

# Chapter 4

## Proposed Regulations for APP based on Japanese Case Example

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## Chapter 4

### Proposed regulations for APP based on Japanese case example

#### 1. Regulations for APP and respective relations

It is essential for APP to decide systematic regulations about organizations, business, procedures, etc. to secure fairness, transparency, and accuracy. Examples for reference are presented in this chapter according to the case of Japan. Regulations consist of three hierarchy levels such as articles of incorporation, business rules, and business guideline (Table 3). Articles of incorporation regulates fundamental items like establishment, authority, scope, and functions. Business rules provide methods and procedures for business operation. Business guideline deals with substantial and concrete rules for each business such as demand and supply plan, system operation, and information disclosure of grid information.

**Table 3. Proposed Regulation Hierarchy for APP**

Regulations	Contents
Articles of incorporation	Governance policy
Business rules	Outline of each business operation and basic procedures
Business guideline	Substantial and concrete rules for each business including implementation period, data submission deadline, etc.

Source: Authors.

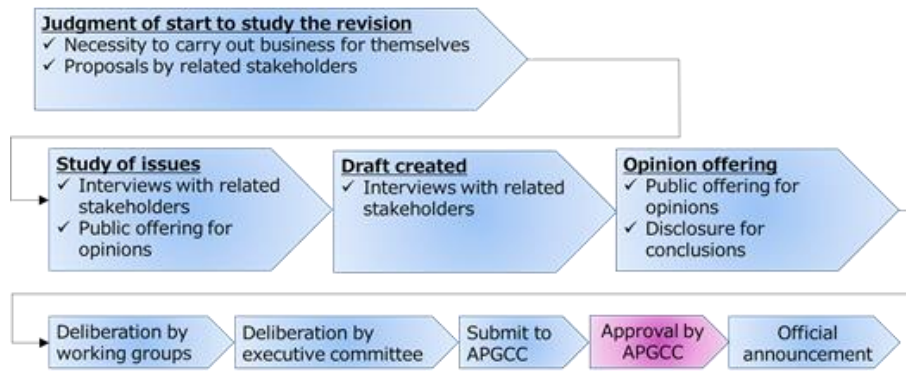
These three documents should follow and are positioned under relevant governing agreements equivalent to treaty or law such as intergovernmental agreement on regional power trading and memorandum of understanding for the establishment of the APP organization. The main objective of the documents is for the APP to keep quality of work.

#### 2. Process of regulation revision

The following is the process of regulation revision:

- (2) APP publishes the draft revision and collects opinions.
- (3) Draft is submitted for deliberation by executive committee and approval by The ASEAN Power Grid Consultative Committee.

**Figure 17. Process of Regulation Revision**



APGCC = ASEAN Power Grid Consultative Committee.

Source: Authors.

### 3. Articles Process of regulation revision

General outlines are described in articles of incorporation and details are followed in business rules and business guideline. The following are included:

(1) Items

- i) Objectives of establishment
- ii) Scope of business
- iii) Name
- iv) Office location
- v) Related stakeholders
- vi) Executive committee
- vii) Officers
- viii) Fund
- ix) Financial affairs and accounting
- x) Revision of articles of incorporation
- xi) Public announcement

(2) The following are examples of two items listed above:

Scope of business

- i) Monitor of the supply and demand balance by each ASEAN country
- ii) In case there is deterioration of supply and demand balance or necessary improvement, AGTP department of APP provide guidance to improve the situation.
- iii) Development of business guideline
- iv) Evaluation of supply reliability by checking demand and supply plan

- v) Public offering for new power supply
- vi) Handling of complaints by related stakeholders and settling disputes
- vii) Disclosure of grid information
- viii) Other business that matches the objective of establishment

#### Executive committee

APP shall appoint one president, four or less board members, and two or less auditors as its executives. The president and board member shall perform full-time.

#### Duties and authority of executives

- i) The board member shall assist the president in handling the operations of APP and perform the duties of the president when the president is unable to carry out the duties.
- ii) The auditors shall audit the operations of APP.

#### Appointment and term of office of executives, etc.

- i) The executive committee shall be appointed based on a resolution of general meeting. They shall hold their office for two years and be appointed twice.
- ii) The executive committee shall not engage in commercial enterprises.
- iii) The auditor shall not concurrently hold a post of president, a board member and a member of APP.
- iv) After leaving the executive committee, the executive shall not be appointed in an executive committee involved in making decisions on the electric power business and businesses closely related thereto at a corporation that operates electricity business.

#### Fees

##### Membership fee

- i) Members of APP shall pay an annual membership fee within one month after receiving notice of membership.
- ii) Membership fee is non-refundable.

##### Special membership fee

- i) A member of APP from a general electricity utility shall pay a special membership fee separate from membership fee annually.
- ii) Special membership fee is set by the board of directors based on the demand of each supply area.
- iii) Special membership fee is non-refundable.

## **4. Business rules**

Business decided in articles of incorporation and business operation are described in business rules.

