Summary of Press Conference Comments Made by Makoto Yagi, FEPC Chairman, on April 20, 2012

I am Makoto Yagi, Chairman of FEPC. Thank you for taking the time to be here.

Today, I would like to report on efforts by the electric power companies to improve the safety of nuclear power stations, the evaluation of the impact of large-scale introduction of solar power on the electric power grid, and a change in the FEPC board of directors.

1. New Framework for Japanese Electric Industry to Enhance Reactor Safety

First, I would like to report on the comments I made on our efforts to improve nuclear safety during the Annual Conference of the Japan Atomic Industrial Forum held for two days from April 18.

This international conference attracts experts from Japan and abroad who gather to discuss important issues concerning energy, in particular the peaceful use of nuclear energy. In this year's conference, the 45th, on the subject of "Searching for the Path to Rehabilitation", the participants confirmed the facts learned during one year since the Fukushima Daiichi Nuclear Power Station’s accident, and expressed their views on lessons to be learned from the accident and actions to be taken for rehabilitation.

In the session in which I participated, chaired by Mr. Matsuura, Chairman of the Nuclear Safety Research Association, five experts including Mr. Stricker, Chairman of the World Association of Nuclear Operators (WANO), spoke on the nuclear safety activities under way in each country.

In closing the session, Mr. Matsuura commented that "Knowledge and ideas on safety were shared by various countries in this session. The path to restoring public trust is putting these ideas into reality." The annual conference was highly inspiring for the FEPC as well as other participants.

On the subject of "New Framework for Japanese Electric Industry to Enhance Reactor Safety ", shown in Document 1, I explained that the electric power companies have taken thorough safety measures such as multiplying and diversifying power supplies and core-cooling functions and installing countermeasures against submergence, and have also performed stress tests to quantitatively demonstrate that the plants have an adequate safety margin even if incidents of unforeseeable intensity occur, in order to prevent a repetition of the Fukushima Daiichi Nuclear Power Station’s accident.

I emphasized an essential point that there is no end to efforts for improving nuclear safety, and my determination to strive toward the highest level of safety in the world, based on the experience of the accident.

Please look at Page 26. Although we consider that the emergency safety measures and voluntary actions taken by electric power companies provide sufficient safety to prevent an accident as serious as the one in last year, we will take further safety measures including installing permanent emergency power generators and ventilators with filters.

Furthermore, in order for the electric companies to improve safety voluntarily and continuously, a new organization will be established by the whole nuclear power industry to lead the electric power companies toward the world’s highest safety level by incorporating the latest knowledge and information from both Japan and overseas, without being bound by traditional approaches.

As announced, as the president of the Kansai Electric Power Company, I submitted the "Implementation plan for measures to improve safety and reliability" for Units 3 and 4 at Ohi Nuclear Power Station to the Minister of Economy, Trade and Industry on April 9 last week.

For Japan, which inherits few energy resources, nuclear energy is an essential power source. We will continue to enhance nuclear safety as our most important management policy, spend the management resources required, and strive to achieve safety at the highest level in the world.

2. Evaluation of the impact of large-scale introduction of solar power into the electric power grid

Secondly, I would like to report on the results of an analysis on the impact of large-scale introduction of solar power into the electric power grid, which the electric power industry has been carrying out since 2009 and was recently completed. Please look at Document 2*.

*) Document 2 is omitted on this web release.

Each electric power company precisely controls the output of thermal and other power plants in accordance with the constantly-changing electricity demand, to ensure that the supply and demand for electricity are balanced. In the future, if large volumes of solar power generation are introduced, changes in demand will be combined with unforeseeable fluctuations in output, making it even harder to manage the demand-supply balance of electricity.

Thus, we are currently developing a next-generation system that forecasts the output fluctuations of solar power and appropriately controls the power sources installed in purpose of adjustment. As a first step, we have installed pyranometers and thermometers in 321 places nationwide, among which solar power panels were also installed in 116 places, and gathered and analyzed the output data from them.

