

Reduced EIA Procedures after the Great East Japan Earthquake

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Abstract

On March 11, 2011, a gigantic earthquake followed by a huge tsunami struck Tohoku Region in the northeastern part of Japan, which is now known as the Great East Japan Earthquake. Therefore, exemption of the EIA procedure requirement was applied for the installation of power generation facilities to supplement the disaster damaged power supply capacity. In addition, a simplified EIA procedure was introduced for the relocation of tsunami struck residential areas to avoid the threat of future tsunami, and for the relocation of railway tracks to restore railway service.

It is expected that speedy disaster reconstruction in harmony with environmental conservation will be achieved through these systems.

Keywords : Great East Japan Earthquake, exemption, supplementary power generation facilities, special EIA procedure, relocation of residential areas, relocation of railway tracks, disaster reconstruction

1. Background

On March 11, 2011, a gigantic earthquake followed by a huge tsunami struck Tohoku Region in the northeastern part of Japan, taking a heavy toll in human lives and destroying everything in its path (Fig. 1). This disaster is now known as “the Great East Japan Earthquake.”



Fig. 1: A tsunami-ravaged city in Miyagi Prefecture^[1]

1.1 Electricity Shortages

As power plants in Japan are mainly located along the coast, many of them, including Fukushima Daiichi Nuclear Power Plant, were severely damaged by the tsunami. Power supply to Kanto (Greater Tokyo) and Tohoku Regions was plunged by as much as 24 Gigawatts^[2] just after the earthquake.

Due to the electricity shortages, Tokyo Electric

Power Company (TEPCO) was forced to implement rolling blackouts in Kanto Region immediately after the earthquake. The government issued a national power-saving edict on July 1, 2011 for the first time in 37 years, under which large-scale power consumers served by TEPCO and Tohoku Electric Power Company (Tohoku Electric Power) were required to reduce electricity consumption by 15 percent from the previous year during peak summer weekday hours.

Therefore, there was an urgent need for recovery of power supply to address such circumstances.

1.2 Reconstruction Projects

After the earthquake, local authorities in the disaster-stricken area formulated their reconstruction plans. These plans include the relocation of residential areas to uplands to avoid the threat of future tsunami (Fig. 2) and the relocation of railway tracks inland to restore railway service.

It is unanimously agreed that these projects are of the highest priority for rebuilding the communities in the disaster-stricken area. On the other hand, as such relocations are accompanied by land development, there was concern over the environmental impacts.

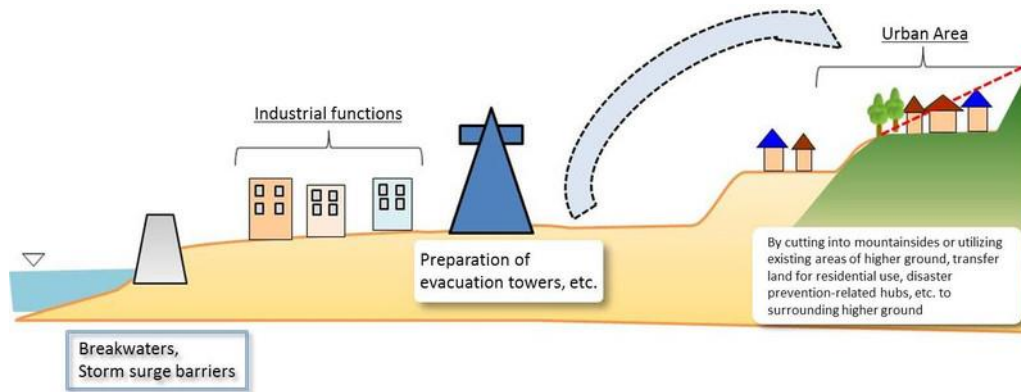


Fig. 2: Relocation of residential areas to uplands^[3]

2. Exemption of EIA Procedure Requirement for Supplementary Power Generation Facilities

2.1 Application of Provision on EIA Exemption for Disaster Recovery

There is a stipulation in the Japanese Environmental Impact Assessment Act (Act No. 81 of 1997, hereinafter referred to as the “EIA Act”) that a disaster recovery project is exempt from the EIA procedure.

Article 52

2. The provisions of Chapters II through IX of this Act shall not apply to the following:

(a) a disaster recovery project pursuant to Article 87 of the Basic Act on Disaster Control Measures (Act No. 223 of 1961);

(Note: Chapters II through IX stipulate EIA procedures. Chapter I, which stipulates the objectives and definitions of the Act, is not exempted.)

