hereinafter, such a contractor shall be called “former exceptional contractor”) shall prepare the generation plan (hereinafter, “exceptional generation plan”) that requests notice or confirmation of planned values for each service area of the transmission and distribution company in the following procedure. As for plans before weekly plans, retail companies, etc. shall prepare by themselves.
  - i. Solar or wind power generation
    - a. Exceptional contractor of renewable energy generation and former exceptional contractor of renewable energy generation (hereinafter, “exceptional contractor and former exceptional contractor”) shall prepare a form of exceptional generation plan by 12:00 am on two days ahead the date of actual demand and supply.
    - b. General transmission and distribution company, and distribution company shall enter planned values of generation by solar or wind power related to exceptional generation plan in the form prepared by exceptional contractor and former exceptional contractor as specified in Item a. above by 16:00 on two days ahead the date of actual demand and supply. Entered values shall be reviewed and re-entered by 06:00 on the day before the date of actual demand and supply. Provided, however, that in a case where a distribution company enters planned values of generation, planned values may be entered by a transmission and distribution company for each service area of the general transmission and distribution company for which such a transmission and distribution company conducts business.
  - ii. Hydro, geothermal or biomass power generation
    - a. Exceptional contractor and former exceptional contractor shall prepare generation plans of hydro, geothermal or biomass power related to the exceptional generation plan by 12:00 am on two days ahead the date of actual demand and supply.
    - b. General transmission and distribution company, and distribution company shall confirm the validity of the exceptional generation plan specified in Item a. by 16:00 on two days ahead the date of actual demand and supply. Where a value in the exceptional generation plan as provided for in a. of this item is changed by 06:00 on the day before

the date of actual demand and supply, the validity thereof shall be confirmed. Provided, however, that in a case where a distribution company confirms the validity, the validity may be confirmed by general transmission and distribution companies for each service area of the transmission and distribution companies for which the distribution company conduct business.

2. Exceptional contractor and former exceptional contractor must submit a generation and its sales plan to the Organization by 12:00 of the previous day of the date of actual demand and supply by following the contents of generation plan entered by the general transmission and distribution company, distribution company or prepared by the exceptional contractor and former exceptional contractor, and of which validity was confirmed by the general transmission and distribution company or distribution company based on each item of the preceding paragraph.
3. General transmission and distribution company, and distribution company shall define and publish measures of forecast of exceptional generation plan specified in item i-b. of Paragraph 1 above, and regularly compile and publish the performance forecasted by such measures.

(Submission of plans from general transmission and distribution companies)

#### Article 141

General transmission and distribution companies, and distribution companies must submit plans specified in the following items (except item ii for distribution companies) and other information to the Organization by each due date specified in the same item. Provided, however, that in a case where a distribution company submits the plans and other information, such a distribution company may submit to the Organization together with the plans and other information to be submitted by the transmission and distribution company for each service area of the general transmission and distribution company for which such a distribution company conducts business.

- i. Plans on demand and supply capacity as well as balancing capacity in regional service areas specified in Appendix 8-4: By the due date specified in Appendix 8-4
- ii. Other information regarding frequency, demand, balancing capacity, reserve capacity, generation facilities and cross-regional network interconnection monitored steadily by the central load dispatching center: Regularly
- iii. Actual generation by contractors of generation, actual procurement of electricity generated from FIT generators by general transmission and distribution companies, distribution companies and specified transmission and distribution companies and actual demand of contractors of cross-regional transmission network use in service areas: (Two month after the month of supply. Estimated values must be submitted immediately regardless of the due date.)

#### Appendix 8-4 Submission of plans on supply and demand capacities and balancing capacity in service areas

Plan to submit	Annual plan (First to second fiscal year )	Monthly plan (Next month, the month after that)	Weekly plan (Next week, the week after that)	Next day plan	Current day plan
Due date	March 25 in every year	25th in every month	Every Thursday	Every day  17:30 PM (*)	One hour prior to the starting time of actual demand and supply for each 30 minutes
Contents					
Demand in service area	Peak and bottom value of demand of weekdays and holidays of each month	Peak and bottom value of demand of weekdays and holidays of each week	Energy requirement of each day at the two points in time specified by the Organization	Energy requirement for each 30 minutes of the next day	Energy requirement for each 30 minutes of the current day
Supply in service area	Supply capacity for demand	Supply capacity for demand	Supply capacity for demand	Energy supply for energy requirement	Energy supply for energy requirement
Reserve capacity in service area	Reserve capacity for demand	Reserve capacity for demand	Reserve capacity for demand	Reserve capacity for demand	Reserve capacity for demand
Balancing capacity in service area	—	Necessary balancing capacity (for deficiency) for demand and Secured balancing capacity (for deficiency and redundancy)	Necessary balancing capacity (for deficiency) for demand and Secured balancing capacity (for deficiency and redundancy)	Necessary balancing capacity (for deficiency) for demand and Secured balancing capacity (for deficiency and redundancy)	Necessary balancing capacity (for deficiency) for demand and Secured balancing capacity (for deficiency and redundancy)

(\*) Including a case where the due date is a holiday

(Submission of information from specified transmission and distribution companies)

Article 142

1. Specified transmission and distribution companies (including registered specified transmission, distribution and retail companies that do not conclude contracts for cross-regional transmission network use with general transmission and distribution companies or distribution companies, hereinafter, the same shall apply in this article) must submit materials regarding their demand and supply capacities at supply points in addition to electricity supply plans, if the Organization considers it necessary.
2. When there are changes in materials submitted in Paragraph 1, the specified transmission and distribution company must submit the revised materials to the Organization accordingly.

(Submission of additional materials)

Article 143

1. When the general transmission and distribution companies, and distribution companies need to conduct more detailed consideration in the following cases, they may ask the contractors of cross-regional transmission network use, of generation and of demand reduction to submit other necessary materials such as demand and its procurement plans or generation and its sales plans by more detailed calculation unit after explaining why they need such submission.
  - i. In a case where the company forecasts the situation of power flow in regional service areas
  - ii. In a case where the company grasps the situation of supply-demand balance in regional service areas
  - iii. In other cases where those additional materials are needed for proper monitoring of electric networks in regional service areas
2. Contractors of cross-regional transmission network use, of generation and of demand reduction must respond immediately to requests from the Organization, general transmission and distribution companies or distribution companies of submission of additional materials related to the plans and other information submitted based on Article 110 of the Operational Rules or the preceding paragraph above.

(Change in plans)

Article 144

1. If changes occur in the demand and its procurement plans, generation and its sales plans or demand reduction plans, etc. (including changes necessary along with changes by the Organization in planned values based on Article 109 of the Operational Rules), the contractors of cross-regional transmission network use, of generation or of demand reduction must submit revised plans immediately to the Organization.
2. When the contractors of generation change the plan for the next day or current day specified in Appendix 8-2, they may submit the revised generation and its sales plans to the Organization via relevant persons who installed power generators only after confirmation of the plans through preliminary consulting with the Organization, the general transmission and distribution companies, and distribution companies.

Network Codes (2022)

*Article 145 Deleted*

## Chapter 9 Instruction under a Tight Supply-demand State

(Instructions from the Organization for improvement of the state of demand and supply)

### Article 146

When the electric power suppliers are given instructions or requests from the Organization, they must immediately respond and cooperate to improve the demand and supply states except for a case there are due reasons.

(Liquidation based on instructions or requests from the Organization)

### Article 147

An electric power supplier which received instructions or requests based on Article 111 of the Operational Rules shall study the cost to be incurred by the companies that supplied electricity, leased electric facilities or perform other matters upon consultation defined in Paragraph 1 and 2, Article 123 of the Operational Rules in accordance with such instructions or requests from the Organization, and shall liquidate rational amount which does not cause loss to the company in principle.

(Publication of trading prices based on Instructions from the Organization)

### Article 148

The general transmission and distribution companies must publish the trading price which becomes a basic value for liquidation beforehand when they accommodate electricity between them to compensate emergent insufficiency of supply capacity based on instructions from the Organization.

(Contract regarding the transmission network use by members and other electric power suppliers instructed or requested by the Organization)

### Article 149

General transmission and distribution companies, distribution companies and other electric power suppliers (except for transmission companies) shall immediately conclude a contract which regulates conditions of transmission network use to supply electricity by using the cross-regional transmission network along with electricity supply based on instructions or requests from the Organization before supply through the cross-regional transmission network, or after such supply in case of emergency.

## Chapter 10 Network Operation of General Transmission and Distribution Companies, and Distribution Companies

### *Section 1 Network Operation*

(Network operation business)

#### Article 150

1. The general transmission and distribution company, and distribution company shall conduct businesses on operation of electric networks (hereinafter “network operation”) to secure safety of workers, maintenance of facilities and stability of electric networks and to maintain the service quality of electricity.
2. Electric power suppliers must cooperate with each other so that the business on operation of electric networks mentioned in Paragraph 1 above is conducted smoothly.

(Decisions on network configuration for network operation)

#### Article 151

The general transmission and distribution company, and distribution company shall decide the network configuration so that they can realize the following matters.

- i. Voltage control
- ii. Suppression or prevention of power outage
- iii. Mitigation of transmission loss
- iv. Smooth conduct of the network operation
- v. Secure isolation of the part of disturbance on electric facilities and prevention of abnormal voltage in disturbance

(Monitoring on electric networks)

#### Article 152

1. The general transmission and distribution company, and distribution company shall monitor the following matters of electric networks in its regional service area.
  - i. State of frequency and voltage
  - ii. State of demand and supply in regional service areas
  - iii. State of securing demand and supply of each retail company
  - iv. State of electric energy output and generating reserve of each generation company
  - v. Situation concerning the amount of electricity supply and reserve capacity of specified wholesale suppliers
  - vi. State of electric facilities operation
  - vii. State of power flow into transmission and distribution facilities
  - viii. Other matters necessary for stable operation of electric networks
2. When it is considered that the retail companies, etc. do not secure necessary supply capacity defined in Paragraph 1, Article 2-12 of the Act (including cases to which Paragraph 2, Article 27-26 of the Act will be applied mutatis mutandis), the general transmission and distribution companies, and distribution companies may ask such retail companies, etc. to secure supply capacities.

3. When the deviation from the balancing system by the contractors of cross-regional transmission network, generation, and demand reduction is a major cause of deterioration of demand and supply state in regional service areas, or when such deviation occurs frequently or otherwise significantly affects operation of network systems in regional service areas, the general transmission and distribution companies, and distribution companies ask such contractors of cross-regional transmission network, generation, and demand reduction to comply with the balancing system.
4. The general transmission and distribution companies, and distribution companies shall report to the Organization immediately in the case set forth in Paragraph 2.

(Coordination of power flow)

Article 153

1. The general transmission and distribution companies, and distribution companies shall strive to coordinate the power flow into the transmission and distribution facilities to the value that can maintain the electric networks stable within the range of TTC (hereinafter “power flow coordination”) by methods specified in the following items.
  - i. Change of the network configuration by operation of switching device
  - ii. Coordination of output of power generators (including starting or stopping of the generators, hereinafter, the same meaning shall apply) that are procured by the general transmission and distribution companies, and distribution companies in advance as balancing capacity or that are adjustable online by the companies
2. In a case where the general transmission and distribution companies, and distribution companies conduct maintenance work of the transmission and distribution facilities, and when the power flow into transmission and distribution facilities (except for interconnection lines) exceeds or might exceed the TTC, the companies shall coordinate the output of power generators of which power flow coordination by output coordination is highly effective, while securing fairness among companies that submitted generation plans and possess power generators specified in the preceding paragraph or power generators that the general transmission and distribution companies, and distribution companies cannot adjust online.

(Preliminary measures when the abnormality is assumed to occur on electric networks)

Article 154

1. When the general transmission and distribution companies, and distribution companies consider that abnormality, such as power outage might occur on the electric networks in regional service areas due to typhoon, severe snowstorm or others, they shall implement following measures according to necessity and prepare structures against such occurrence.
  - i. Preparing of companies’ structure against disasters, such as typhoon, severe snowstorm, or others
  - ii. Securing of communication and contact methods with electric power suppliers when disasters, such as typhoon, severe snowstorm, or others occur
  - iii. Consultation with electric power suppliers regarding the cases where the abnormality occurs on the electric networks or where communication or contact became impossible
2. In a case of Paragraph 1 above, the general transmission and distribution companies, and distribution companies shall take the following measures to mitigate or prevent the



occurrence of abnormality on electric networks according to necessity.