As a result, it was confirmed that there were observed a possible smoothing effect on photovoltaic power generation systems dispersed in a large area; the fluctuation of outputs of many photovoltaic power generation systems in a large area will be mutually mitigated, or smoothen in total..

Furthermore, an analysis of a hypothetical situation with a large amount of photovoltaic power generation (28 million kW) showed that the range of smaller fluctuations of relatively short cycles of about 20 minutes becomes smaller by smoothing effect, while the range of fluctuations with longer cycles can reach 10 to 15% of the maximum power.

While further data must be gathered and analyzed as both short and long cycle fluctuations will be affected by the degree of introduction of photovoltaic power generation, to handle these fluctuations it is necessary to forecast the size and timing of the fluctuations and to keep the adjustment power sources ready in an efficient manner.

Thus, in collaboration with 17 corporations including the University of Tokyo, the Japan Weather Association and electronics manufacturers, we are developing a technology to forecast the power output for one day or several hours ahead, using weather forecasting technology.

Currently, in preparation for the launch of the feed-in tariff system of renewable energies in July this year, a government-run committee is working on the detailed design.

We will continue to promote the development of the "Japanese smart grid" to ensure a stable supply of electricity even when large amounts of solar power are introduced into the grid.

3. Change in the FEPC board of directors

Lastly, I would like to report a change in the FEPC board of directors, which was decided at today’s General Policy Meeting, as reported in Document 3. Mr. Sato, President of Hokkaido Electric Power Company, has retired as president of the company as of March 29 and hence resigned as Vice Chairman of FEPC, and will be replaced by Mr. Kyuwa, President of Hokuriku Electric Power Company. There are no other changes in the board of directors.

This is all for today. Thank you for your kind attention.

New Framework for Japanese Electric Industry to Enhance Reactor Safety

April 19, 2012

The Federation of Electric Power Companies of Japan (FEPC)

Outline of the Accident at Fukushima Dai-ichi NPP and Counter Measures

Overview of the Accident (1/2)

- Reactors shut down automatically by the earthquake and emergency power systems were actuated.
- All electric powers including emergency power were lost due to tsunami and reactor cooling function were lost.

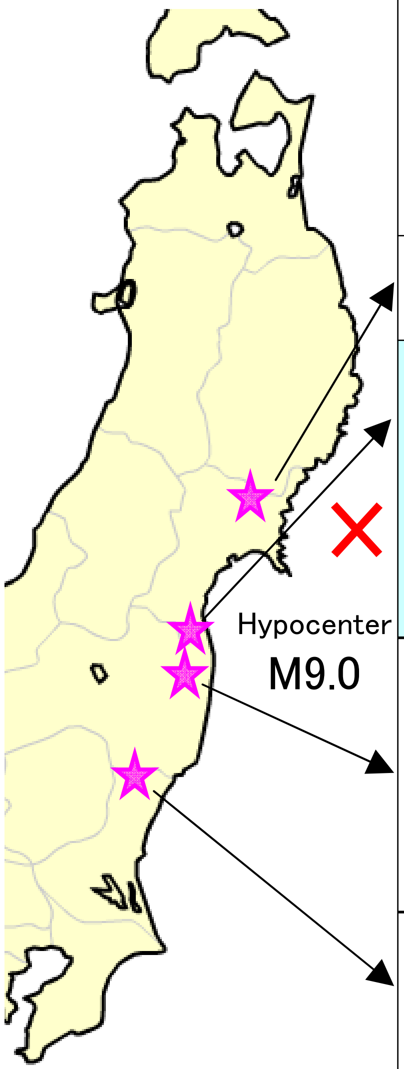
【Effects of earthquake】

- ○ All reactors shut down automatically by the earthquake struck.
- ○ All emergency diesel generators (EDG) automatically actuated.
  (Off-site power was lost due to a landslide around the off-site transmission tower.)
- ○ Components necessary for cooling the reactors functioned properly.

【 Effects of tsunami】

- ● Important facilities such as EDG, switchboards and batteries were flooded.
- ● Seawater pumps (SWP) were damaged and the ultimate heat sink (UHS) was lost
  (loss of reactor cooling functions).
- ● All AC power was lost (all off-site power and emergency diesel generators were lost).

