

March 12, 2011 Nuclear and Industrial Safety Agency

Seismic Damage Information(the 13th Release) (As of 11:00 March 12, 2011)

Nuclear and Industrial Safety Agency (NISA) confirmed the current situation of Higashidori and Onagawa NPSs, Tohoku Electric Power Co., Inc

Higashidori, Fukushima Dai-ichi, Fukushima Dai-ni and Kashiwazaki-Kariwa NPSs, Tokyo Electric Power Co., Inc. and electricity, gas, heat supply and complex as follows:

- 1. Summary of Damage(Earthquake at Sanriku-Oki)
- (1) Time of Occurrence: 14:46 (UTC 5:46) March 11, 2011, Friday
- (2) Epicenter: Off-Coast of Sanriku (North Latitude: 38; East Longitude: 142.9), 10km deep, M8.8
- (3) Seismic Intensity in Japanese Scale
- <Area of Seismic Intensity Larger Than and Including 4>
- 7: Northern Miyagi Prefecture
- 6+: Northern and southern Ibaraki Prefecture
- 5+: Sanpachi-Kamikita Aomori Prefecture
- 5-: Chuetsu, Niigata Prefecture
- <Municipality of Seismic Intensity Larger than and Including 4>
 - 6+: Naraha Machi, Tomioka Machi, Ookuma-machi, and Futaba-machi, Fukushima Prefecture
 - 6-: Ishinomaki-city and, Onagawa town (by Seismograph of NPP)of , Miyagi Prefecture and Tokaimura, Ibaraki Pref.
 - 5-: Kariwa-village, Niigata Prefecture
 - 4: Rokkasho-village, Higashidori-village, Aomori Prefecture, Kashiwazaki-city, Niigata Prefecture and Yokosuka-city, Kanagawa Prefecture



1: Tomari-village, Hokkaido

- 2. The status of operation at Power Stations(Number of automatic shutdown(units): 10 (as of 11:00, March12)
- a. Onagawa Nuclear Power Station (Onagawa-machi and Ishinomaki-shi, Miyagi Prefecture)
- (1) The status of operation

Unit 1 (524MWe): automatic shutdown

Unit 2 (825MWe): automatic shutdown

Unit 3 (825MWe): automatic shutdown

(2) Readings of monitoring post etc.

Variation in the monitoring post readings: No

Variation in the main stack monitor readings: No

(3) Report concerning other malfunction

It is confirmed Smoke in the first basement of the Turbine Building was confirmed the extinguished at 22:55 on March 11th.

 Fukushima Dai-ichi Nuclear Power Station, Tokyo Electric Power Co., Inc. (TEPCO)

(Okuma-machi and Futaba-machi, Futaba-gun, Fukushima Prefecture)

(1) The status of operation

Unit 1 (460MWe): automatic shutdown

Unit 2 (784MWe): automatic shutdown

Unit 3 (784MWe): automatic shutdown

Unit 4(784MW): in periodic inspection outage

Unit 5(784MW): in periodic inspection outage

Unit 6(1,100MW): in periodic inspection outage

(2) Readings at monitoring post etc.

From 04:00, March 12 by the measurement of radioactive materials in the surrounding area of the power station using monitoring cars. (As of 09:40, March12)It was confirmed that radioactivity was increased compared to the one at 04:00, March 12.

MP6 (near the main gate) 0.07microSv/h ->5.1 micro Sv/h

(04:00, March12->09:10, March 12)

MP8 (observation platform) 0.07microSv/h ->2.9 micro Sv/h

(04:00, March 12->09:40, March 12)



(3) Report concerning other malfunction

Article 10* of Act on Special Measures Concerning Nuclear Emergency Preparedness (Fukushima Dai-ichi)

(*A heightened alert condition)

Article 15** of Act on Special Measures Concerning Nuclear Emergency Preparedness (Fukushima Dai-ichi, Units 1 and 2)

(** Nuclear emergency situation)

Situation of power source to recover water injection function at the Station.

-Cable from electric power generating cars are under connecting work(as of 11:00, March 12)

Pressure in the containment vessel has arisen. Steam release is undertaking in order to relieve pressure.

c. Fukushima-Daini Nuclear Power Station(TEPCO)

(Naraha-cho/Tomioka-cho, Futaba-gun, Fukushima pref.)

(1) The status of operation

Unit1(1,100MW): automatic shutdown

Unit2(1,100MW): automatic shutdown

Unit3(1,100MW): automatic shutdown

Unit4(1,100MW): automatic shutdown

(2) Readings at monitoring post etc.