- i. Adjustment of power flow in case of isolation of electric networks
  - ii. Change of network configuration
  - iii. Interruption of maintenance work of electric facilities
  - iv. Halting of transmission and distribution facilities to prevent bad influence on service quality of electricity and stability of electric networks
  - v. Coordination of output of power generators that are preliminary secured by the general transmission and distribution companies, and distribution companies as balancing capacity or that are adjustable by the companies online
  - vi. Operation of transmission and distribution facilities which is temporarily interrupted for mitigation of transmission loss or voltage regulation
3. When the measures mentioned in Paragraph 2 limit the operation of generation facilities or the supply of electricity by electric power suppliers, the general transmission and distribution companies, and distribution companies immediately report to the electric power suppliers about contents of measures beforehand or afterward.
4. In a case where the general transmission and distribution companies, and distribution companies take measures mentioned in Paragraph 2, and when such measures significantly affect the operation of cross-regional interconnection networks or the demand and supply balance in regional service areas, those companies immediately report to the Organization that they will take measures beforehand or afterward.

(Measures when abnormality occurs on electric networks)

#### Article 155

If abnormality, such as power outage occurs on electric networks in regional service areas, the general transmission and distribution companies, and distribution companies take the following measures according to necessity and strive to dissolve such an abnormality (hereinafter “restoration of electric networks”).

- i. Change of the network configuration
- ii. Coordination of output of power generators that are preliminary procured by the general transmission and distribution companies, and distribution companies as balancing capacity and that are adjustable by the companies online
- iii. Load-dispatch instructions for coordination of output of generation facilities (except for power generation facilities mentioned in Item ii above)
- iv. Emergency interruption of electric facilities (only when there is possibility of impairment of safety of people or of the occurrence or expansion of malfunction of electric facilities)
- v. Other measures necessary for the restoration of electric networks

(Adjusting output of generation facilities when abnormality occurs on electric networks)

#### Article 156

When the general transmission and distribution companies, and distribution companies coordinate the output of generation facilities mentioned in Item iii of Article 155, they shall take account of the ramp rate of generator output and the capacity to be coordinated and make the output of generation facilities expected to be the most proper for the restoration of electric networks as subject of the adjustment.

(Suppression or interruption of demand in regional service areas when the abnormality occurs on electric networks)

Article 157

1. When the general transmission and distribution companies, and distribution companies cannot dissolve the abnormality on electric networks by a method defined in Article 155, they can suppress or interruption the demand in regional service areas.
2. When the general transmission and distribution companies, and distribution companies suppress or interrupt the demand in regional service areas, they shall take social influence into account and give consideration to the fairness between electric power companies and electricity customers.

(Measures by electric power suppliers when the abnormality occurs on electric networks)

Article 158

1. When it became difficult for electric power suppliers other than the general transmission and distribution companies or distribution companies to operate the electric facilities maintained or operated by them in a normal manner, and if stability of electric networks or quality of electricity is forecasted to be affected, they shall immediately report to the general transmission and distribution companies or distribution companies about such a situation and take necessary measures after consulting with the companies. Provided, however, that measures which the electric power suppliers should take have been agreed with the general transmission and distribution companies or distribution companies beforehand, the electric power suppliers shall report to the companies after taking such measures.
2. If safety of workers might be harmed or disturbance of electric facilities might occur or expand, electric power suppliers other than the general transmission and distribution companies or distribution companies can conduct an emergency interruption of the electric facilities maintained or operated by them.
3. When the electric power suppliers other than the general transmission and distribution companies or distribution companies took measures mentioned in preceding two paragraphs, they shall immediately report to the general transmission and distribution companies or distribution companies about the situation of abnormality on electric networks and a result of measures.

## *Section 2 Frequency Control*

(Maintaining frequency)

Article 159

The general transmission and distribution companies, and distribution companies shall strive to maintain frequency of electricity to serve (hereinafter “frequency control”) by balancing the capacity of supply with the demand after securing the balancing capacity necessary to maintain frequency as specified in Paragraph 1, Article 26 of the Act.

(Method to frequency control)

Article 160

The general transmission and distribution companies, and distribution companies may control frequency by utilizing the balancing capacity.

(Request for securing available capability for short-cycle cross-regional frequency control)

Article 161

1. When short-cycle frequency control capability for the next day becomes or might become insufficient in regional service area of the general transmission and distribution company, the general transmission and distribution company must request securing available capability of interconnection lines for short-cycle cross-regional frequency control from the Organization after 12:00 of the previous day of the date of actual demand and supply.
2. When the general transmission and distribution company request as described in Paragraph 1, the company shall notify the available capability of interconnection lines expected to be necessary.

(Procedures for short-cycle cross-regional frequency control for the date of actual supply and demand)

Article 162

1. When the general transmission and distribution company which requested as described in Paragraph 1 of Article 161 is set up available capability for short-cycle cross-regional frequency control, the company shall notify the Organization about the necessity of such control and such available capability after considering the condition of short-cycle control capability on the date of actual demand and supply.
2. The general transmission and distribution company that was given notice of the final decision of available capability of interconnection lines shall control short-cycle cross-regional frequency within the range of such available capability.

(Cooperation for short-cycle cross-regional frequency control)

Article 163

When the general transmission and distribution company, and distribution company is asked from the Organization to calculate the capability and the time of short-cycle control that the company can provide for other general transmission and distribution companies whose short-cycle control capability is or might become insufficient, the company must immediately send the calculation result to the Organization.

(Charges to be borne for short-cycle cross-regional frequency control)

Article 164

When the short-cycle cross-regional frequency control was conducted, charges to be borne by or to the relevant general transmission and distribution company, and distribution company, and other matters shall be defined through consultations among parties based on cost of electricity to compensate difference in plans subject to interconnection and others.

(Frequency control when abnormality occurs)

Article 165

In a case where the frequency has significantly changed and the difficulty of maintaining frequency continues or might continue (hereinafter “at the time of abnormal frequency”) due to disturbance of electric facilities, rapid increase or decrease of demand or other unexpected events, the general transmission and distribution companies, and distribution companies take the following measures in addition to the control of frequency specified in Article 160 and 162 according to necessity.

- i. Emergency stop of power generators procured as balancing capacity by the general transmission and distribution companies, and distribution companies, and power generators adjustable by the companies online (including emergent interruption of pumping operation of pumped storage hydro power generator, the same shall apply in this article)
- ii. Load-dispatch instructions to control output of power generators (excluding power generators specified in the preceding item) (including emergent interruption of power generator)
- iii. Emergency receiving and supply of electricity using interconnection lines (including those using a device which automatically receives and supplies electricity at the AC-DC switching facilities [such as Emergency Power Preset Switch: EPPS])

(Adjusting output of power generators at the time of abnormal frequency)

Article 166

When the general transmission and distribution companies, and distribution companies coordinate the output of power generators mentioned in Item ii of Article 165, they shall take account of the ramp rate of generator output and the capability to be coordinated and make the power generator expected to be the most proper for the restoration of electric networks a subject of the adjustment of output.

(Suppression or interruption of demand in service areas at the time of abnormal frequency)

Article 167

1. In a case of abnormal frequency where the frequency has decreased significantly and the frequency cannot be maintained or recovered even after conducting the frequency control specified in Article 165, the general transmission and distribution companies, and distribution companies may suppress or interrupt demand in regional service areas. Provided, however, that in an emergency case where the frequency control defined in Article 142 cannot maintain or recover the frequency, the companies can suppress or interrupt demand in regional service areas without conducting such frequency control.
2. When the general transmission and distribution companies, and distribution companies suppress or interrupt demand in regional service areas, they shall take the social influence into account and give consideration to the fairness between the electric power companies and electricity customers.

(Isolation of electric networks by interruption of interconnection lines)

Article 168

1. If the frequency decreased or increased significantly and the cascading outage of power generators might occur, the general transmission and distribution companies may interrupt the interconnection lines and isolate the electric networks.
2. When the general transmission and distribution companies isolated the electric network by interrupting the interconnection lines, they shall give load-dispatch instructions to suppress or interrupt the output of power generators to the electric power suppliers involved with cross-regional interconnection using such interconnection lines according to necessity.
3. When the general transmission and distribution companies took measures according to Paragraph 1, they shall immediately report to the Organization about such a fact and its reasons.

*Section 3 Measures at the time of insufficient balancing capacity for deficiency*

(Utilization of balancing capacity for deficiency)

Article 169

The general transmission and distribution companies, and distribution companies shall take measures specified in the following items in a case where electricity supply for demand seems to become insufficient in regional service areas due to disturbance of electric facilities, forecast error of demand forecasts or power generation forecast.

- i. Utilization of balancing capacity preliminary preserved by the general transmission and distribution companies, and distribution companies
- ii. Starting operation of power generators that are adjustable by the general transmission and distribution companies, and distribution companies online

(Increase of reserve capacity)

Article 170

When the general transmission and distribution companies, and distribution companies consider that the balancing capacity for deficiency will or might become insufficient even after taking measures specified in Article 169, they shall strive to increase the reserve capacity in their regional service areas by methods specified in the following items.

- i. Interruption of maintenance work of electric facilities accompanying with suppression of output of generation facilities
- ii. Preparation of operation which exceeds the rated output of the thermal power generators (limited to power generators for which the general transmission and distribution company or distribution company agreed with owners of the generators beforehand)
- iii. Other measures which can immediately increase supply capacity in regional service areas

(Demand of instructions from the Organization, which dissolve the tightness of the demand and supply balance)

Article 171

The general transmission and distribution companies may request instructions to the Organization after the submission deadline of the plan for the next day specified in Appendix 8-1 when it is necessary for dissolving the tightness of the demand and supply balance or the possibility of such tightness.

(Suppression or interruption of demand when the supply capacity is insufficient)

Article 172

1. If the general transmission and distribution companies, and distribution companies cannot dissolve the tightness of the demand and supply balance in their own regional service areas even after taking measures according to the preceding two articles, they can suppress or interrupt the demand. Provided, however, that in a case of inevitable emergency events, they can suppress or interrupt the demand without taking measures specified in the preceding two articles.
2. The general transmission and distribution companies, and distribution companies shall take the social influence into account and give consideration to the fairness between electric power companies and electricity customers when they take measures in Paragraph 1
3. When the general transmission and distribution companies, and distribution companies took the measures in Paragraph 1, they shall explain why they took the measure to the electric power companies and electricity customers subjected to such measures without delay.

*Section 4 Measures at the time of insufficient balancing capacity for redundancy*

(Utilization of balancing capacity for redundancy)

Article 173

When the supply in service areas seems to excess the demand due to malfunction of electric facilities, errors of forecast of demand or power generation, the general transmission and distribution companies, and distribution companies shall take measures specified in the following items.

- i. Measures specified in following a. to c. that are preliminary procured as balancing capacity by the general transmission and distribution company, and distribution company.
  - a. Suppression of output from the power generator
  - b. Pumping operation of pumped storage hydro power generators
  - c. Charged power storage device utilized for improvement of supply-demand condition
- ii. Measures specified in following a. to c. that are adjustable by the general transmission and distribution company, and distribution company online.
  - a. Suppression of output from the power generator
  - b. Pumping operation of pumped storage hydro power generators
  - c. Charged power storage device utilized for improvement of supply-demand condition

(Measures when balancing capacity for redundancy is insufficient)

Article 174

1. When the general transmission and distribution companies consider that oversupply in their regional service areas will not be dissolved and the balancing capacity for redundancy is insufficient or might become insufficient in regional service areas even after taking measures specified in Article 173 above, they shall take measures specified in the following items in an order specified in the same items.
  - i. Measures specified in following a. to c. that are not adjustable online by the general transmission and distribution company, and distribution company (except measures specified in Item iii, iv, v and vii)
    - a. Suppression of output of power generator of thermal generation facility (except generation facility of which output suppression is difficult or of which effect for dissolution of insufficient balancing capacity for redundancy is low, hereinafter, the same shall apply)
    - b. Pumping operation of pumped storage hydro power generators
    - c. Charged power storage device utilized for improvement of supply-demand condition
  - ii. Long-cycle cross-regional frequency control
  - iii. Suppression of output of biomass mono-fuel power generator (except for the regional resource biomass power generator specified in the following item, hereinafter the same shall apply)
  - iv. Suppression of output of power generators utilizing regional resource biomass power generator
  - v. Load-dispatch instructions for suppression of output of intermittent generation
  - vi. Measures based on instructions from the Organization defined in Article 111 of the Operational Rules
  - vii. Suppression of output of long-term cost recovery generation
2. The general transmission and distribution companies shall request or instruct distribution companies and relevant electric power suppliers according to necessity after considering the time necessary for the measures specified in each item of Paragraph 1.