Overview of the Accident (2/2)



○: Outage	Earthquake: Power Supply (Off-Site Power/EDG)	Earthquake: Cooling Function SWP	Tsunami: Tsunami Height (m)	Tsunami: NPP Altitude (m)	Tsunami: Power Supply Off-site Power	Tsunami: Power Supply EDG	Tsunami: Cooling Function SWP	Fuel Damage
Onagawa 1,②,3	○ (○/○)	○	13	13.8	○	○	○	Intact
Fukushima Dai-ichi 1,2,3,④ ⑤,⑥	○ (×/○)	○	15.5 (Submer-ged)	10 (Unit 1 to 4) 13 (Unit 5,6)	× (Tsunami)	Unit 1 to 5 × Unit 6 ○	Unit 1 to 4 × Unit 5,6 ×→○ A few days later	Unit 1 to 3 (Damaged) Unit 4 to 6 (Intact)
Fukushima Dai-Ni 1,2,3,4	○ (○/○)	○	14.5 (Submer-ged)	12	○	Unit 1,2 × Unit 3,4 ○	Unit 1,2,4 ×→○ A few days later Unit 3 ○	Intact
Tokai Dai-ni 1	○ (×→○/○) A few days later	○	5.3	8	Earthquake ×→○ A few days later	○	○	Intact

Safety Measures

- Loss of electric supply and cooling function due to tsunami continued for a long time, causing a serious situation with severe damage to the fuel and failure of containment vessels.
- Apply multiple and diversified measures to maintain electric power and water supply and to prevent flooding in order to prevent similar severe accident.

【Safety Measures】

Point of View

Never happen a similar severe accident again

"**Multiplexing**" and "**Diversification**"

for "to shut off" and "to confine" function

- ○ Assurance of power supply
- ○ Assurance of water supply
- ○ Measures against flooding

Measures to Enhance Nuclear Safety
(Emergency Safety Measures)

Status of Response for Assurance of Power Sources

(Example at Ohi NPP of Kansai Electric Power)

- Power supply vehicles and emergency air-cooled generators were applied to assure electric supply. And, install of permanent emergency air-cooled generators are planned.
- Established the organization, drills and procedures for emergency preparedness

Application of equipments and components
(allocated at 30m above sea water level)

Fuel : Heavy oil (Enable 85 days continuous operation without fuel supply from outside of NPP.)

Total : 2330kVA

For monitoring instruments

Main Control Room

4 power supply vehicles (3 buck-up)

Total : 4730kVA

Increased capacity

Enable to operate M/D-AFWP

Additional 3 Power Supply vehicles

Total : 14600kVA

Expansion of means for core cooling

・Boron Acid Pump
・RHR System

8 emergency air-cooled generators

Diversification of power supply sources

・ECCS
・SWP etc.

4 permanent emergency air-cooled generators (planned)
(in the mid- to long-term)

Cables are installed in advance in order to supply power from the emergency air-cooled generators to MCR and cooling systems in timely manner

Drills and Procedures

Measures for rapid connection of deployed power supply vehicles and emergency air-cooled generators to the appropriate points:

○ **Establish the Organization**

Out-of-hours	Always 8 members are on standby

○ **Prepare Procedures**

○ **Perform Drills**

Power supply vehicles deployment, power cables connection and power supply vehicles operation

○ **Feedback on drills**

・Wearing headlamps for nighttime work
・Improving the shape of connection terminals for ease of work, etc.

