

Electricity Supply-Demand Measures this Winter

November 2, 2012

Electricity Supply-Demand Review Committee

Energy and Environment Council

1. Electricity Supply and Demand Forecast for this Winter

The Electricity Supply-Demand verification Committee, which was established by the Electricity Supply-Demand Review Committee and the Energy and Environment Council, held four meetings in total from October 12 to 30, 2012. Third-party experts verified the electricity supply and demand forecast for this winter.

As a result, under the assumption that this winter will be an extremely cold one, it is expected that a reserve margin of 3%, which is deemed necessary to respond to instantaneous fluctuations in demand, can be secured in all service areas, but it is suggested that we note that the situation does not allow for optimism as there are risks of unexpected shutdowns of thermal power plants.

In particular, in the service areas of Hokkaido Electric Power Co., Inc. (HEPCO), in light of its particular circumstances—there are limits on its ability of power interchange with other power utility companies and a power shortage would have an even greater impact on people's lives due to the cold climate—all possible measures should be taken in preparation for the risk of any failure in the HVDC Hokkaidō-Honshū and major power generation facilities. At the same time, proper power conservation targets should be set, with the aim of ensuring responses to risks in the event of a shutdown of a power plant, etc. while obtaining the cooperation of local governments and the private sector and further promoting measures from both the supply and the demand sides.

2. Basic Idea of Electricity Supply and Demand Measures for this Winter

(1) Measures on the supply side

- (i) According to the verification by the Electricity Supply-Demand Verification Committee, the supply capacity secured at present should be considered as a reference value. The reference value will be adjusted upward when the capacity increase has been confirmed.
- (ii) Efforts to maintain and expand the cooperation among the power utility companies such as power interchange on a nationwide basis should be continued so that an immediate response is ensured in the event of a failure at power generation facilities in the service areas of any power utility companies.
- (iii) In order to minimize the risk of unexpected shutdowns of thermal power plants, facility maintenance and security should be strengthened.

(2) Measures on the demand side

- (i) The estimated power demand for this winter incorporates a decline in the reasonably expected reduction of power consumption, which was verified by the Electricity Supply-Demand Verification Committee, and is based on the assumption that consumers will conserve power at this reasonably expected level. Therefore, it is certainly necessary to request that consumers conserve power.
- (ii) In order to ensure fairness among consumers, power conservation should be requested based on their actual power consumption in FY2010 (actual demand prior to any request for power conservation) in the same manner that was employed this summer.
- (iii) Due consideration should be given when requesting power conservation so as not to request unreasonable power conservation of vulnerable people, such as the elderly and those in earthquake-damaged areas.
- (iv) Measures on the demand side should be taken with the cooperation of local governments, etc., and implemented carefully with creative efforts, with the aim of minimizing the impacts on people's everyday lives and economic activities.

(3) Measures in light of the special nature of Hokkaido during the winter

- (i) The Electricity Supply-Demand Verification Committee has pointed out the necessity of preparing measures to respond to the risks faced by Hokkaido during the winter, taking into account the possibility of a failure at the largest power generation facilities and unexpected power plant shutdowns in the past. Furthermore, if any power failures, including rolling blackouts occur in Hokkaido during severe winter weather, it may pose a direct danger to the lives and safety of Hokkaido residents, and any possibility of rolling blackouts may itself have a negative influence on tourism and other economic activities in Hokkaido.
- (ii) Therefore, a spectrum of measures should be taken to ensure stable supply and demand in order to prevent any power failures, including rolling blackouts, even in the event of unexpected power supply failure equal to the largest-ever level (1.37 million kW) during the last 15 years.

3. Electricity Supply and Demand Measures for this Winter

Electricity supply and demand measures for this winter should be taken based on the basic ideas mentioned in 2 above.

(1) Requests for all customers throughout Japan (except Okinawa area)

- (i) Under the assumption that this winter will be an extremely cold one, it is expected that a reserve margin of 3%, which is deemed necessary to respond to instantaneous fluctuations in

demand, can be secured in all service areas, but it is suggested that we note that the situation does not allow for optimism as there are risks of unexpected shutdowns of thermal power plants. In light of this fact, power conservation should be requested without concrete numerical targets. However, due consideration should be given so as not to request unreasonable power conservation of vulnerable people, such as the elderly and those in earthquake-damaged areas.

* Reasonably anticipated reductions in power consumption this winter in the respective power utility companies' service areas are as follows, compared with consumption in FY2010. These figures are expected to be the reference criteria for requesting power conservation as shown in 2.(2)(i).