(Preliminary consultation regarding output suppression or pumping operation)

#### Article 175

The general transmission and distribution companies, and distribution companies must agree in advance on costs and other conditions related to output suppression or pumping operation with contractors of generation related to generation facilities or persons who installed and owned such generation facilities (hereinafter, “contractors of generation” in this section) selected as subjects of requirement of measures to prevent insufficiency of balancing capacity for redundancy as specified in item i and ii, Paragraph 1 of the preceding Article.

(Output suppression upon emergency)

#### Article 176

When the emergent suppression of output is needed due to rapid decrease of demand, rapid increasing of river flow or others, the general transmission and distribution companies, and distribution companies may suppress output by load-dispatch instructions regardless of the order specified in Paragraph 1 of Article 174.

(Adjustment of the electric energy and the timing of electricity supply for long-cycle cross-regional frequency control)

Article 177

1. When the balancing capacity for redundancy of the next day is or might become insufficient in a general transmission and distribution company's regional service area, the general transmission and distribution companies may ask the Organization to adjust the electric energy and the timing of supply for the case specified in Item ii, Paragraph 1 of Article 174 after 12:00 of the previous day of the actual supply and demand day.
2. When the general transmission and distribution company ask as described in the preceding paragraph, it must notify the Organization about the electric energy and the timing of supply expected to be necessary.

(Procedures for long-cycle cross-regional frequency control on the current day of actual demand and supply)

Article 178

1. When the general transmission and distribution company which asked as described in Paragraph 1 of Article 177 received notice of the electric energy and the timing of supply for the long-cycle cross-regional frequency control provisional defined by the Organization based on Article 132 of the Operational Rules, the company review the necessity of such control based on the demand and supply balance on the date of actual demand and supply.
2. The general transmission and distribution company specified in the preceding paragraph shall define the necessity of long-cycle cross-regional frequency control specified in Paragraph 1 after gate closure, in principle, by considering the time necessary for output suppression specified in Item iii to v, Paragraph 1 of Article 174, and shall notify the Organization about the necessary electric energy and the timing of supply for the control, if the company judges such control is necessary.
3. The general transmission and distribution company which was received notice of the electric energy and the timing of supply for the long-cycle cross-regional frequency control finally defined by the Organization shall conduct such control based on the notice.

(Cooperation for the long-cycle cross-regional frequency control)

Article 179

When the general transmission and distribution company, and distribution company was asked by the Organization to calculate the electric energy and the timing of supply the company can offer for other general transmission and distribution companies whose ability to reduce power supply is or might become insufficient, the company must notify the Organization about the result of calculation by 16:00 of the previous day of the date of actual demand and supply in principle.

(Charges to be borne for long-cycle cross-regional frequency control)

Article 180

When the measures specified in Paragraph 1 of Article 174 were taken, charges to be borne by or to the relevant parties and other matters shall be defined through discussion among such



parties based on contracts of cross-regional network use or other agreements except cases of discussion among parties as specified in Article 175.

(Liquidation among general transmission and distribution companies after the long-cycle cross-regional frequency control)

Article 181

When the long-cycle cross-regional frequency control was conducted, charges to be borne by or to the relevant general transmission and distribution companies, and distribution companies, and other matters shall be defined through discussion among the parties based on electricity cost to compensate difference in plans subject to interconnection.

(Request of instructions to the Organization to dissolve the insufficient ability to reduce power supply)

Article 182

1. The general transmission and distribution companies may request instructions defined in Article 111 of the Operational Rules to the Organization when it is necessary to dissolve the insufficient ability to reduce power supply or such possibility in their regional service areas.
2. When the Organization was requested in Paragraph 1 above, it shall give instructions according to Paragraph 1 after the general transmission and distribution companies take measures specified in Items i to v, Paragraph 1 of Article 174, provided, however, that in an emergency where the resolution of the insufficiency of ability to reduce power supply is necessary, the Organization may give instructions without regard to the provisions of Article 174.

(Verification when the output of intermittent generation is suppressed)

Article 183

When the general transmission and distribution companies, and distribution companies suppress the output of intermittent generation defined in Item v, Paragraph 1 of Article 174, they shall immediately explain about the matters regarding Items i to iii, the matter regarding Item iv by the end of April of the following year to the Organization and submit supporting documents.

- i. Situation of demand and supply in regional service areas forecasted upon giving instructions of suppression of the output of intermittent generation
- ii. Specific contents of measures specified in Article 173 taken by the general transmission and distribution companies or distribution companies
- iii. Necessity of taking measures defined in Item v, Paragraph 1 of Article 174
- iv. Specific details of the suppression of output implemented for a whole year to take the measures defined in Item v, Paragraph 1 of Article 174 along with the pre-defined procedures

(Explanation when the suppression of output was requested to contractors of generation)

Article 184

1. When the general transmission and distribution companies, and distribution companies

must treat the electric power suppliers fairly upon selecting generation facilities subject to suppression of output specified in each item (except item ii and vi) of Paragraph 1 of Article 174.

2. When the general transmission and distribution companies, and distribution companies give load-dispatch instructions for suppression of output defined in Item i to v (except Item ii), Paragraph 1 of Article 174, they must give an explanation beforehand regarding the following matters to the contractors of generation who receive such instructions and consult with such contractors, provided, however, that in a case of emergency, giving explanation afterward is sufficient.
  - i. Forecast of the situation of demand and supply in regional service areas at the time when the load-dispatch instruction was given
  - ii. Specific contents of a load-dispatch instruction
  - iii. Necessity to give a load-dispatch instruction
3. The general transmission and distribution companies, and distribution companies shall give an explanation in writing mentioned in Paragraph 2 when the contractors of generation demand it.

(Report to the Organization when the suppression of output was requested to generation contractors)

#### Article 185

When the general transmission and distribution companies, and distribution companies gave load-dispatch instructions for suppression of output specified in Items i. to vi, Paragraph 1 of Article 174 to the generation contractors, those companies shall give explanation regarding the matters specified in each item of Paragraph 2 of Article 184 and submit supporting documents to the Organization immediately after giving such instructions.

### *Section 5 Voltage regulation*

(Voltage regulation)

#### Article 186

1. The general transmission and distribution companies, and distribution companies shall strive to maintain the voltage of electricity to serve (hereinafter, “voltage regulation”) within the range defined in Paragraph 1, Article 38 of the Ministerial Ordinance for Enforcement of the Electricity Business Act (Ordinance of the Ministry of Economy, Trade and Industry No. 77 of October 18, 1995, hereinafter, “Ordinance for Enforcement”) by methods specified in the following items.
  - i. Voltage regulation by power generators (including adjustment accompanied by operation or interruption of power generators)
  - ii. Voltage regulation by transformers
  - iii. Voltage regulation by reactive power compensation facilities
  - iv. Change of network configuration
  - v. Other methods to regulate voltage
2. Electric power suppliers except for the general transmission and distribution companies, and distribution companies shall regulate the voltage by power generators based on

agreements with the companies or load-dispatch instructions.

3. The general transmission and distribution companies, and distribution companies shall ask the electricity customers to open the capacitors for power factor improvement when it is necessary for regulating voltage.

(Setting up of operation target)

#### Article 187

The general transmission and distribution companies, and distribution companies shall define the operation target of voltage of the high-voltage or extra-high-voltage transmission networks to regulate the voltage properly by considering the following matters.

- i. The range within which power generators, transformers, reactive power compensation facilities or other devices which can regulate the voltage can be installed and the range within which the voltage regulation is possible
- ii. The range of voltage within which operations of generation facilities and electricity customers' facilities are possible
- iii. Stability of electric networks
- iv. Mitigation of transmission loss
- v. Other matters necessary to consider upon defining of operation target of voltage

(Voltage regulation in abnormal conditions)

#### Article 188

1. When even the voltage regulation defined in Paragraph 1 and 2 of Article 186 cannot maintain the proper voltage, and when the voltage collapse might happen, the general transmission and distribution companies, and distribution companies can suppress or interrupt the demand in regional service areas if it is necessary to regulate voltage in regional service areas.
2. When the general transmission and distribution companies, and distribution companies take measures according to Paragraph 1 above, they shall take the social influence into account and give consideration to the fairness between electric power companies and electricity customers.

### *Section 6 Load-dispatch instructions*

(Load-dispatch instructions)

#### Article 189

In the following cases, the general transmission and distribution companies, and distribution companies shall give instructions regarding operation (including manipulation or interruption, hereinafter, the same meaning shall apply) of electric facilities, interrupting maintenance work of electric facilities and other necessary matters (including automatic operation of calculators used for operation of electric facilities or automatic recovering devices, hereinafter "load-dispatch instructions"), to the electric power companies and electricity customers in regional service areas.

- i. Load-dispatch instructions in normal states: Instructions of operation of electric facilities accompanying with operation of electric networks, voltage regulation and maintenance work in normal states
- ii. Load-dispatch instructions in abnormal states: Instructions of operation of electric facilities and maintenance work of electric facilities specified in the following items
  - a. Adjusting output of generators of power producers and suppression or interruption of demand for securing stable electric networks, such as control of frequency and voltage or resolution of excessive TTC of transmission and distribution facilities
  - b. Instructions of interrupting maintenance work of electric facilities for securing of supply reliability level upon severe weather or disturbance of electric networks
  - c. Other instructions necessary for mitigation or prevention of or restoration from abnormality of electric networks when the abnormality occurs or might occur on electric networks

(Decision on matters necessary for issuing the load-dispatch instructions)

Article 190

The general transmission and distribution companies, distribution companies and receivers of load-dispatch instructions (hereinafter, “receivers of instructions”) shall execute a load-dispatch agreement or other agreements that define the contents of instructions, the range of electric facilities subject to the instructions, systems of issuing and receiving of the instructions and other matters necessary for issuing and receiving of the instructions prior to such issuing and receiving after consultation. Provided, however, relevant general transmission and distribution company, and distribution companies must be included among parties when it is necessary.

(Preparation of procedure manuals)

Article 191

1. The general transmission and distribution companies, distribution companies and receivers of instructions shall prepare procedure manuals to implement load-dispatch instructions each time they issue or receive the instructions after consultation, except for the following cases.
  - i. A case where safe and secure operation or manipulation of electric facilities are possible without relying on adjusting output of power generators or of voltage or procedure manuals
  - ii. A case where the load-dispatch instructions in abnormal states are issued and there are not enough time to prepare the procedure manuals
2. The general transmission and distribution companies, and distribution companies shall issue the load-dispatch instructions according to the procedure manuals and the receivers of instructions shall immediately manipulate or operate the electric facilities according to the procedure manuals.

(Operation of electric facilities based on the load-dispatch instructions)

Article 192

Receivers of instructions shall immediately and accurately respond to the load-dispatch

instructions, and shall not reject, modify, or postpone such instructions without due reasons. Provided, however, that in cases safety of workers, preservation of security of electric facilities, stable electricity supply and securing service quality of electricity might be affected, the receivers of instructions may request change or suspension of the instructions from the general transmission and distribution companies or distribution companies, and may express their proper opinions.

(Notice of reasons of load-dispatch instructions in abnormal states)

Article 193

1. When the general transmission and distribution companies, and distribution companies gave the load-dispatch instructions specified in Item ii, Paragraph 1 of Article 189, they shall notify the reasons and contents of such instructions to the receivers of such instructions.
2. In a case where the general transmission and distribution companies, and distribution companies gave the load-dispatch instructions specified in Item ii, Paragraph 1 of Article 189 directly to the owner companies of generation facilities, and when such instructions have effects on electric supply from such owner companies to other electric power companies, the general transmission and distribution companies shall give necessary explanation to such other electric power companies immediately after giving instructions.

(Operations of electric facilities not based on the load-dispatch instructions)

Article 194

In a case where safety of workers might be harmed significantly or where disturbance of electric facilities might happen or expand, receivers of instructions may operate electric facilities subject to the load-dispatch instructions not based on such instructions regardless of the decisions in Article 190.

## Chapter 11 Management of Cross-regional Interconnection Lines

(Concepts on calculation of total transfer capability)

Article 195

1. Total transfer capability (TTC) of interconnection lines shall be the capability with which the stable operation of electric networks is possible even when disturbance that can be normally expected happens.
2. TTC of interconnection lines shall be the lowest value of the power flow specified in the following items.
  - i. Thermal capacity: The maximum value of power flow of interconnection lines which is possible to make the power flow into the transmission and distribution facilities the same level as or the level below the thermal capacity or acceptable value on designs when the facilities work in sound or when the N-1 disturbance happened, provided, however, that the thermal capacity in this item shall mean the value of power flow which makes the temperature of transmission and distribution facilities the highest for continuous using of

such facilities when the electricity flow into such transmission and distribution facilities.