Recognizing that projects to supplement the lost power supply capacity of TEPCO and Tohoku Electric Power need to be implemented quickly in the aftermath of a disaster, both the Ministry of the Environment and the Ministry of Economy, Trade and Industry agreed that such projects are applicable to the exemption as stipulated in the EIA Act.

Consequently, in April 2011, the two ministries issued a document called “Implementation of Projects on Installation of Power Generation Facilities subject to the Exemption pursuant to Paragraph 2, Article 52 of the Environmental Impact Assessment Act”

(hereinafter referred to as “Implementation of Projects on Installation of Power Generation Facilities”), which meant that the exemption of the EIA procedure requirement was applied for the first time ever.

2.2 Scope of Exemption

The prerequisites for the exemption as stated in “Implementation of Projects on Installation of Power Generation Facilities” are:

- 1) *Supplementary power generation facilities shall be installed on the premises of the existing locations of power plants within the service area of each company (TEPCO / Tohoku Electric Power); and*
- 2) *Operations of supplementary power generation facilities shall be specified in restoration plans formulated by each company within 1 year after the date of the Great East Japan Earthquake (March 11, 2011), and shall start operation within approximately 3 years after that date.*

On formulating restoration plans, TEPCO or Tohoku Electric Power shall clarify the details (type, power output and layout of installed generators) of supplementary power generation facilities if the total output installed in a single power plant exceeds 112.5 MW, which would be normally subject to the EIA Act (Class-2 project scale). In case of any changes and supplements in the details mentioned above, the restoration plan is required to be revised each time.

As a result, TEPCO installed supplementary power generation facilities at 8 power plant sites with a total output of 2,844 MW (Table 1), and Tohoku Electric Power at 4 power plant sites with a total output of

1,034 MW (Table 2). (Note: These outputs in total only account for less than 20% of the lost power supply capacity, which is stated in 1.1.)

Table 1: Supplementary power generation facilities of TEPCO^[2]

Power Plants	Type of Generators / Fuels	Outputs (MW)
Anegasaki	Diesel / Oil	6 ^{*1}
Sodegaura	Gas engine / LNG	112 ^{*1 *4}
Chiba	Gas turbine / LNG	1,002 ^{*2}
Oi	Gas turbine / Utility gas	209
Kawasaki	Gas turbine / LNG	128
Yokosuka	Gas turbine / Oil	330 ^{*4}
Hitachinaka	Gas turbine & Diesel / Oil	253 ^{*3}
Kashima	Gas turbine / Utility gas or Oil	804 ^{*2}
(Total)		2,844

*1 Less than Class-2 project scale of the EIA Act

*2 Increase in output planned by retrofit combined-cycle

*3 Closed in March 2012

*4 Planned to be closed in the first half of 2013

Table 2: Supplementary power generation facilities of Tohoku Electric Power^[2]

Power Plants	Type of Generators / Fuels	Outputs (MW)
Higashi-Niigata	Gas turbine / Oil and LNG	393
Niigata	Gas turbine / Natural gas	34 ^{*1}
Hachinohe	Gas turbine / Oil	274 ^{*2}
Akita	Gas turbine / Oil	333
(Total)		1,034

*1 Less than Class-2 project scale of the EIA Act

*2 Increase in output planned by combining steam power generation

2.3 Alternative to EIA Procedures

In spite of the exemption of the EIA procedure requirement pursuant to the provisions of the EIA Act, it is recommended in “Implementation of Projects on Installation of Power Generation Facilities” that

TEPCO and Tohoku Electric Power implement voluntary EIAs in order to minimize possible environmental impacts caused by these projects.

Such voluntary EIAs include:

- Consideration to minimize environmental impacts,
- Close communications to local governments and citizens, and
- Announcement of measures for protecting the environment.

Based on this recommendation, TEPCO and Tohoku Electric Power, respectively, published a “document on environmental consideration” for each of these facilities before installing them, and a “result on environmental monitoring” after commencing their operations.

According to the survey conducted by the Ministry of the Environment^[2], adequate measures for protecting the environment have been taken for installed supplementary power generation facilities, and no concerns about serious environmental impacts have been reported.

3. Special EIA Procedure for Disaster Reconstruction Projects

3.1 Special Provisions for EIA Procedure

Large-scale reconstruction projects, especially the above-mentioned relocation of residential areas or railway tracks, could have serious impacts on the environment, and the exemption of the EIA procedure requirement was not applicable. On the other hand, a normal EIA procedure, which takes approximately 3 years to complete, would hamper speedy implementation of reconstruction projects.