Service areas of Hokkaido Electric Power Co., Inc.: 3.3% reduction
Service areas of Tohoku Electric Power Co., Inc.: 2.2% reduction
Service areas of Tokyo Electric Power Co., Inc.: 5.0% reduction
Service areas of Chubu Electric Power Co., Inc.: 2.8% reduction
Service areas of Kansai Electric Power Co., Inc.: 5.6% reduction
Service areas of Hokuriku Electric Power Co., Inc.: 3.4% reduction
Service areas of Chugoku Electric Power Co., Inc.: 1.5% reduction
Service areas of Shikoku Electric Power Co., Inc.: 5.2% reduction
Service areas of Kyushu Electric Power Co., Inc.: 4.5% reduction

(ii) Period and time range to request power conservation

Weekdays from December 3, 2012 to March 29, 2013 (excluding December 31 and January 2 to 4)

9:00 to 21:00 (8:00 to 21:00 in service areas of HEPCO and Kyushu Electric Power Co., Inc.)

(2) Measures for the HEPCO service area

In light of the special nature of Hokkaido during the winter, the following spectrum of measures should be taken in addition to (1) above, in order to prevent any power failures, including rolling blackouts.

(i) Requests for power conservation with a numerical target

i. Numerical target (reduction of 7% or more compared to the FY2010 level)

Request that large consumers, small consumers, and households reduce their maximum power consumption (kW), etc. by 7% or more, compared to the FY2010 level

ii. Period and time range to request power conservation

Weekdays from December 10, 2012 to March 8, 2013 (excluding December 31 and January 2 to 4)

December 10 to December 28	16:00 to 21:00
January 7 to March 1	8:00 to 21:00
March 4 to March 8	16:00 to 21:00

* During the winter in Hokkaido, power demand remains high even at night. Therefore, power conservation to the extent possible will also be requested during time ranges other than the above.

iii. Power consumption reference

The maximum power consumption (kW), etc. in FY2010 (during the period mentioned in ii. above) should be reference basis for the reduction of power consumption.

iv. Points to be noted

- a) In a case in which power conservation may hinder the functions of vital facilities, such as hospitals and railways, or the functions of facilities extremely significant to national security, customers will be requested to set voluntary targets for power conservation to the extent that it does not affect maintenance of their functions.
- b) Based on the fact that the 3% reserve margin is expected to be secured during ordinary times without any power supply failure, power consumption should be reduced by setting voluntary targets that would not substantially affect economic activities (including farming and tourism, etc.). However, when the power supply becomes tight (when the reserve margin will fall below 3%), power conservation at the level of the numerical target (reduction of 7% or more compared to the FY2010 level) is requested.
- c) Due consideration should be given so as not to request unreasonable power conservation of vulnerable people, such as the elderly and those in earthquake-damaged areas.
- d) Multiple enterprises or business offices in the same service area should be permitted to jointly set power conservation targets and make joint power conservation efforts.

(ii) Program for Emergency Adjustments to Prevent Rolling Blackouts

In order to prevent any power failures, including rolling blackouts, HEPCO should not only request power conservation with the numerical target mentioned in (i) above, but should also prepare a Program for Emergency Adjustments to Prevent Rolling Blackouts to be implemented when power supply tightens due to a large-scale power supply failure, etc.

The target under the Program for Emergency Adjustments to Prevent Rolling Blackouts should be set so that the reserve margin of 3% can be secured, together with the contribution of the request for power conservation with the numerical target mentioned in (i) above, even in the event of a power failure of record size (greater than 1.37 million kW). The national government, the Hokkaido prefectural government, and HEPCO should request that consumers in HEPCO service areas conclude contracts to join the Program for Emergency Adjustments to Prevent Rolling Blackouts. HEPCO should publicize the status of these contracts.

i. Period

From Monday December 10, 2012 to Friday, March 22, 2013 (all day)

ii. Coverage

All large consumers (whose contract power consumption is 500kW or more) in Hokkaido will be asked to cooperate.

iii. Goal

To ensure that demand is reduced by at least 0.33 million kW on effective basis

- (iii) Measures in preparation for further power shortages (bidding for Negawatts during emergencies, etc.)

In preparation for the possibility of a power supply failure of record size, in addition to the measures mentioned in (i) and (ii) above, HEPCO should develop a mechanism to allow bidding for Negawatts during emergencies, etc., for the purpose of reducing power demand during a large-scale power supply failure that cannot be handled using the program mentioned in (ii) alone.

By taking a spectrum of measures ((i) to (iii) above), full preparation should be ensured in the event of the power supply failure equal to or exceeding the record size to prevent any power failures, including rolling blackouts.

(3) Provision of information, etc.

- (i) The national government will present concrete power conservation options for business operators and households. Upon such occasions, the national government should take into account the special nature of Hokkaido this winter—that power demand will remain high even at night—and should clarify that it will request power conservation by reducing peak demand without the need to shift peak time.
- (ii) Power utility companies should voluntarily and independently transmit information on power supply and demand conditions and estimated demand, and should simultaneously actively provide information to private business operators (mobile phone and internet business operators, etc.).
- (iii) When tight supply is expected, power utility companies should maximize the use of contracts for supply and demand adjustments to request that large consumers reduce demand, and the national government should issue warnings of tighter electricity supply and request further power conservation.