○ **Reduction of time required for connection by improving facilities**

Power supply vehicles: 135 minutes ⇒
Emergency air-cooled generator: 78 minutes
(Actual time required to complete power supply to all units during the drill)

Status of Installation of Emergency Air-Cooled Generators
(Example at Ohi NPP of Kansai Electric Power)

- Installed at a location higher than 30 m above sea level
- Rapid connection by installation of connection board and cables

Emergency air-cooled generators

Capacity : 3,650kVA
(1,825kVA×2)

Connection board

Installation of cables

Status of Response for Assurance of Water Sources

(Example at Ohi NPP of Kansai Electric Power)

- Fire pumps, mobile engine-operated seawater pumps and large capacity pump were applied to assure water supply.
- Established the organization, drills and procedures for emergency preparedness

Application of equipments and components

Fuel : Gasoline (Enable 16 days continuous feeding without fuel supply from outside of NPP.)

Feeding Capacity

Assurance of means for cooling

・Core cooling (HSD)
・SFP

25 fire pumps

Further cooling of the core

・Core cooling (CSD)

28 additional fire pumps

Diversification of power supply sources

Cooling of diesel generator

30 mobile engine-operated seawater pumps

Substitute for seawater pump

Feeding water to reactor component cooling system

1 large-capacity pump

Total of 88 fire pumps were deployed (including backup pumps)

Total of 32 seawater pumps were deployed (including backup pumps)

Deployed in Dec. 2011 (training was completed)

Drills and Procedures

For rapid installation of the deployed fire pumps, etc. to the appropriate points:

○ **Establish the Organization**
○ **Prepare Procedures**
○ **Perform Drills**

Feed to SG
Feed to SFP
Transition to CSD

Installation of pumps, hoses
Operation of pumps and refilling fuel

○ **Feedback on drills**
・Points where pumps should be installed were marked.
・Radios were deployed for close communication, etc.

○ **Number of standby equipment and supplies**
・A total of 87 fire pumps were deployed, although only 53 are required.
・A total of 670 hoses were deployed, although only 631 are required.

Status of Installation of Large Capacity Pump
(Example at Ohi NPP of Kansai Electric Power)

- Installed at a location higher than 30 m above sea level
- Move to the designated point, then pump seawater