To balance speedy implementation of projects and environmental conservation, a simplified EIA procedure (hereinafter referred to as “special EIA procedure”) was established in the Law for Special Zone for Great East Japan Earthquake Reconstruction (Act No. 122 of 2011) as an exemption from the normal EIA procedure. The special EIA procedure applies to land readjustment projects to relocate residential areas to uplands or railway projects to restore railway service that were designated in municipalities’ land restructuring plans.

In the special EIA procedure, the municipality in the disaster-stricken area, with the help of the project proponent, conducts EIA (survey, forecast and evaluation) and prepares a document called a “Designated Special Environmental Impact Statement (Designated Special EIS).” (Fig. 3)

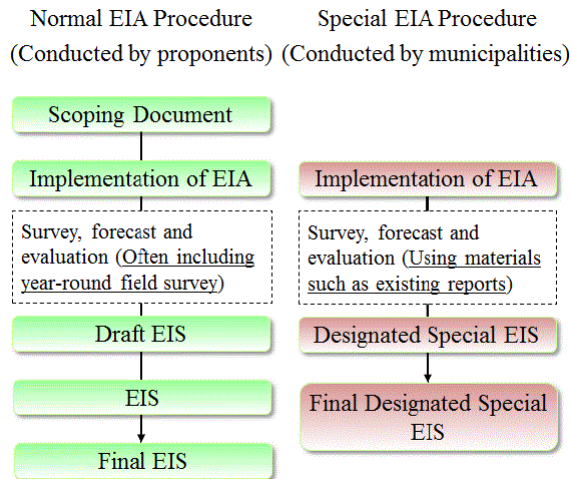


Fig. 3: Comparison of normal EIA procedure and special EIA procedure

The Designated Special EIS integrates the “Scoping Document,” “Draft EIS” and “EIS” required in the normal EIA procedure. In addition, surveys to consider measures for protecting the environment can be made based on existing reports or interviews with experts, whereas in the normal EIA process activities such as all-year-round field surveys for important animals and plants are almost always required.

Due to these methods of simplification, the duration of EIA procedures is expected to be reduced up to 6 months, while maintaining the opportunity for public comments and submission of comments from national and local governments.

3.3 Example of Special EIA Procedure

In January 2013, a “Designated Special EIS” for a restoration project of the Joban Rail Line was published jointly by three towns located in the disaster-stricken area.

This project will be implemented by East Japan Railway Company, the proponent, to restore the railway service in the disaster-stricken area where the railway tracks were swept away by the tsunami. The

project plan includes the relocation of stations and railway tracks in accordance with the relocation of residential areas. (Fig. 4)



Fig. 4: Relocation of Joban Rail Line

It is notable that this Designated Special EIS states, in addition to the results of brief field surveys conducted twice, that the proponent will conduct a four-season survey (comparable to that of a normal EIA procedure) after the special EIA procedure is finished and before the project starts, for the forecast of the environmental impacts on flora and fauna, and, if necessary, it will consider additional measures for protecting the environment.

This four-season survey in this case was enabled in parallel with other processes, such as land acquisition.

4. Conclusion

In response to the Great East Japan Earthquake, the Ministry of the Environment established reduced EIA procedures for disaster reconstruction projects (the exemption of the EIA procedure requirement and the introduction of the special EIA procedure) such as by skipping or integrating the steps required in the normal EIA procedure, and by simplifying the methods of survey. It is expected that speedy disaster reconstruction in harmony with environmental conservation will be achieved through these systems.

Regarding the special EIA procedure on residential relocation, some steps in the normal EIA procedure are skipped (i.e. Scoping Document and Draft EIS) as mentioned above, which can surely reduce the chance of public involvement. However, city planning procedure runs in parallel with this special EIA procedure, and public involvement processes are included in city planning procedure as well. Also, disaster affected residents are surely keenly interested in the rapid reconstruction of their home town, although environmental issues are important as well. Therefore, we think this choice is the “happy middle ground.”

So far, no concerns have been reported about serious environmental impacts caused by the projects stated above. But these systems, the exemption and the special EIA procedure, involve increased uncertainty about the forecast of environmental impacts due to the simplification. Therefore, it is important, although it is not a legal requirement, to continue follow-up surveys and monitoring as well as to consider, if necessary, additional measures for protecting the environment.

As this is the first experience in Japan to exempt or simplify the EIA procedure requirement, the Ministry of the Environment will continue to monitor closely and carefully whether these systems function well to achieve the purpose.

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