- ii. Synchronized stability: The value which withdraws the value of deviation of power flow accompanying with momentary fluctuation of demand from the maximum power flow of interconnection lines which is possible to keep the synchronized states among power generators and the stable operation of power generators, when disturbance of electric facilities which might affect transmission lines, bus lines at substations or switching stations or synchronized states among power generators happened up to the extent normally expectable
- iii. Voltage Stability: The value which withdraws the value of deviation of power flow accompanying with momentary fluctuation of demand from the maximum power flow of interconnection lines which is possible to keep the voltage stability of electric networks, when disturbance of electric facilities which might affect transmission lines, bus lines at substations or switching stations or voltage stability of electric networks happened up to the extent normally expectable
- iv. Frequency Control: The maximum power flow of interconnection lines which can keep the frequency of the electric networks stable when the interconnection lines were interrupted and the electric networks were isolated

(Calculation of TTC on short-term thermal capacity when the ability to reduce power supply is insufficient)

#### Article 196

When the insufficiency of ability to reduce power supply is expected in the specific general transmission and distribution company's regional service area, and when TTC is defined based on the thermal capacity of transmission and distribution facilities specified in Item i, Paragraph 2 of Article 195, the Organization may calculate the power flow based on the short-term thermal capacity only during the period when the insufficiency of such an ability is expected in spite of the proviso of the Item 1. Provided, however, that this will be applied only when there are generation facilities which can suppress output immediately and securely in the general transmission and distribution company's regional service area where the insufficiency of the ability is expected according to the load-dispatch instructions.

(Calculation unit of TTC)

#### Article 197

TTC of interconnection lines shall be calculated for every 30 minutes except for the following cases.

- i. A case of calculating total transfer capability in long-term, annual, monthly and weekly cross-section
- ii. A case where the market splitting is not expected to occur
- iii. A case where the TTC will be defined according to item i to iii of Paragraph 2 of Article 195

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(Use of the transmission margin when demand and supply balance is tight or an ability to reduce power supply is insufficient)

Article 208-2

When the demand and supply balance is or might become tight or the ability to reduce power supply is or might become insufficient in regional service areas, and the necessity of the use of the transmission margin in the interconnection lines is recognized or such utilization is requested from the Organization, general transmission and distribution companies of such service areas shall submit plans on the demand and supply of the service areas beforehand and explain the need for the use of such margin to the Organization.

(Utilization of interconnection lines in emergencies)

Article 208-3

1. When the general transmission and distribution companies recognized the need for the expansion of total transfer capability(TTC) or when such an expansion is required by the Organization in order to address the tight balance of demand and supply in their service areas or such possibility, the companies shall submit plans on the demand and supply in their service areas and information on the level, duration, and influence of such an expansion of TTC and explain the need for such an expansion to the Organization.
2. When the general transmission and distribution companies used the interconnection lines temporarily beyond TTC (or emergency TTC in the case where the expansion of TTC is conducted) in order to address the unforeseeable sudden incident or situation where the supply-demand situation is or might become tight regardless of the measures to increase supply, such Companies shall report such use and reasons to the Organization.

(Application for approval of generators or contracts)

Article 209

1. Owners of power generators or contracts may apply to the Organization for approval defined in the Article 144 of the Operational Rules.
2. Application mentioned in Paragraph 1 shall be conducted by submitting an application form specified by the Organization.

(Handling of approved power generators or contracts)

Article 209-2

1. Owners of the approved power generators or contracts specified in Item ii, Article 144-2 of the Operational Rules may not change the plans on power generation after two days later after publication of TTC for two days later. Provided, however, that the change may be allowed if such change has no effect on the day-ahead spot market. And in case such change has any effect on the day-ahead spot market, the following changes may be allowed in each of the following cases.
  - i. When it is difficult to generate power because of the failure of generation facilities (including extension of scheduled outage) or system failures: Change to reduce power generation
  - ii. When TTC increases beyond the amount increased by a plan on power generation: Change to increase
2. Owners of approved power generators or contracts are not required to suppress the output accompanied with congestion management, even after congestion management was implemented based on Article 143 of the Operational Rules for their approved power generators or contracts.

*Article 210 Deleted*

*Article 211 Deleted*

*Article 212 Deleted*

*Article 213 Deleted*

(Handling upon revision of approved contents)

Article 214

1. When there are changes in the approved contents, the owners of approved power generators or contracts must immediately apply for changes in such approved contents to the Organization, except for revisions that do not involve shortening the period of approval.
2. Notwithstanding the previous paragraph, the owners of approved power generators or contracts specified in Item ii, Article 144-2 of the Operational Rules must apply for such changes in the approved contents to the Organization before the end of two years before the year when the approved contents will be changed.
3. The owners of approved power generators or contracts shall apply as provided in the



preceding paragraphs by submitting an application form specified by the Organization.

(Submission of materials along with examination of power generators)

Article 215

The owners of power generators or contracts, or of approved power generators or contracts shall submit materials requested by the Organization for examination specified in Article 144 or 147 of the Operational Rules and shall explain operational situations of their power generators or contracts, or approved power generators or contracts to the Organization.

*Article 216 Deleted*

*Article 217 Deleted*

*Article 218 Deleted*

*Article 219 Deleted*

*Article 220 Deleted*

(Adjusting output of power generator upon emergency suppression)

Article 221

The general transmission and distribution companies in which their regional service areas are adjacent to interconnection lines on which the congestion occurred shall adjust the output of power generators which are controllable through on-line system of the general transmission and distribution companies according to necessity so as to let the counter power flow suppress the power flow on such interconnection lines to secure the stability of electric networks until the emergency suppression or congestion management based on Articles 143 through 143-5 of the Operational Rules are conducted.

*Article 222 Deleted*

*Article 223 Deleted*

*Article 224 Deleted*

*Article 225 Deleted*

*Article 226 Deleted*

*Article 227 Deleted*

*Article 228 Deleted*

## Chapter 12 Coordination of maintenance work plans

(Coordination of maintenance work plans by the general transmission and distribution companies)

### Article 229

1. The general transmission and distribution companies shall coordinate and compile the maintenance work plans on electric facilities for each type specified in Appendix 11-1 of the Operational Rules, except for maintenance work plans on electric facilities which the Organization will coordinate (hereinafter in this chapter, maintenance work plans which the general transmission and distribution companies will coordinate shall be called “maintenance work plans to be integrated”).
2. Electric power suppliers (including distribution companies, except for the general transmission and distribution companies, the same shall apply in this chapter) must cooperate in coordination and compiling of the maintenance work plans conducted by the general transmission and distribution companies so as to secure sharing of information on period of maintenance work or others, to prevent accidents and to perform maintenance works smoothly.

(Submission of drafts of maintenance work plans)

### Article 230

1. When persons who submit maintenance work plans interrupt the use of electric facilities to conduct maintenance work, such as inspection or repair of electric facilities specified in the following article (limited to electric facilities that the general transmission and distribution companies and electric power suppliers agreed to designate as subjects of coordination of maintenance work plans, hereinafter in this chapter, the same shall apply) or when the operation of electric facilities are constrained due to maintenance work, such as inspection or repair of electric facilities, those persons must submit drafts of maintenance work plans by the deadline defined in Appendix 12-1 in accordance with Appendix 12-2.
2. General transmission and distribution company shall receive the draft of maintenance work plan of electric facilities of which generation plan was received by the Organization from the person who submitted a generation plan based on Paragraph 2, Article 157 of the Operational Rules.
3. In a case where the size of network in a regional service area of general transmission and distribution company, is large or where the number of maintenance work plans is numerous, the general transmission and distribution companies may demand the maintenance work plan providers to submit maintenance work plans for the second half of the current fiscal year in addition to annual and monthly maintenance work plans, if necessary, to coordinate those maintenance work plans on electric facilities smoothly after gaining prior consents from maintenance work plan providers.
4. Maintenance work plan providers shall specify the following matters on maintenance work plans mentioned in preceding two paragraphs.
  - i. Scheduled times and dates of start and completion of work
  - ii. Contents of maintenance work on electric facilities

iii. Other matters necessary for coordination of maintenance work plans

Appendix 12-1: Deadline of maintenance work plans submission to the general transmission and distribution companies (\*1, \*2)

	Annual Plan (next fiscal year, the fiscal year after next)	Monthly plan (next month, the month after next)	Revised plan, Unplanned maintenance work
Draft	End of each October	First day of each month	As necessary (ASAP)
Coordinated	End of each December	10th day of each month	
Final	Middle of each February	Middle of each month	

\*1 As for maintenance work plans on electric facilities, the general transmission and distribution companies and persons who submitted maintenance work plans in service areas of general transmission and distribution company where such facilities are located may define the submission deadline separately after consulting with each other.

\*2 When the maintenance work plan is submitted to the general transmission and distribution company via the Organization, such a plan must be submitted to the Organization by the deadline defined separately by the Organization.

Appendix 12-2 Persons who submit maintenance work plans and destination to submit

Subject facilities	Persons who submit plans	Destination to submit
Transmission and distribution facilities	Persons who submitted maintenance work plans	General transmission and distribution companies in regional service areas where such facilities are located
Generation facilities	Persons who submitted generation plans	The Organization

(Electric facilities subject to maintenance work plans)

Article 231

Electric facilities subject to maintenance work plans shall be as follows.

- i. Power generators
- ii. Bus lines, main transformers, switching devices, current transformers for metering, voltage transformers for metering, lightning arresters and reactive power compensation facilities
- iii. Power lines
- iv. Network protection relays, equipment protection relays and neutral grounding devices
- v. Communication facilities which transmit information necessary for monitoring, control or protection of electric networks
- vi. Other facilities affecting operation of electric networks

(Submission of maintenance work plans to the Organization)

Article 232

When the general transmission and distribution companies received drafts of maintenance work plans according to Paragraph 1 or 2 of Article 230, they shall submit the maintenance work plans of cross-regional network interconnection (including maintenance work plans of such general transmission and distribution companies) to the Organization immediately.

(Coordination of drafts of maintenance work plans to be integrated)

Article 233

1. The general transmission and distribution companies shall hear opinions about drafts of maintenance work plans to be integrated from persons who submitted the maintenance work plans subject to coordinate, persons who submitted generation plan and whose generation plans will be affected by such maintenance work plans to be integrated and other relevant electric power suppliers (hereinafter, “relevant electric power suppliers”), and shall coordinate times and periods of maintenance work, and ask for a review of drafts of such maintenance work plans to be integrated, if necessary
2. The general transmission and distribution companies may coordinate the drafts of maintenance work plans before submission of those drafts based on Paragraph 3 of Article 230, if necessary.

(Submission and compiling of coordinated proposal for maintenance work plans to be integrated)

Article 234

1. Persons who submitted maintenance work plans shall submit the coordinated proposal for maintenance work plans that was coordinated from the draft by the deadlines defined in Appendix 12-1 based on the coordination in Paragraph 1, Article 158 of the Operational Rules and Article 233 above according to Paragraph 1 of Article 230.
2. General transmission and distribution companies shall receive coordinated proposal for maintenance work plans of electric facilities of which generation plan was received by the Organization according to Paragraph 2 of Article 230.
3. When the general transmission and distribution companies received the coordinated proposal for maintenance work plans in each preceding items, they shall submit maintenance work plans of cross-regional network interconnection to the Organization according to Article 232.

(Coordination of maintenance work plans to be integrated)

Article 235

The general transmission and distribution companies shall hear opinions on coordination proposal for maintenance work plans to be integrated from the relevant electric power suppliers based on matters to consider defined in Article 215 and coordinate the time and period of maintenance work, if necessary, and ask for a review of the coordination proposal for maintenance work plans to be integrated.

(Submission and acceptance of final proposals of maintenance work plans to be integrated)

Article 236

1. Persons who submitted maintenance work plans shall submit final proposals of maintenance work plans that have gone through final coordination in light of the coordination proposals by deadline defined in Appendix 12-1 based on coordination in Paragraph 2, Article 160 of the Operational Rules and Article 235 above according to Paragraph 1 of Article 230.
2. General transmission and distribution companies shall receive final proposals of maintenance work plans of electric facilities of which generation plans are received by the Organization from persons who submitted generation plans according to Paragraph 2 of Article 230.
3. When the general transmission and distribution companies received the final proposals of maintenance work plans in preceding paragraph, the companies shall submit maintenance work plans of cross-regional network interconnection to the Organization according to Article 232.
4. When the general transmission and distribution companies received the final proposals of maintenance work plans to be integrated according to Paragraph 1 and 2, they shall accept the proposals.