Variation in the monitoring post readings: No

Variation in the main stack monitoring readings: No

(3) Report concerning other malfunction

Report of fire: No

Article 10* of Act on Special Measures Concerning Nuclear Emergency

Preparedness (Fukushima Dai-ni, Unit 1)

(*A heightened alert condition)

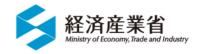
Article 15** of Act on Special Measures Concerning Nuclear Emergency

Preparedness (Fukushima Dai-ni, Units 1,2 and 4)

(**Nuclear emergency situation)

3. Industrial Safety

- Electricity
- * Tokyo Electric Power Co. (as of 10:49, March 12, 2011)



Scale of loss of electrical power: approx. 970 thousand houses

Power loss area:

Ibaraki Pref.: Whole area,

Tochigi Pref.: Whole area of eastern part, Utsunomiya-shi, Mooka-shi

Chiba Pref.: Katori-shi, Yamatake-shi

* Tohoku Electric Power Co. (as of 09:00, March 12, 2011)

Scale of loss of electrical power: approx.4,220 thousand houses (under investigation)

Power loss area:

Aomori Pref.: Whole area Iwate Pref.: Whole area, Akita Pref: Whole area Miyagi Pref: whole area

Yamagata Pref: Almost whole area

Fukushima Pref: Some area Niigata Pref.: Some area

* Hokkaido Electric Power Co. (as of 10:00, March 12, 2011)

Scale of loss of electrical power: approx.160 houses

Power loss area: Samani-shi

*Chubu Electric Power Co. (as of 07:30, March 12, 2011)
Scale of loss of electrical power: approx.100 houses(Nagano prefecture),

• General Gas(as of 10:20, March 12)

The Japan Gas Association dispatched its six advance teams of thirty staff (five teams for Sendai and one team for Joban area) at 07:00, 12 March upon request from Sendai-shi.

Sendai-city municipal Gas, Kesennuma-city municipal Gas, Ishinomaki Gas have trouble contacting. The Japan Gas Association confirmed that there are no supply disruption in the supply area of city gas in Hokkaido, Aomori, Yamagata, and Akita prefecture.

^{*} Tokyo Gas Co.



Hitachi branch: 30,008 houses are in supply disruption. There is no damage in equipment, however, equipment in inoperable due to loss of power. Walkdown unit of eight person departed at 18:45, March 11 and already arrived at 06:00, March 12. Time of recovery is not certain.

Eastern part of Joso: 453 houses were in supply disruption in Ushiku (supply restarted at 17:10, March 11)

471 houses were in supply disruption in Ushiku-shi Ushiku-cho(supply restarted at 22:36 March11)
77 houses are in supply disruption in Ryuugasaki(supply restarted at 16:20, March 11)
40 houses are in supply disruption in Nishi-ku, Yokohama-shi(supply restarted at 17:29, March 11)

Gas leaked from a Nozzle of an LNG tank at Sodegaura but no ignition(restored on 02:30, March 12)

- *Gas Bureau of Sendai-shi: whole supply disruption (approx.360 thousand houses)
- *Shiogama Gas Co.: approx.12,000 houses are in supply disruption (all of supply area is out of service due to no supply from Gas Bureau of Sendai)
- *Kamaishi Gas Co.: approx.10,000 houses are in supply disruption. First floor of this Gas facility sank.
- *Hatano Gas Co.: 330 houses are in supply disruption
- *Keiyo Gas Co.: Leakage occurred at 5 locations of middle pressure conduit

 Leakage occurred at many parts of Low pressure conduits

 5,445 houses in Urayasu-shi are in supply disruption.

 Supply to Yachiyo Station stopped.
- *Kujukuri choei Gas: Approx 258 houses are in supply disruption.
- *Atsugi Gas Co: leakage occurred at 1 location of middle pressure condit.
- *Fukushima Gas Co.: Approx. 2,726 houses are in supply disruption
- *Tohoku Gas(part of Shirakawa-shi): 300 houses are in supply disruption
- *Joban kyodo Gas(Iwaki-shi): 14,000 houses(whole customer) are in supply disruption
- *Tobu Gas(Tsuchiura-shi): 7,500 houses are in supply disruption
- *Tosai Gas(Kasukabe-shi) Gas leakage occurred from conduit. 150 houses in apartment are in supply disruption
- *Odawara Gas(Odawara-shi)



leakage occured at 1 locations of low pressure branch conduit and 3 locations of ex-core inner conduit and have restored at 21:30 11 March. Other areas are under investigation.

oCommunity Gas(as of 10:20, March 12)

Severe damage has not been reported to Japan Community Gas Association so far. No information is available about the damage in North part of Ibaraki prefecture.

*Tokyo Gas energy(North part of Ibaraki): Factory stopped supply to 943 houses in Nakago-New Town due to the leakage from pipe.