Large Capacity Pump

Pump Starting-up

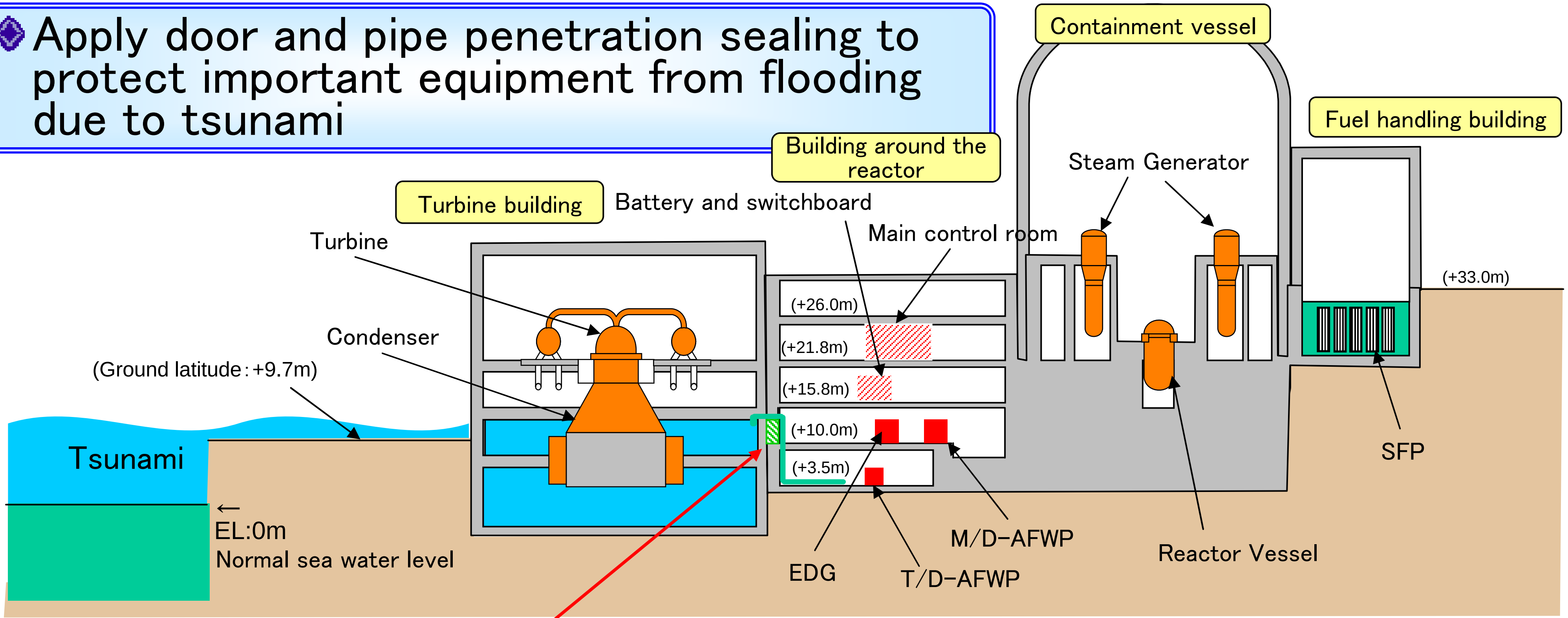
Capacity:
1,320 m³／hr

Discharge Side

Suction Side

Status of Response for Measures to Protect from Flooding
(Example at Ohi NPP of Kansai Electric Power)

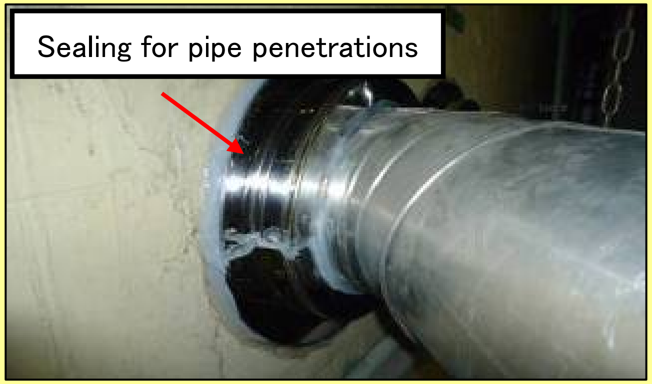
◆ Apply door and pipe penetration sealing to protect important equipment from flooding due to tsunami