(Provision of information regarding accepted maintenance work plans)

Article 237

1. General transmission and distribution companies shall receive from the Organization maintenance work plans of cross-regional network interconnection accepted by the Organization according to Paragraph 1, Article 162 of the Operational Rules.
2. The general transmission and distribution companies must notify the persons who submitted maintenance work plans about the maintenance work plans accepted by the Organization or the companies and must share necessary information with them.

(Apply for re-coordination of coordinated proposals of cross-regional maintenance work plans)

Article 238

Persons who submitted generation plans and whose generation plans are affected by the maintenance work plans of the cross-regional interconnection lines may apply for re-coordination of the maintenance work plans to the Organization as for coordinated proposals of maintenance work plans of cross-regional network shared according to Paragraph 3, Article 159 of the Operational Rules.

(Handling when coordination of maintenance work plans is difficult)

Article 239

When it is difficult to integrate the coordinated maintenance work plans of cross-regional network interconnection (except maintenance work plans subject to cross-regional coordination) with the relevant electric power suppliers, the general transmission and

distribution companies may ask the Organization to solve the difficulty.

(Omission of submitting maintenance work plans)

Article 240

1. Persons who submitted maintenance work plans may omit the submission of drafts, coordination proposals and final proposals of the maintenance work plans, in the following cases.
  - i. In cases where there are no changes in the draft of annual plan for the next year from the annual plan for the year after the next which was confirmed in the previous year
  - ii. In cases where there are no changes in the draft of monthly plan from the yearly plan
  - iii. In cases where there are no changes in coordination proposal from the draft
  - iv. In cases where there are no changes in final proposals from the coordination proposal
2. When the persons who submit maintenance work plans omitted the submission of maintenance work plans according to Paragraph 1, the general transmission and distribution companies shall coordinate such maintenance work plans subject to coordinate of such persons as there are no changes in such plans.

(Change and addition of maintenance work plans)

Article 241

1. When the persons who submitted maintenance work plans change (including cancelation, hereinafter, the same shall apply) or add (including unscheduled maintenance works, hereinafter, the same shall apply) the annual plans or monthly plans of maintenance work plans after acceptance of such plans due to inevitable reasons such as changes in supply and demand states or network conditions or unplanned outage of facilities, they shall submit the changed maintenance work plans with reasons of such changes to the general transmission and distribution companies (hereinafter “revised maintenance work plans”) according to Paragraph 1 of Article 230.
2. When the persons who submitted maintenance work plans need to change or add drafts, coordination proposals or final proposals of maintenance work plans finally submitted by them, they shall immediately submit the revised maintenance work plans with reasons of such changes or additions to the general transmission and distribution companies even during the period from submission of the draft of maintenance work plans subject to coordinate to acceptance of the final proposal in accordance with Paragraph 1 of Article 230.
3. When the general transmission and distribution companies received the revised maintenance work plans of cross-regional network interconnection in each preceding paragraphs, the companies shall submit the plans to the Organization according to Article 232.
4. When the general transmission and distribution companies received the revised maintenance work plans to be integrated, they shall coordinate such plans according to Article 233 and ask for review of such plans, if necessary.
5. The general transmission and distribution companies shall accept the revised maintenance work plans to be integrated according to Paragraph 4 of Article 236 after coordination specified in Paragraph 4 above.

(Omission of coordinating the revised maintenance work plans in an emergency case)

Article 242

1. General transmission and distribution companies and electric power suppliers may interrupt the use of relevant electric facilities immediately without procedures for coordination of maintenance work plans specified in Article 157 to 166 of the Operational rules and Article 230 to 241 of these Codes, if an emergent interruption is necessary for protecting safety of persons or preservation of facilities.
2. In an emergency case where the electric facilities were stopped according to Paragraph 1, and when such interruption of the electric facilities will continue, persons who submitted maintenance work plans shall immediately submit the revised maintenance work plans to be integrated to the general transmission and distribution companies according to Paragraph 1 of Article 230.
3. When general transmission and distribution companies received the revised maintenance work plans of cross-regional network interconnection in Paragraph 2 above, the companies shall submit the plans according to Article 232 to the Organization.

(Procedures for conduct of maintenance work)

Article 243

1. The general transmission and distribution companies, distribution companies and electric power suppliers, who conduct maintenance work, must cooperate with each other in operation of electric facilities accompanying with maintenance work so as to prevent work-related accidents or disturbance of supply according to Article 191.
2. When the electric power suppliers who conduct maintenance work with general transmission and distribution companies, or distribution companies, will conduct maintenance work, they shall confirm the time of starting and ending of maintenance work with each other.
3. When the general transmission and distribution companies or distribution companies interrupt maintenance work, postpone the start of work, or extend the work period, they shall confirm the contents and reasons of such interruption, postponement, or extension with the electric power suppliers, who conduct maintenance work.
4. The general transmission and distribution companies shall report the situation of suspension and operation of electric facilities, when the maintenance work is conducted based on the maintenance work plan of cross-regional network.

(Matters to consider upon coordination of maintenance work plans)

Article 244

1. The Organization or the general transmission and distribution companies shall coordinate the maintenance work plans on electric facilities by considering the following matters (except item xi as for coordination by general transmission and distribution companies). The Organization and general transmission and distribution companies shall regard and give priority to the matters specified in Items i to vi.
  - i. Securing of public safety
  - ii. Securing of safety of workers
  - iii. Preservation of electric facilities

- iv. Supply reliability level during maintenance work
  - v. Balancing capacity during maintenance work
  - vi. Supply capacity in regional service areas of the general transmission and distribution companies during maintenance work
  - vii. Business plans of electricity customers during maintenance work accompanied by suppression or interruption of demand
  - viii. Avoiding suppression or interruption of generation and market splitting
  - ix. Shortening maintenance work period and optimization of the work
  - x. Securing of fairness among electric power suppliers
  - xi. Avoiding simultaneous interruption of multiple interconnection lines
2. When the Organization or the general transmission and distribution companies coordinate the maintenance work plans, and when they need to control power flow into transmission and distribution facilities (except interconnection lines) by increase or suppression of output from the power generators, they must select the power generators that will be subject to such increase or suppression of output by considering the effect of power flow control and the fairness among persons who submit generation plans.



## Chapter 13 Network Information Disclosure

(Network information disclosure)

### Article 245

1. The general transmission and distribution companies, the transmission companies, and distribution companies shall disclose information contributing to utilization of electric networks based on Guidelines on network information disclosure.
  - i. Deleted*
  - ii. Deleted*
2. Regarding contents of information of the Organization according to Paragraph 2 of Article 168 of Operational Rule, such contents subject to be disclosed by general transmission and distribution companies, transmission companies, and distribution companies shall be disclosed by the corresponding companies.
3. Electric power companies must provide the Organization with information necessary for publication of network information by the Organization based on Guidelines on network information disclosure without delay.

*Article 246 Deleted*

*Appendix 13-1: Deleted*

*Appendix 13-2: Deleted*

## Chapter 14 Supplier Switching Support

(Supplier Switching Support System)

### Article 247

1. Business that can be performed through Supplier Switching Support System shall be the business specified in the following items (hereinafter “switching support business”) that are related to customers of low-voltage and high-voltage electricity and persons who install generation facilities and who possess low-voltage FIT generators (power generators that are connected to low-voltage transmission network among FIT generators, hereinafter, the same meaning shall apply), as well as low-voltage FIT expired generators (power generators that have expired specified contract prescribed in Paragraph 5 of Article 2 of the FIP Act, and that are interconnected to low-voltage transmission network among power generation facilities of which such a specified contract is terminated, hereinafter, the same meaning shall apply). As for inquiry of information of the consumption of electricity specified in item iii, business related to users of 500 kW and more of contracted high-voltage and extra-high-voltage electricity is included as well.
  - i. Customer location number retrieval (except regarding customers of high-voltage electricity)
  - ii. Supplier facility information enquiry (except regarding customers of high-voltage electricity)
  - iii. Customer consumption data enquiry (except regarding low-voltage FIT generators and FIT expired generators)
  - iv. Business related to transferring such as cross-regional transmission (except restorations and contracted current changes of high-voltage electricity customers or low-voltage FIT generators, switching of transmission network use contract of low-voltage FIT generators, and contracted current change of low-voltage FIT expired generators as well as regarding imbalance adjustment supply contract for demand reduction)
  - v. One-stop service of supplier switching (except regarding low-voltage FIT generators)
  - vi. Transaction status enquiry
  - vii. Retail company information enquiry
2. In this Chapter, customers are segmented as follows unless otherwise specified.
  - i. Customers of low-voltage electricity: Customers receive 100 V or 200 V of electricity as standard voltage
  - ii. Customers of high-voltage electricity: Customers whose contracted electricity is less than 500 kW among customers receiving 6000 V as standard voltage
  - iii. Customers of extra-high-voltage electricity: Customers who receive 20,000 V or more electricity as standard voltage
3. Provisions in this Chapter shall be applied when the retail companies, the general transmission and distribution companies, distribution companies, and contractors of demand reduction conduct supplier switching support business.

(Development of collaboration system by general transmission and distribution companies)

### Article 248

## Network Codes (2022)

The general transmission and distribution companies, and distribution companies must develop and operate system necessary for business subject to supplier switching support by coordinating with the Supplier Switching Support System.

(Compliance of system utilizing rules)

### Article 249

Retail companies and contractors of demand reduction who utilize the Supplier Switching Support System must comply with system utilizing rules provided by the Organization.

(Customer location number retrieval)

### Article 250

1. Retail companies may ask general transmission and distribution companies or distribution companies to provide customer location number through the Supplier Switching Support System when it is necessary for concluding retail supply contracts.
2. Contractors of demand reduction may ask general transmission and distribution companies or distribution companies to provide customer location numbers through the Supplier Switching Support System when it is necessary for concluding specified wholesale supply contracts.

(Supplier facility information enquiry)

### Article 251

1. Retail companies may ask general transmission and distribution companies or distribution companies to provide customer location number through the Supplier Switching Support System when it is necessary for concluding retail supply contracts. Information regarding low-voltage FIT power generators and low-voltage FIT expired generators that can be asked to provide is limited to information on address and date of metering.
2. Contractors of demand reduction may ask general transmission and distribution companies or distribution companies to provide customer location numbers through the Supplier Switching Support System when it is necessary for concluding specified wholesale supply contracts. Information regarding low-voltage FIT generators and low-voltage FIT expired generators that can be asked to provide is limited to information on address and date of metering.

(Customer consumption data enquiry)

### Article 252

1. Retail companies may ask general transmission and distribution companies or distribution companies to provide information on the customer consumption through the Supplier Switching Support System when it is necessary for concluding retail supply contracts only after being commissioned by customers.
2. Contractors of demand reduction may ask general transmission and distribution companies or distribution companies to provide information on the consumption through

the Supplier Switching Support System when it is necessary for concluding specified wholesale supply contracts only after being commissioned by customers.

3. When the retail companies and contractors of demand reduction were commissioned inquiry of information on the customer consumption, the companies and contractors must confirm the person who commissioned is the customer itself based on official certificates, and shall deliver a copy of the certificate to the general transmission and distribution company or distribution companies.
4. The general transmission and distribution companies, and distribution companies shall provide information on the customer consumption by the customer who commissioned inquiry after confirming that the retail companies and contractors of demand reduction were commissioned by the customer based on the official certificates.
5. The general transmission and distribution companies, and distribution companies shall provide information on consumption to customer who made an inquiry through a retail company or a contractor of demand reduction when the customers asked the general transmission and distribution company to provide information on consumption.

(Business related transferring such as cross-regional transmission)

#### Article 253

Business related transferring such as cross-regional transmission shall be as follows.