*Satoh Kosan (based in Iwatsuki-ku, Saitama City) Iwatsuki-housing complex: Gas leakage occurred from conduit. 451 sites are in supply disruption.

*Syutoken Gas(based in Sakura-City) Chitose-housing complex:1,320 houses are in supply disruption

*Kashima Marui Gas(Kamisu-shi):Gas conduit was damaged. 527 houses are in supply disruption. Time of recovery is not certain.

*Imaichi Gas: Gas leakage occurred from conduit at the simple gas complex in Nikko-shi: 240 houses were in gas supply disruption.

*Nihon Gas: Gas leakage occurred from conduit at simple gas complex in the jurisdiction: 76 houses in Nasu-karasuyama-shi, 97 houses in Inashiki-shi, 594 houses in Tokai-mura, Natsu-gun, 370 houses in Yaita-shi, and 3299 houses in Itako-shi were in gas supply disruption.

These areas other than Itako-shi will be restored on March 12. Residents in 1876 houses of Hinode housing complex in Itako-shi evacuated from this region due to liquefaction of the ground. Time of recovery is not certain.

212 houses in Noda-shi were in gas supply disruption. This area was supposed to be restored in March 11.



- *Horikawa Industry (Bando city, Ibaraki Pref.): Iwai Greenland Due to liquefaction of the ground, 566 houses are in supply disruption.
- *Tajima: 250 houses were in gas supply disruption at the simple gas complex in Hachiooji-city. This area will be restored within March 12.
- Gas conduit Operators(as of 10:20, March12)
- *JX Nikko Nisseki Energy: Hachinohe LNG Station

Premise, electric room and in-house electricity generator equipment, were flooded by the 2^{nd} wave of tsunami and the gas supply was stopped.

According to Japan National Gas Association, there are no damage to pipelines of conduit-trans port companies.(as of 23:00, March 11)

- oHeat supply(as of 10:20, March12)
- *Yamagata Netsu Kyokyu(Yamagata-shi): Stopped heat supply
- *Onahama Haiyu(Onahama, Iwaki-shi): stopped heat supply due to the breakage of pipe. Heat supply pipes underground might be affected. Time of recovery is not certain.
- *"HITACHI NETSU ENERGY" (Hitachi City): stopped heat supply due to the electrical outage at 15:19, March11.
- *"CHIBA NETSU KYOKYU"(Chiba-city): stopped freezer, etc. at 16:19, March 11. Supply was stopped and walkdown is conducted at 16:19, March 11.
- *"NISHI-IKEBUKURO NETSU KYOKYU": stopped freezer and boiler at 15:45, March 11.

*"TOKYO NETSU KYOKYU";

- -stopped boiler in Takeshiba and Yurakucho areas at 15:20, March 11
- -stopped supply to one of the building complex at Hikarigaoka for approx. 3 hours due to the leakage of pipe at 21:35, March 11(Restart supplying at 00:05, March 12)



*"Yokohama Business Park NETSU KYOKYU (Hodogaya-ku, Yokohama city)

15:50 Stopped steam and cold water supply to PREZZO building 16:20 restored by temporary repair

- ○Complex(as of 11:00, March 12)
- *Cosmo Oil factory Chiba branch

A column of Butane Butylene storage tank was broken. Fire occured due to gas leakage. One person suffered serious-injury, 4 persons suffered minor injury.

- *JX Nippon Oil&Energy Corporation Sendai oil factory(sendai-city, Miyagi prefecture)
- -Fire occured from an explosion of low temperature LPG tank
- 4. Action taken by NISA

(March 11)

14:46 Set up of the NISA Emergency Preparedness Headquarters (Tokyo) immediately after the earthquake

15:42: TEPCO reported to NISA in accordance with Article 10 of the Act on Special Measures Concerning Nuclear Emergency Preparedness regarding Fukushima Dai-ichi, Units 1,2 and 3.

16:36: TEPCO judged the event in accordance with Article 15 of the Act for Special Measures Concerning Nuclear Emergency Preparedness regarding Fukushima Dai-ichi, Units 1 and 2.(notified to NISA at 16:45)

18:08: Unit 1 of Fukushima Dai-ni notified NISA of the situation of the Article 10 of Act on Special Measures Concerning Nuclear Emergency Preparedness.

18:33: Units 1,2 and 4 of Fukushima Dai-ni notified NISA of the situation of the Article 10 of Act on Special Measures Concerning Nuclear Emergency Preparedness.