(1) Items

a) Functions of system planning

- (i) Demand forecast
- (ii) Development of operation guide for demand forecast, development of demand forecast
- (iii) Aggregation of the supply plan
- (iv) Public offering for new power supply
- (v) System planning
- (vi) Development of long-term enhancement policy, development of interconnection reinforcement plan

b) Functions of system planning

- (i) Monitor of demand and supply balance
- (ii) Provide guidance in case of deterioration of demand and supply balance
- (iii) Monitor and manage of interconnections operation capacity, margin setting
- (iv) Short-term and long-term frequency control
- (v) Plan of utilization for interconnections
- (vi) Adjustment of planned outage for interconnections

c) Functions of others

- (i) Disclosure of grid information
- (ii) Available capacity for interconnections, information about demand and supply, information about interconnections including planned outage plans and records
- (iii) Disaster management
- (iv) Settling disputes and handling complaints for issues between TSOs

(2) Examples of described contents

a) Allocation of activities of organization

- (i) General Affairs Department, Secretary, finance, HR, public relations
- (ii) APG codes, Guidelines and Research Department common transmission capacity mechanism design, technical standards, environmental
- (iii) Power System Planning Department system planning, system planning for interconnections, aggregation of supply plan
- (iv) Power System Operation and Coordination Department
- (v) Monitoring and metering of APG, system operation
- (vi) Information technology (IT) and supervisory control and data acquisition (SCADA) department System operation centre IT tools, market operation centre IT tools

(vii) ASEAN Market and Multilateral Trading Department

Market design, market operation

(viii) Legal and regulatory group

b) Development of operation guide for demand forecast

To perform the business of demand forecast properly and smoothly, APP shall develop the operation guide for demand forecast and announce it to related stakeholders.

(i) Basic items: forecast period (by which year, interval, etc.), responsible organization, forecast target, demand classification, etc.

(ii) Correction method of demand record: Concrete correction method considering temperature, leap year, etc.

(iii) Demand forecast method in the service area

(iv) Form of submit

(v) Other necessary items related to development of suitable demand forecast.

c) Power system development

Formulating long-term development policy of cross-regional power system

APP formulates a long-term policy that shows the action plans regarding development and renewal of cross-regional network in APG and the ideal situation of interconnection forecasting a period exceeding 10 years and the view to realize it.

d) Supervision

Supervising the demand and supply condition

APP conducts the following as a supervising task of demand and supply condition:

(i) Matters regarding demand and supply conditions of service area

- The condition regarding demand, supply and securing reserve in service area of APP member from general electricity utility
- The condition regarding demand and supply in service area of APP member from specific transmission and distribution system operator

(ii) Conditions regarding demand and supply in each ASEAN country

(iii) Conditions regarding utilization of interconnections

## 5. Business guideline

Business guideline constitutes substantial and concrete rules about each business and about demand and supply plans, system operation, disclosure of grid information, etc.

Items are the same as those in business rules. However, business guideline includes period, deadlines, contents, granularity, etc. in detail for proper and smooth business operation.

#### Development of operation guide for demand forecast

All TSOs shall develop demand forecast of the service area based on the operation guide for demand forecast and instructions. They shall submit to APP on 20 January the forecast covering the whole year from April to March.

- (1) Forecast period
  - a) In principle, successive 10 years from the year starting from next April to March
  - b) Monthly value of energy at using end, energy at supplying end, and peak demand for the first year
- (2) Forecast target
  - a) Net system energy demand, energy at using end, energy at receiving end, energy at supplying end
  - b) Peak demand, yearly top three average of day peak
- (3) All TSOs shall consider economic outlook, related information, recent demand trend, past demand record, etc. to develop demand forecast of the service area.
- (4) All TSOs shall submit by required form and include calculation basis.

#### Network development

The following are matters to be stated in long-term development of cross-regional network:

- (1) Basic concept on development of cross-regional network
  - a) Matters regarding the future demand in AMS
  - b) Matters regarding the ideal situation of future cross-regional network in AMS

#### Points of attention regarding basic concept on development of cross-regional network

- (1) Demand and supply conditions up to previous year
- (2) Outlook for demand and supply based on changes in economic circumstances
- (3) Characteristics of supply area in each AMS
- (4) Outlook for improving environment of cross-regional power electricity trade
- (5) Service reliability at the occurrence of a large-scale outage or disaster
- (6) Ageing, deterioration information of power equipment, progress in technology development, and other technical information

#### Requirements for starting consideration of interconnection reinforcement

- (1) In the annual plan of interconnection, a case in which the number of hours, during which the available transfer capability for operational capability is 5% or less, exceeds 20% of the target period of annual plan.
- (2) In the utilization record of interconnection, a case in which the number of hours, during which the available transfer capability for the operational capability was 5% or less in the past year, exceeded 20% of the total number of hours in the past year.
- (3) The record of generation output limitation due to the constraints of transmission line of upper two voltage levels in each AMS.

(4) Frequency of market split according to interconnections capacity.

Collection of supply plan

Submission of draft supply plan

Each business operator shall submit the draft supply planning in prescribed form to APP on the deadline specified below to confirm the point reviewed based on checks and advice from APP.

(1) Transmission System Operator, Specific Transmission and Distribution System Operator

Every 10 February

(2) General Electricity Utility

Every 10 March

The deadline cited above is an example based on a fiscal year beginning in April.

Submission of supply planning

Business operators shall submit the draft supply planning in prescribed form to APP on the deadline specified below.

(1) Transmission System Operator, Specific Transmission and Distribution System Operator, Retailer and Power producer

Every 1 March

(2) General Electricity Utility

Every 25 March

The deadline cited above is an example based on a fiscal year beginning in April.

Supervision

Supervising the power system

General electricity utility shall supervise the following matters regarding the power system in its own service area:

(1) Conditions of frequency and voltage

(2) Demand and supply condition in each service area

(3) Operating condition of power equipment

(4) Power flow condition

(5) Other necessary matters for stable power system operation

Preliminary measure when an abnormality is expected in the electric power system

When the general electricity utility judges that there is a possibility of abnormality such as power outage in the power system of the service area due to typhoon, snowstorm, etc., it shall take countermeasures and prepare a system for the occurrence of abnormality.

Instruction from APP to improve demand and supply condition



When business operators receive the instruction or request from APP, unless there is a justifiable reason, they shall promptly respond to it and cooperate in improving the demand and supply condition.