- i. Switching of contracts of cross-regional transmission
- ii. Commencement of the service or electric generation along with relocation of customers or persons who installed generation facilities (hereinafter, “restoration of service”)
- iii. Interruption of the service or electric generation along with relocation of electricity customers or persons who installed generation facilities (hereinafter, “abolishment”)
- iv. Change of contracted electric current (hereinafter, “contracted current change”)
- v. Change of information of customers and persons who installed generation facilities

(Switching of contract of cross-regional transmission)

#### Article 254

1. When a customer is receiving retail service from other retail company (hereinafter, “current contract supply service company”), and when the retail company concludes a new contract specifying retail service (hereinafter, “retail service contract”) with such a customer, the retail company shall immediately apply to the general transmission and distribution company or distribution company for switching of a contract of cross-regional transmission (hereinafter, “supplier switching commencement”) through the Supplier Switching Support System (hereinafter, such retail company is called “upcoming contract supply service company”).
2. When a customer concluded a retail service contract with the upcoming contract supply service company, and when the current contract supply service company agreed on termination of a retail service contract with such a customer, the current contract supply service company shall apply for the acceptance of such switching of a contract of cross-regional transmission through the Supplier Switching Support System (hereinafter, “supplier switching abolishment”) immediately after such agreement.

3. General transmission and distribution company, and distribution company shall switch the contract of cross-regional transmission through the Switching Support System on the date when the upcoming contract supply service company and the current contract supply service company request switching (hereinafter, “switching date”) after the date of receiving of the application for the commencement or abolishment through switching (hereinafter, “matching date”). Switching date must be after the date specified in the following items.
  - i. When the installation of smart meter is not completed: 8th business day plus two calendar days from the matching date
  - ii. When the installation of smart meter is completed: 1st business day plus two calendar days from the matching date

(Application for restoration of service)

Article 255

1. When the retail company concluded a service supply contract with a customer, and when retail supply is not currently conducted on the supply location, the company shall immediately apply to the general transmission and distribution company or distribution company for cross-regional transmission (hereinafter, “application for restoration of service”) from the starting date of retail supply (hereinafter, “date of restoration”) through the Supplier Switching Support System.
2. When a customer has started using electricity before closing of a contract of retail supply, the retail company may set the date of restoration as the starting date of the use of electricity by the customer based on a request from a customer, provided, however, that in a case where the starting date of the use of electricity by the customer is dating back to more than 31 days from the date of the application for restoration, the retail company may not use the Supplier Switching Support System.
3. In a case of proviso of the preceding paragraph 2, the retail company shall individually consult with general transmission and distribution company or distribution company about the application for restoration.

(Application for abolishment)

Article 256

When the retail company agreed on termination of a retail supply contract with a customer (except when the customer concluded a retail supply contract with the upcoming contract supply service company), the company shall apply for interruption of cross-regional transmission from the date of interruption of retail supply (hereinafter, “abolishment date”) through the Switching Support System (hereinafter, “application for abolishment”) immediately after such an agreement.

(Contracted current change)

Article 257

1. When the retail company received an application for contracted current from a customer, the company must notify the general transmission and distribution company or

distribution company about such application and condition after the change through the Supplier Switching Support System.

2. The general transmission and distribution company, and distribution company shall change contracted current after receiving notice in Paragraph 1 above. In such a case, the general transmission and distribution company, and distribution company shall reflect the result of change on information of facilities, and make such information available to the retail company through the Supplier Switching Support System.

(Change of information on customers)

Article 258

1. When there are changes in information on customers, the retail company must immediately notify the general transmission and distribution company or distribution company about such changes and condition after the change through the Supplier Switching Support System.
2. General transmission and distribution company, and distribution company shall reflect the changes in information on customers received from the retail company, and make such information available to the retail company through the Supplier Switching Support System.

(Resolution of unmatched at the same supply location)

Article 259

1. In cases specified in the following each case (hereinafter, “case of unmatched”), the general transmission and distribution, and distribution company shall strive to resolute unmatched case after consulting with the retail company.
  - i. In cases where abolishment is not applied within a reasonable period regardless of the fact that the restoration of service is applied for a contracted supply location
  - ii. In cases where dates of restoration and abolishment are the same day, and the requested time of restoration is earlier than such a day
  - iii. In cases where it is clear that electricity consumed on the supply location where the abolishment was applied, and the restoration was applied from a date different from the commencement date of the customer
2. When the retail company recognized unmatched case, the company shall consult and cooperate with the general transmission and distribution company or distribution company in resolution of unmatched case.

(One-stop Service of Supplier Switching)

Article 260

1. Upcoming contract supply service company may intermediate termination of a retail supply contract between a customer and the current contract supply service company (hereinafter, “current retail service contract”) for the current contract supply service company when the company was commissioned by the customer, through the Supplier Switching Support System (hereinafter, “one-stop service of supplier switching”).

2. Upcoming contract supply service company shall provide information necessary for confirmation of customers to the current contract supply service company regarding the following matters for one-stop service of supplier switching.
  - i. Contract number related to the current retail service contract
  - ii. Contract name related to the current retail service contract
  - iii. Address of customer
3. Current contract supply service company must confirm existence of the application for one-stop service of supplier switching from the upcoming contract supply service company more than once per one hour by utilizing Supplier Switching Support System during business hours on weekdays, except when there are inevitable reasons such as system troubles.
4. When the contents of information specified in each item of Paragraph 2 that are received from upcoming contract supply service company are matched with contents of information possessed by current contract supply service company, the current contract supply service company must immediately notice an acceptance of switching abolishment through the Supplier Switching Support System, except when there are special circumstances under which the application of one-stop service of supplier switching from the upcoming contract supply service company does not seemed to be based on the will of the customer itself.
5. When the current contract supply service company notice the rejection of one-stop service of supplier switching, the company must explain reasons of such rejection according to a request from the upcoming contract supply service company.
6. Upcoming contract supply service company shall properly store information obtained upon one-stop service of supplier switching for at least three months from the date of application of such intermediation according to measures of application specified in the following items.
  - i. Application in writing: Application form shall be stored on papers or electric data
  - ii. Application by phone: Audio data or reception note shall be stored on papers or electric data
  - iii. Application on internet: System entry data such as Web application form

(Accountability on being commissioned one-stop service of supplier switching)

#### Article 261

When the upcoming contract supply service company is commissioned one-stop service of supplier switching by a customer, the company must explain the following matters to the customer.

- i. When the upcoming contract supply service company was commissioned by a customer, the company will intermediate one-stop service of supplier switching for the current contract supply service company on behalf of the customer.
- ii. When the current contract supply service company accepted the one-stop service of supplier switching by the upcoming contract supply service company, the current supply service contract will be terminated.
- iii. When the current supply service contract was terminated, disadvantage such as penalty might incur.

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- iv. When switching is canceled for customer's convenience, the customer must request such cancellation toward the upcoming contract supply service company before the request date of switching.

### (Inquiry of business handling situation)

#### Article 262

Retail companies and contractors of demand reduction may inquire through the Supplier Switching Support System about the transaction status of business related to cross-regional transmission conducted by such retail company through the Supplier Switching Support System.

### (Inquiry of information on retail company)

#### Article 263

Retail company may inquire company codes, names, address and other information of retail companies registered in the Organization.

### (Utilization of Supplier Switching Support System)

#### Article 264

1. When the Supplier Switching Support System is available, retail company must conduct business subject to the switching support by utilizing the system.
2. When the retail company does not use the Supplier Switching Support System in a case specified in the preceding paragraph, general transmission and distribution company, and distribution company does not need to handle the application for business subject to the switching support.

### (Prohibition from the use other than for intended purpose)

#### Article 265

Retail companies and contractors of demand reduction may not use information obtained through the Supplier Switching Support System for purposes other than purposes for obtaining.

### (Business subject to Switching Support related to low-voltage FIT generators and low-voltage FIT expired generators)

#### Article 266

1. When business subject to supplier switching support related to low-voltage FIT generators and low-voltage FIT expired generators is conducted, provisions of this Chapter shall be applied by replacing the terms “customer location number”, “supply location”, “customers”, “supply service” and “supply service contract” with the terms “receiving location number”, “receiving location”, “persons who installed generation facilities”, “specific supply” and “specific contract” “specified contract defined by the provisions Paragraph 5 of Article 2 of FIP Act”, respectively.



2. Regardless of the preceding paragraph, when the business subject to switching support related to low-voltage FIT generators is conducted, Articles 247, 252 to 255, 257, and 259 to 261 will not be applied. When the business subject to switching support related to low-voltage FIT expired generators, Articles 247, 252, 253, and Paragraphs 2 and 3 of Article 255, and Article 257 will not be applied.
3. Regardless of Paragraph 1 above, when the low-voltage FIT generators that has executed a specified contract defined by the provisions Paragraph 5 of Article 2 of FIP Act with the general transmission and distribution companies or distribution companies conduct the business subject to switching support accompanying with expiration of FIT procurement period, Articles 247 and 252 to 262 will not be applied.

## Chapter 15 Emergency Response to Disasters and Review of Disaster Cooperation Plan

### *Section 1 Emergency Response to Disasters*

(Emergency response)

#### Article 267

1. In emergency cases, such as major disasters, electric power companies cooperate with the Organization and other electric power suppliers in responding to major disasters based on the operational plan for disaster prevention established by the Organization.
2. Electric power companies received an ordinance of preparation for emergency from the Organization based on the operational plan for disaster prevention established by the Organization, those companies must cooperate in restoration works and others by collaborating with the Organization and Electric Power Suppliers.
3. Electric power companies must always conduct business specified in the following items for emergency such as major disasters based on the operational plan for disaster prevention established by the Organization.
  - i. They must submit information regarding disaster prevention to the Organization every year.
  - ii. They must participate in disaster drills according to requests from the Organization.
4. Electric power suppliers that are not electric power companies shall strive to respond according to the preceding each paragraph with regard to disaster prevention operation.

### *Section 2 Review of Disaster Cooperation Plan*

(Submitting a disaster coordination plan)

#### Article 267-2

A member constituting a general transmission and distribution company must submit a disaster coordination plan to the Organization as stipulated in an Ordinance of the Ministry of Economy, Trade and Industry.

(Changing a disaster coordination plan)

#### Article 267-3

A member constituting a general transmission and distribution company must submit any changes in a disaster coordination plan to the Organization without delay.

(Matters to be taken into account when checking a disaster coordination plan)

#### Article 267-4

Matters to be taken into account when conducting a review as provided for in paragraph 2 of Article 176-4 of the Operational Rules shall be set forth at a meeting of the Board of Directors of the Organization upon taking into account the policy of the government and the results of

discussions undertaken by the Board of Directors and published accordingly.

(Cooperating with the Organization in connection with the reviewing of a disaster coordination plan)

Article 267-5

A member constituting a general transmission and distribution company must promptly respond to any request to explain the basis of and thinking concerning a submitted disaster coordination plan in accordance with paragraph 1 of Article 176-4 of the Operational Rules.

### *Section 3 Mutual Assistance of Disaster Recovery Funds*

(Application of granting disaster assistance subsidies)

Article 267-6

A general transmission and distribution company, transmission company, and distribution company may apply granting of disaster assistance subsidies.

## Chapter 16 Submission of Information for Electricity Supply-demand

(Submission of information on electricity demand and supply to the Organization)

### Article 268

1. The general transmission and distribution companies, and distribution companies must report to the Organization about the actual performance of the following matters of the previous fiscal year by the end of August of each year so that the Organization can prepare the written report mentioned in Article 181 of Network Codes.
  - i. Performance on frequency: Actual ratio of period when the frequency was kept within the range from the standard frequency to the value specified below in their own service areas (except for actual data regarding frequency in isolated islands, etc.)
    - a. Within 0.1 Hz
    - b. Within 0.2 Hz
    - c. Within 0.3 Hz
    - d. Beyond 0.3 Hz
  - ii. Performance on voltage: The number of location where the voltage was measured based on Article 45 of the Enforcement Regulations of the Act and the number of locations deviated from the value specified in Appendix 16-1 as the value should be kept in their own service areas and the ratio of deviation
  - iii. Actual power outage: Information on the number of supply disturbance accident and customers' statistics of power outage of each part where accidents happened that was prepared based on the Regulations on Report Regarding Electricity (Ordinance of the Ministry of Economy, Trade and Industry No. 54 of Jun 15, 1965, hereinafter "Regulations on Report Regarding Electricity")
  - iv. Other matters the Organization considers it is necessary to confirm continuously for improvement of electricity demand and supply
2. The general transmission and distribution companies and the distribution companies must submit the measured results of frequency and voltage recorded and kept based on Paragraph 3 of Article 26 of the Act and Paragraph 3 of Article 26 applied mutatis mutandis pursuant to Article 27-12-13, as well as Article 39 of the Ministerial Ordinance for Enforcement of the Electricity Business Act and the information on supply disturbance accidents reported to the government based on Article 3 of the Regulations on Report Regarding Electricity and other information that the Organization needs for evaluation and analysis specified in Paragraph 1 according to requests from the Organization.