19:03: Government declared the state of nuclear emergency

20:50: Fukushima prefecture's emergency preparedness headquarters - issued a directive regarding the accident occurred at Fukushima-Dai-ichi Nuclear Power Station, TEPCO that the residents living in the area of 2km radius from Unit 1 of the Nuclear Power Station must evacuate.(The



population of this area is 1,864)

21:23: Directives from Prime Minister to Governor of Fukushima, Mayor of Ookuma and Mayor of Futaba were issued regarding the accident occurred at Fukushima-Dai-ichi Nuclear Power Station, TEPCO, pursuant to Paragraph 3, Article 15 of the Act for Special Measures Concerning Nuclear Emergency Preparedness as follows:

- -Residents living in the area of 3km radius from Unit 1 of the Nuclear Power Station must evacuate.
- -Residents living in the area of 10km radius from the Unit 1 must take sheltering.

(March12)

- 5:22 Unit 1 of Fukushima Dai-ni notified NISA of the situation of the Article 15 of Act on Special Measures Concerning Nuclear Emergency Preparedness.
- 5:32 Unit 2 of Fukushima Dai-ni notified NISA of the situation of the Article 15 of Act on Special Measures Concerning Nuclear Emergency Preparedness.
- 05:44 Residents living in the area of 10km radius from unit 1 of the Nuclear Power Station must evacuate by the Prime Minister Direction.
- 06:01 Regarding Units 1,2 and 4 of Fukushima Dai-ni NPS, TEPCO reported NISA in accordance with Article 15 of Act on Special Measures Concerning Nuclear Emergency Preparedness.
- 7:45 Directives from Prime Minister to Governor of Fukushima, Mayors of Hirono, Naraha, Tomioka, Ookuma and Futaba were issued regarding the accident occurred at Fukushima-Dai-ni Nuclear Power Station, TEPCO, pursuant to Paragraph 3, Article 15 of the Act for Special Measures Concerning Nuclear Emergency Preparedness as follows:
 - -Residents living in the area of 3km radius from Fukushima-Dai-ni Nuclear Power Station must evacuate.
 - -Residents living in the area of 10km radius from Fukushima-Daini NPS must take aheltering



Earthquake at Nagano Prefecture

- 1. Summary of Damage(Earthquake at north part of Nagano prefecture)
- (1) Time of Occurrence: 3:59 (UTC 18:59) March 12, 2011, Saturday
- (2) Epicenter: North part of Nagano Prefecture(North Latitude: 37; East Longitude: 138.6), 10km deep, M6.6
- (3) Seismic Intensity in Japanese Scale

<Area of Seismic Intensity>

5-: Kashiwazaki-city, Niigata prefecture and Kariwa-village, Niigata prefecture.

2. Status of operation at Power Stations

- a. Kashiwazaki-Kariwa Nuclear Power Station, Tokyo Electric Power Co., Inc.(TEPCO)
- (1) The status of operation

Unit1(1,100MW): Keep operation

Unit2(1,100MW): in periodic inspection outage Unit3(1,100MW): in periodic inspection outage Unit4(1,100MW): in periodic inspection outage

Unit5(1,356MW): Keep operation Unit6(1,356MW): Keep operation Unit7(1,356MW): Keep operation

(2) Readings of monitoring post etc.

Variation in the monitoring post readings: No Variation in the main stack monitor readings:No

- (3) Report concerning other malfunction Report of fire: No
- 3 Industrial Safety

oGeneral Gas



Nagano municipal gas (Nagano city), Joetsu municipal gas, Myouko municipal gas, Ojiya municipal gas, Mitsuke municipal, Kashiwazaki municipal gas, Nagaoka of Hokuriku (Nagaoka city) gas are confirmed there are no supply disruption

*Facilities which have confirmed safety will be eliminated from the next press release.



$Status\ of\ Residents\ Evacuation$ (Information from the Resident Safety Team of OFC at 10:50 March 12)

Resident Safety Team of ERC

Ookuma-cho	Completed two thirds of residents confirmed			
Futaba-cho	Completed 80% of confirmed residents confirmed			
Tomioka-cho	Confirming number of residents, difficult to forecast due to			
traffic jam				
Namie-cho	Confirming number of residents, difficult to forecast due to			
traffic jam				
Naraha-cho	Confirming number of residents, difficult to forecast due to			
traffic jam				

^{*}Evacuation has not completed yet.

Residents live in 10km radius

Vicinity of	Fukushima	Vicinity of Fukushima Daini		
Daiichi				
	0-10km		0-3km	0-10km
Tomioka-cho	14,808	Tomioka-cho	6,534	15,961
Ookuma-cho	11,363	Ookuma-cho	-	7,127
Futaba-cho	7,243	Futaba-cho	-	1,238
Namie-cho	17,793	Namie-cho	1,515	8,100
Total	51,207	Total	8,049	32,426

Facilities which have confirmed safety will be eliminated from the next press release.

(Contact Person)

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^{*}Residents are to be evacuated another refuges if present one is full.