Measures to protect facilities from tsunami

Sealing for the door

Sealing for pipe penetrations



Examples of equipments applied submersion protection

Facilities required for supplying power to the main control room

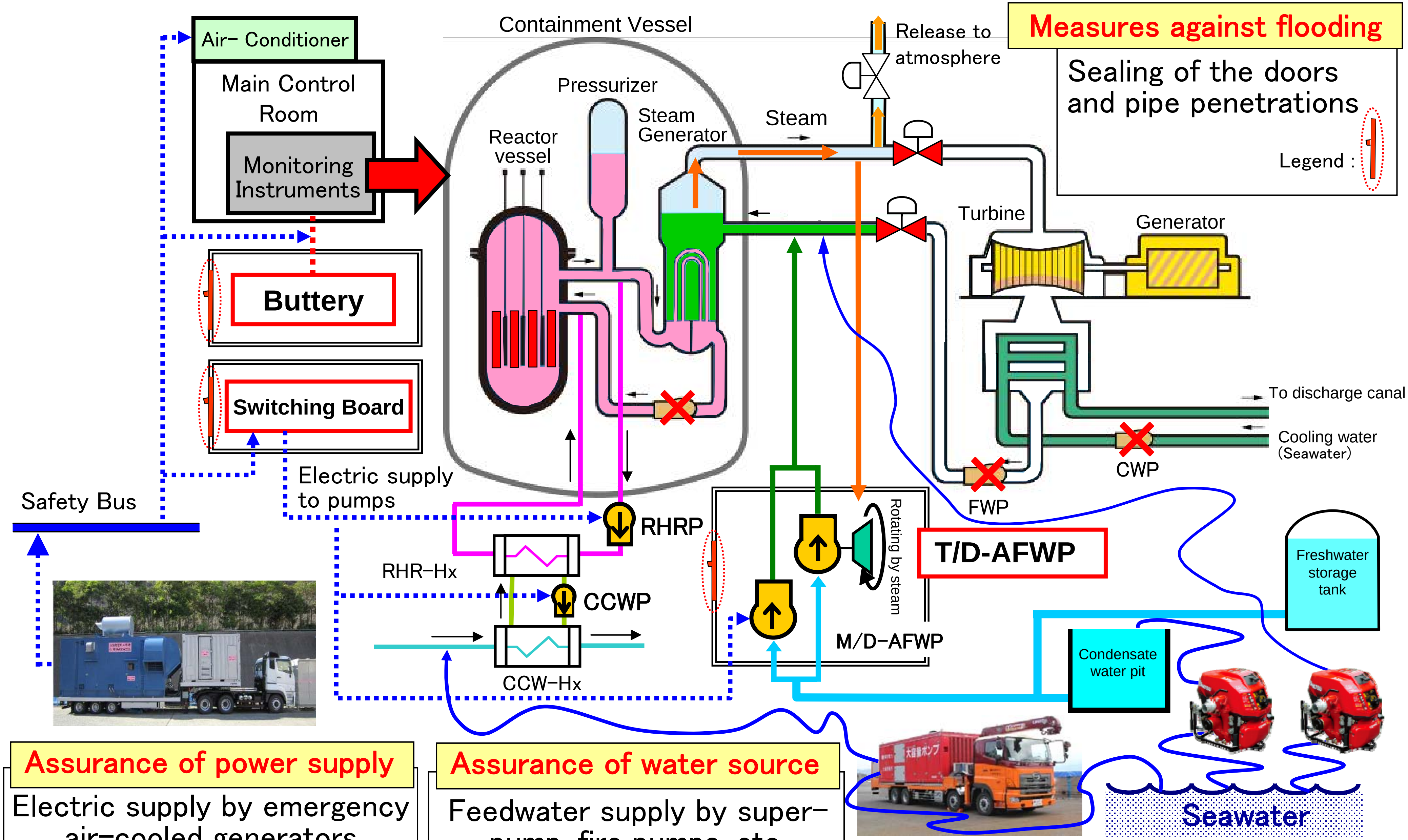
(Battery room/metal clad switchgear room)

Facilities required for supplying water to the steam generators

(Pump room/metal clad switchgear room)

Various Measures to Enhance Safety ever applied

(Example of a Pressurized Water Reactor (PWR))