Appendix 16-1: Value of voltage that should be kept

Nominal voltage	Acceptable deviation
100 volts	Values not less than 95 volt and not over 107 volts
200 volts	Values not less than 182 volt and not over 222 volts

## Chapter 17 Miscellaneous

(Application for company code, etc.)

### Article 269

1. Contractors of cross-regional interconnection network use and of generation and other electric power suppliers must apply to the Organization for issuing of numbers (codes) used on the system specified in the following items so as to submit demand and its procurement plans, generation and its sales plans, and electricity supply plans to the Organization through the cross-regional network system.
  - i. Company codes: Numbers identifying company names
  - ii. Power station Codes: Numbers identifying location of power stations
  - iii. Balancing Group (BG) Codes: Numbers identifying BG
  - iv. Plan submitter codes: Numbers identifying companies who submit various plans such as Generation and its Sales plans
  - v. Generation and its Sales plan codes: Numbers identifying basic information of generation and its sales plans
  - vi. Demand and its procurement plan codes: Numbers identifying basic information of demand and its procurement plans
  - vii. Demand reduction plan codes: Numbers identifying basic information of demand reduction plans, etc.
  - viii. Specified transmission network use Code: Numbers identifying basic information necessary for clearing for specified transmission network use
2. Eligible market participants must apply for issuance of the codes specified in the respective item of the preceding paragraph to the Organization, when it is necessary to apply for registration of their basic information on the capacity market system (except for eligible market participants who have been issued the codes through an application in the preceding paragraph).
3. When the Organization received application in the preceding paragraphs, it shall issue codes for applied company and notify the general transmission and distribution company, and distribution company of contents of application.

(Measures for information security)

### Article 270

Electric power companies and contractors of demand reduction shall take measures for protecting personal information related to the use of supplier switching support system and other measures for information security, and handle the provision of information from the Organization, and review the measures from time to time.

*Article 271 Deleted*

## Supplementary Provisions

(Enforcement date)

### Article 1

These Codes shall become effective from the date of approval from the Minister of Economy, Trade and Industry.

(Handling of application for the start of solicitation process for generator interconnection to the vertically integrated power companies by applicants for interconnection of power generators who received a response regarding system impact study by FY 2014)

### Article 2

Applicants for interconnection of power generators who received a response regarding system impact study by FY 2014 may apply for the solicitation process for generator interconnection to the vertically integrated power companies according to Article 76, if the construction work for network interconnection specified on such a response of system impact study does not include the reinforcement work for the cross-regional interconnection networks and the size of construction work for network interconnection subject to the allocated construction cost is bigger than the size defined in Article 111.

(Submission of the drafts of electricity supply plan and the electricity supply plans of FY 2015 to the Organization)

### Article 3

1. When specified electric power companies and power producers and suppliers submit the drafts of electricity supply plan of FY 2015 to the Organization according to Article 23 of the Operational Rules and Article 4 of the Supplementary Provisions of the Operational Rules, they shall submit them as electronic data in the form defined by the Organization and published on the website of the Organization.
2. The drafts of electricity supply plan to be submitted to the Organization by the specified electric power companies and the power producers and suppliers according to Paragraph 1 and electricity supply plans which must be submitted to the Minister of Economy, Trade and Industry shall be submitted to the Organization by the deadlines specified below.
  - i. The draft of electricity supply plan: April 15, 2015
  - ii. Electricity supply plan: April 24, 2015

### *Article 4 Deleted*

(Succession of company code and power station code)

### Article 5

Company codes and power station codes gained by the cross-regional interconnection network user companies before the foundation day of the Organization shall remain effective after the foundation of the Organization.

## Network Codes (2022)

### Supplementary Provisions (as of August 31, 2015)

(Enforcement date)

These Codes shall become effective from the date of approval from the Minister of Economy, Trade and Industry.

### Supplementary Provisions (as of April 1, 2016)

(Enforcement date)

#### Article 1

These Codes shall become effective from April 1, 2016 or the date of approval from the Minister of Economy, Trade and Industry, whichever comes later.

(Submission of the draft of the electricity supply plan to the Organization and the electricity supply plan of FY 2016)

#### Article 2

Regardless of provisions of Article 9-2 and 9-3, submission deadlines of the draft of the electricity supply plan and the electricity supply plan of FY 2016 shall be as follows.

- i. Companies who become transmission companies, specified transmission and distribution companies, retail companies (including registered specified transmission, distribution and retail companies) and generation companies along with enforcement of the Act on the Partial Revision of the Electricity Business Act (Act No. 72, Jun 18, 2014).
  - a. Draft of the electricity supply plan: April 13, 2016
  - b. Electricity supply plan: April 27, 2016
- ii. Companies who become general transmission and distribution companies along with enforcement of the Act on the Partial Revision of the Electricity Business Act (Act No. 72, Jun 18, 2014).
  - a. Draft of the electricity supply plan: May 16, 2016
  - b. Electricity supply plan: May 30, 2016

(Transitional measures of the use of Supplier Switching Support System subject to customers of high-voltage electricity)

#### Article 3

1. Regardless of provisions of Article 264, the retail companies may conduct business subject to the Supplier Switching Support System subject to customers of high-voltage electricity for six months from the date of enforcement of the Act on the Partial Revision of the Electricity Business Act (Act No. 72, Jun 18, 2014) according to measures of application specified by the general transmission and distribution companies.
2. Regardless of provisions of Paragraph 2 of Article 264, during a period specified in Paragraph 1, the general transmission and distribution companies need to handle the application for the business subject to the Supplier Switching Support System from retail companies.

(Special measures related to actual demand and supply balancing system)

#### Article 4

1. Regardless of provisions of Article 138, contractors of actual demand and supply balancing systems must prepare demand and supply plans and generation plans for each service area of general transmission and distribution company as specified in Appendix 1 and 2, and submit to the Organization.
2. Demand forecast based on rational forecast and a plan for securing of supply capacity for such demand shall be included in the demand and supply plan specified in Paragraph 1.
3. Regarding judgment of transmission acceptance defined in Article 137 of the Operational Rules, contractors of actual demand and supply balancing systems are treated as they requested an acceptance of transmission of the part of their request plan for the interconnection line upon determination of capability allocation defined in Paragraph 1, Article 137 of the Operational Rules.
4. Submission of additional materials to the general transmission and distribution companies or distribution companies defined in Article 143 and changes of planned value defined in Article 144 shall be applied mutatis mutandis to submission of the demand and supply plan and generation plan by contractors of actual demand and supply balancing system.
5. When the contractors of actual demand and supply balancing system submit annual and monthly capability allocation plans for the interconnection line, they must submit plans for weekdays and holidays of each month and week, and the Organization will convert planned values to values per day.

#### Article 5 Deleted

Appendix 1 Submission of the demand and supply plan

Plans to submit	Annual plan (First to Second fiscal year)	Monthly plan (Next month, the month after next)	Weekly plan (Next week, the week after next)	Next day plan	Current day plan
Due date	The end of October of each year	First day of each month	AM 10:00 on every Wednesday	12:00 a.m. on every day (*1)	As needed
Contents of submission					
Demand	Peak and bottom demand segmented by holidays and weekdays of each month	Peak and bottom demand segmented by holidays and weekdays of each week	Energy requirement of each day at the two points in time specified by the Organization	Energy requirement for each 30 minutes	Energy requirement for each 30 minutes
Supply	Supply capacity for the demand	Supply capacity for the demand	Supply capacity for the demand	Energy supply for the requirement	Energy supply for the requirement



Appendix 2 Submission of generation plan

Plans to submit	Annual plan (First to Second fiscal year)	Monthly plan (Next month, the month after next)	Weekly plan (Next week, the week after next)	Next day plan	Current day plan
Due date	The end of October of each year	First day of each month	AM 10:00 on every Wednesday	12:00 a.m. on every day (*1)	As needed
Generation plans to be submitted for each power station	Peak and bottom supply capacity segmented by holidays and weekdays of each month	Peak and bottom supply capacity segmented by holidays and weekdays of each week	Supply capacity of each day at the two points in time specified by the Organization	Energy supply for each 30 minutes	Energy supply for each 30 minutes

(\*) This includes the case when the submission date is a holiday.

Supplementary Provisions (as of July 11, 2016)

(Enforcement date)

Article 1

These Codes shall become effective from the date of approval from the Minister of Economy, Trade and Industry.

*Article 2 Deleted*

Supplementary Provisions (as of October 18, 2016)

(Enforcement date)

These Guidelines shall become effective from the date of approval from the Minister of Economy, Trade and Industry.

Supplementary Provisions (as of April 1, 2017)

(Enforcement date)

Article 1

These Codes shall become effective from April 1, 2017 or the date of approval from the Minister of Economy, Trade and Industry, whichever comes later.

(Implementation of demonstration test of wind power in Hokkaido)

Article 2

The general transmission and distribution companies relevant to the demonstration test toward the expansion of the introduction of wind power in the Hokkaido area (published by Hokkaido Electric Power Co. Inc., Tohoku Electric Power Co. Inc., and Tokyo Electric Power Co. Inc. on September 30 in 2011, hereinafter, “demonstration test on wind power in Hokkaido”) shall conduct the demonstration test on wind power in Hokkaido within the range of the pre-set margin until the test is completed.

Supplementary Provisions (as of September 6, 2017)

(Enforcement date)

Article 1

1. These Codes shall become effective from the date of approval from the Minister of Economy, Trade and Industry.
2. Notwithstanding the preceding paragraph, the provisions of Articles 33, 138 to 139-2, 197 to 228, 233, 238, 244, and 269 of these Codes, as well as Articles 2 to 5 of the Supplementary Provisions shall be enforced within one year from April 1, 2018, as defined by a resolution adopted by the board of directors of the Organization (after the date approved by the Minister of Economy, Trade and Industry).
3. Before enforcement of the provisions specified in the preceding paragraph, “b, c, and f” in the provision of Item ii-a, Paragraph 1 of Article 33 shall be modified to “b and f”, and “c” of the same item shall be omitted.

(Submission of updated plans for revised rule of cross-regional interconnection line)

Article 2

1. When any of the following happens, companies subject to transitional scheme must submit updated plans (limited to a plan for cross-section of 30-minute units) to the Organization so that the Organization can manage the plans subject to transitional scheme and determine the relevance to the transitional scheme.
  - i. When the usage amount in the transitional scheme decreases beyond the amount recorded in the plans subject to transitional scheme because of revisions of the plan on development of power generators, failure of power generation facilities, extension of scheduled outage, or other reasons
  - ii. When the usage amount in the transitional scheme decreases beyond the amount registered in the plans subject to transitional scheme because of changes or the expiration of an agreement for the procurement of electricity across regional service areas of general transmission and distribution companies between suppliers or plans on the procurement of electricity across the regional service areas of the above by one supplier
  - iii. When the usage amount in the transitional scheme decreases beyond the amount registered in the plans subject to transitional scheme because of the expectation of a decrease in demand according to the plans subject to transitional scheme
  - iv. When the usage amount in the transitional scheme decreases beyond the amount

registered in the plans subject to transitional scheme for other reasons

2. Updates shall be applied before the noon two days before the date of transitional scheme.

(Submission of relevant plans, etc. subject to transitional scheme by generation companies whose energy supply is undetermined)

#### Article 3

1. Among generation companies whose energy supply is undetermined and who have plans subject to transitional scheme, companies who are not obliged to submit supply plans must submit relevant plans, etc. subject to transitional scheme to the Organization regardless of changes in their contents before the end of March of each year.
2. When the generation companies whose energy supply is undetermined and who have plans subject to transitional scheme have secured companies to which they supply power (energy supplied companies), such generation companies whose energy supply is undetermined and energy supplied companies shall follow the following procedures so as to let the Organization succeed the whole or part of their plans subject to transitional scheme.
  - i. Energy supplied companies shall submit plans subject to transitional scheme to the Organization and notify the Organization of their intention to succeed the plans subject to transitional scheme from the generation companies whose energy supply is undetermined ten business days before the date of transitional scheme in principle.
  - ii. Generation companies whose energy supply is undetermined shall notify the Organization of their intention to transfer their plans subject to transitional scheme to the energy supplied companies specified in the preceding item

(Response to the confirmation of utilizing situation of transitional scheme for revised rule of cross-regional interconnection lines)

#### Article 4

1. Companies subject to transitional scheme shall submit information on updates and progress of plans subject to transitional scheme, agreements, and other necessary materials required by the Organization to confirm the utilizing situation of the transitional scheme.
2. Companies subject to transitional scheme shall respond to the request of review of their future plans subject to transitional scheme or contents of bidding when required by the Organization.

(Application of a plan code subject to transitional scheme for revised rule of cross-regional interconnection lines)

#### Article 5

1. When the companies subject to transitional scheme are integrated or when the plans subject to transitional scheme are succeeded from the generation companies whose energy supply is undetermined to the energy supplied companies, such companies or energy supplied companies must apply for the issuance of the plan code subject to transitional scheme(application number) as a number for identification of plans subject to transitional scheme used by Cross-regional Operation System (hereinafter “plan code subject to transitional scheme”).

## Network Codes (2022)

2. When the Organization received the application as described in the preceding paragraph, it shall issue the plan code subject to transitional scheme for the companies subject to the transitional scheme who applied.

## Supplementary provisions (as of June 29, 2018)

### (Enforcement date)

#### Article 1

These Codes shall be effective from the date of approval by the Minister of Economy, Trade and Industry. Provided that rules from Article 2 to 4 of supplementary provisions shall be effective from October 1, 2018.

### (Coordination of the increase or suppression of output from the power generators)

#### Article 2

1. The general transmission and distribution companies shall notify the persons who submitted power generation plans of the increase or suppression of output from the power generators due to maintenance work plan of transmission facilities prorated according to installed capacity of power generators selected as a subject of restriction and the power generators selected as a subject of increase or suppression based on Paragraph 2 of Article 244, upon coordination of maintenance work plans of cross-regional interconnection network. This shall apply when the increase or suppression of output from the power generators was reviewed according to the demand and supply situation in the regional service area of general transmission and distribution company.
2. Persons who submitted power generation plans may coordinate the informed increase or suppression of output from the power generators through discussion among the persons regarding the increase or suppression of output from the power generators informed from the general transmission and distribution companies.
3. When the persons who submitted power generation plans wish to coordinate the increase or suppression of output from the power generators informed in accordance with Paragraph 1 above, such persons shall inform the general transmission and distribution companies who informed them, about such coordination of the increase or suppression of output from the power generators they wish.
4. When the general transmission and distribution companies are informed from the persons who submitted power generation plans of their wish to coordinate the increase or suppression of output from the power generators, such companies shall inform the persons who submitted power generation plans having power generators selected as a subject of restriction of details of such control and a date of control.
5. The persons who submitted power generation plans who wish to coordinate the increase or suppression of output from the power generators and the persons who submitted power generation plans who were informed of the detail of control shall discuss about control of the increase or suppression of output from the power generators, costs for such coordination and other conditions among such persons and inform the general transmission and distribution companies of the result of coordination of the increase or suppression of output from the

power generators by the date of coordination.

6. The general transmission and distribution companies who were informed of the result of coordination of the increase or suppression of output from the power generators shall inform the Organization of the result.
7. When the persons who submitted power generation plans are asked to give information on the details of coordination or other necessary information, they have to immediately give information in accordance with the Operational Rules.

(Handling of failure of coordination of the increase or suppression of output from the power generators)

#### Article 3

1. When the persons who submitted power generation plans whose coordination of the increase or suppression of output from the power generators according to Paragraph 5 of Article 2 above has failed are asked to re-coordinate by the Organization, such persons shall re-coordinate the increase or suppression of output from the power generators.
2. The persons who submitted power generation plans shall inform the Organization of the result of re-coordination of the increase or suppression of output from the power generators.
3. The general transmission and distribution companies and the persons who submitted power generation plans will be noticed of the result of re-coordination and the defined increase or suppression of output from the power generators from the Organization.

(Information sharing of maintenance work plans of cross-regional interconnection network accompanied by increase or suppression of power generation)

#### Article 4

1. When the increase or suppression of power generation is expected to accompany with the maintenance work plan of the third fiscal year, the general transmission and distribution companies shall share information on names of maintenance work projects whose duration exceeds approximately thirty days with the persons who submitted power generation plans by a submission date provided in Paragraph 3 of Article 236. Provided, however, that names of maintenance work projects listed in the following items shall include names of projects after the fourth fiscal year as much as possible.
  - i. Maintenance work plans from the third fiscal year to the fourth fiscal year
  - ii. Maintenance work plans of multiple years
2. The general transmission and distribution companies shall compile the shared contents mentioned in the preceding paragraph and submit them to the Organization by a submission date provided in Paragraph 3 of Article 236.

Supplementary provisions (as of April 1, 2019)

(Enforcement date)

These Codes shall become effective from April 1, 2019 or the date of approval from the Minister of Economy, Trade and Industry, whichever comes later.

Supplementary provisions (as of July 1, 2019)

(Enforcement date)

Article 1

1. These Rules shall be effective from the date of approval by the Minister of Economy, Trade and Industry.
2. Notwithstanding the preceding paragraph; the provisions of the Articles 15-2 through 15-19, 17, 139, and 269 shall be enforced from July 1 of 2019 to March 31, 2021 defined by a resolution adopted by the board of directors of the Organization (after the date when approved by the Minister of Economy, Trade and Industry).

(Handling period for specified defrayer of reinforcement work for the interconnection lines between Tohoku and Tokyo)

Article 2

Handling period applied to the specified defrayer of reinforcement work for the relevant bulk electric system within the service areas and the interconnection lines between Tohoku and Tokyo where the interconnection contract was executed on or before September 30, 2018, shall be from the starting date of the use of the interconnection lines between Tohoku and Tokyo after the reinforcement work or the starting date of the operation of generators of the specified defrayer, whichever is later, (hereinafter “starting date”) until the date of abolition of the generator of the defrayer (including a case of replacement) or the date on which 40 years has passed from the starting date, whichever is earlier.

Supplementary Provisions (as of December 11, 2019)

(Effective date)

Article 1

1. These Codes shall take effect on the date on which approval is granted by the Minister of Economy, Trade and Industry.
2. The provisions of Article 15-4 hereof shall take effect on the date prescribed by a resolution of the Board of Directors of the Organization within the period extending from the date on which approval is granted by the Minister of Economy, Trade and Industry to March 31, 2021.
3. The provisions of Article 140 hereof shall take effect on April 1, 2020.
4. The provisions of Article 79, Article 80, Article 135, Appendix 7-1, Appendix 7-2, Appendix 7-3, Article 135-2, and Article 174 hereof shall take effect on the date on which approval is granted by the Minister of Economy, Trade and Industry or the date on which a change to the technical requirements for network interconnection as made by a general transmission and distribution company is approved by the Minister of Economy, Trade and Industry, whichever is later.

(Applying the technical requirements for network interconnection)

Article 2

The technical requirements for network interconnection as prescribed pursuant to Article 135 of these Codes shall be applied to projects in which an application for an agreement is made for accessing a network on or after the effective date as provided for in paragraph 4 of the preceding Article and projects in which bids are made in a solicitation process for generator interconnections.

Supplementary Provisions (as of March 30, 2020)

(Effective date)

Article 1

These Codes shall take effect on the date on which approval is granted by the Minister of Economy, Trade and Industry.

(Applying for a specified cost allocation plan code)

Article 2

1. Where a person who is eligible for a price differential adjustment under a specified cost allocation arrangement for reinforcement work on or measures to expand the operational capacity of interconnection lines between Tohoku and Tokyo (hereinafter referred to in this Article and the following Article as “Person Eligible for Price Differential Adjustments”) attempts to receive a price differential adjustment right or where a person subject to a specified cost allocation plan transfers a specified cost allocation plan to a third party, the Person Eligible for Price Differential Adjustments or the third party must submit an application for the issuance of a number identifying the specified cost allocation plan to be used in a cross-regional organization system (hereinafter referred to as “specified cost allocation plan code”) to the Organization.
2. The Organization shall, where an application as provided for in the preceding paragraph is received, issue a specified cost allocation plan code to the Person Eligible for Price Differential Adjustments or third party who submitted the application.

(Application pertaining to a price differential adjustment right)

Article 3

1. Where a Person Eligible for Price Differential Adjustments seeks to be granted a price differential adjustment right, an application pertaining to the price differential adjustment right must be submitted to the Organization.
2. Where a change in an application submitted in accordance with the preceding paragraph arises, the person subject to a specified cost allocation plan must submit a change application to the Organization.

(Submitting an updated specified cost allocation plan)

Article 4

1. In order to have the Organization manage a specified cost allocation plan and carry out a specified cost allocation assessment, a person subject to a specified cost allocation plan must submit a cross-sectional updated specified cost allocation plan in thirty (30)-minute increments where any of the following items applies:
  - i. A value in the specified cost allocation plan decreases due to a change in a power source development plan, a failure affecting a power generation facility, an extension of the working period, or other circumstances;
  - ii. A value in the specified cost allocation plan decreases due to an agreement pertaining to the procurement of power across regional service area of general transmission and distribution company or a change in a plan pertaining to the procurement of power across regional service area of general transmission and distribution company;
  - iii. A value in the specified cost allocation plan decreases due to a projected decrease in demand corresponding to the specified cost allocation plan;
  - iv. It has become clear that a value in the specified cost allocation plan will otherwise decrease.
2. An updated specified cost allocation plan shall be submitted by no later than twelve (12) noon on the second day before the date on which a price differential adjustment is to be made under a specified cost allocation arrangement.

(Accommodating efforts to confirm the state of the use of price differential adjustments price under a specified cost allocation arrangement)

Article 5

1. Where the Organization requests the submission of a progress report on the updating of a specified cost allocation plan, written agreements, and other materials required to confirm the state of the use of price differential adjustments under a specified cost allocation arrangement, the person subject to a specified cost allocation plan shall submit such materials.
2. The person subject to a specified cost allocation plan shall accommodate any request made by the Organization to have a future specified cost allocation plan or the contents of a bid reviewed.

(Period of the handling of short construction period measures by a specified cost allocation person)

Article 6

The period of the handling of measures to expand the operational capacity of interconnection lines between Tohoku and Tokyo (hereinafter referred to as “short construction period measures”) by a specified cost allocation person shall extend from the date on which usage commences after short construction period measures are implemented to the day before the date on which usage of the interconnection lines between Tohoku and Tokyo commences.



## Network Codes (2022)

### Supplementary Provisions (as of July 8, 2020)

(Effective date)

#### Article 1

1. These Codes shall take effect on the date on which approval is granted by the Minister of Economy, Trade and Industry.
2. Notwithstanding the preceding paragraph, the provisions of Article 33, Article 83, Article 85, Article 88, Article 88-2, Article 89, Article 91, Article 93, Article 97, Article 100, Article 101, Article 102, Article 106, Article 112, Articles 120 through 123-8, and Article 130 hereof shall take effect on the date on which approval is granted by the Minister of Economy, Trade and Industry or the date on which a change to a collective study process for generator interconnections as made by a general transmission and distribution company is approved by the Minister of Economy, Trade and Industry, whichever is later.
3. Notwithstanding paragraph 1 hereof, the provisions of Articles 26 through 30-1 hereof shall take effect on April 1, 2021, or the date on which approval is granted by the Minister of Economy, Trade and Industry, whichever is later.

### Supplementary provisions (as of April 16, 2021)

(Effective date)

#### Article 1

These Codes shall take effect on the date on which approval is granted by the Minister of Economy, Trade and Industry.

(Transitional measures related to the process of soliciting network interconnections in a replacement project)

#### Article 2

1. A member constituting a general transmission and distribution company that has been notified by the Organization of a project for which the applicability of replacement has been determined shall deem such notification to constitute procedures for suspension or retirement and accordingly apply the provisions of the revised Network Codes.
2. Notwithstanding the provisions of the amended Network Codes, any projects for which the solicitation process for network interconnections in replacement projects has commenced as of the enforcement of these Network Codes shall continue to remain applicable.

### Supplementary provisions (as of June 24, 2021)

(Enforcement date)

1. These Codes shall become effective from July 1, 2021 or the date of approval from the Minister of Economy, Trade and Industry, whichever comes later.

## Network Codes (2022)

2. Notwithstanding the preceding paragraph, the provisions of Appendix 8-1, Appendix 8-2, Appendix 8-3, and Appendix 8-4 shall take effect from April 1, 2022, or the date of approval from the Minister of Economy, Trade and Industry, whichever comes later.

## Supplementary provisions (as of April 1, 2022)

### (Enforcement date)

These Codes shall become effective from April 1, 2022 or the date of approval from the Minister of Economy, Trade and Industry, whichever comes later.