Measures against flooding

Sealing of the doors and pipe penetrations

Assurance of power supply

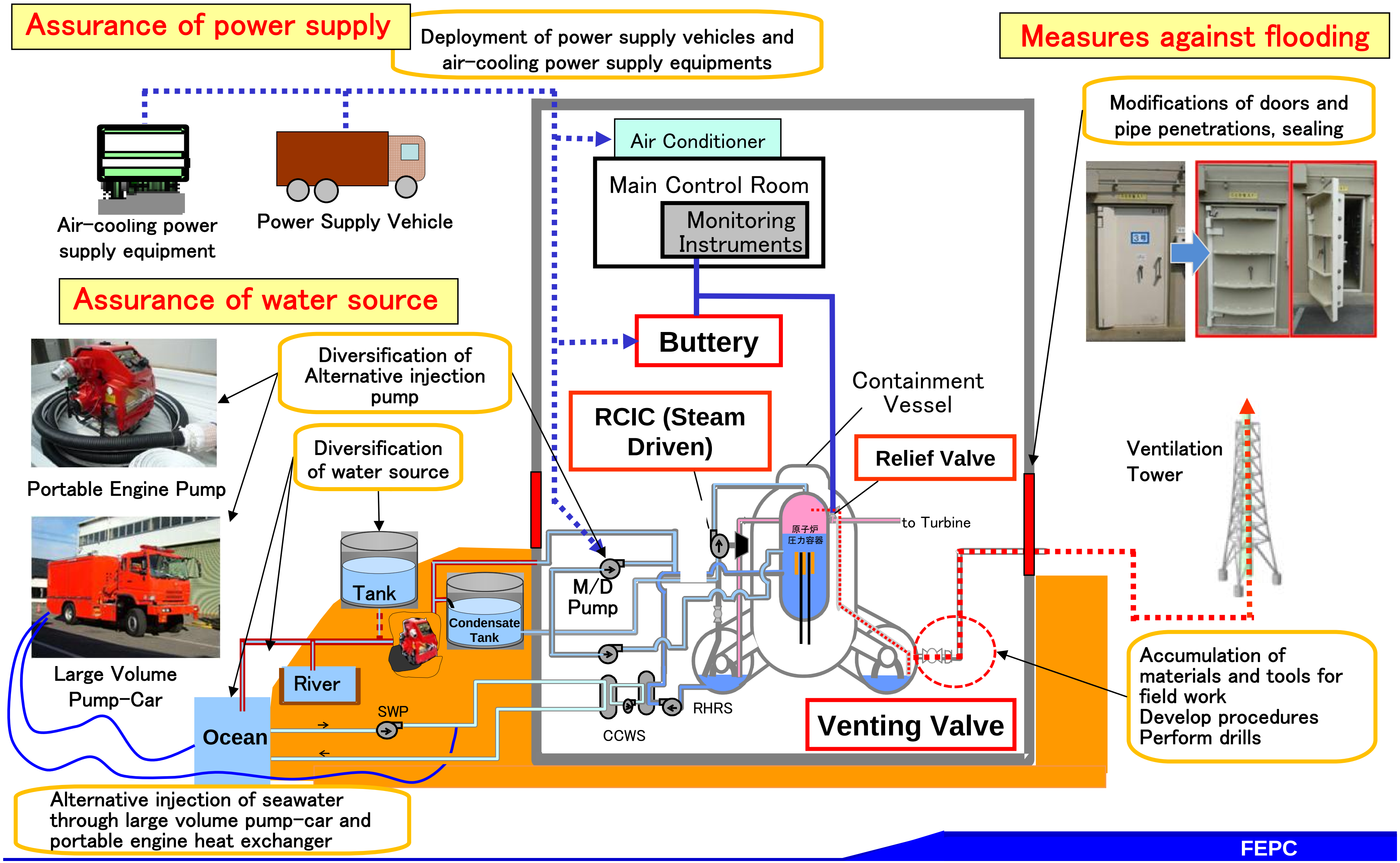
Electric supply by emergency air−cooled generators

Assurance of water source

Feedwater supply by super−pump, fire pumps, etc.

Various Measures to Enhance Safety ever applied

(Example of a Boiling Water Reactor (BWR))



Measures to ensure effective safety

(Examples of Kansai Electric Power)

◆ To increase the effectiveness of safety efforts, various measures were applied that reflect the experience of those who were on-site during the accident.

Work environment	On-site and station-to-station communication	Radiation management	Prevention of hydrogen explosion	Removal of rubble
・Develop procedures for steady operation of the main control room ventilation system (recirculation system) during an accident. ・Secured area next to Main Control Room for commanding in case of emergency	・Walkie-talkies ・Portable communications equipment ・Satellite phones	・High dose protective wear ・Mutual lending of equipment and materials between electric utilities	・Develop procedures for proper ventilation from annulus during an accident. (For Ohi NPP Unit 1 and 2, power supply to an igniter has been confirmed.)	Wheel Loader
	Strengthening emergency preparedness			
	・Strengthened emergency preparedness and support systems. (examples in Ohi NPP) **Support system consists of 800 persons** (Reinforced resident staff in NPP) : 29 → 54 persons (Reinforcement of support system) – Readiness for emergency : Call up 160 persons – Reinforced vendor's support : 500 persons Establish regional support centre (including HQ) – Reinforce contractor's support : 150 persons ・Improved communication systems, and more.		Bulldozer	Crawler Carrier

Wheel Loader

Bulldozer

Crawler Carrier

Improvement of the Safety evaluated by Stress Test (Primary Assessment)

Stress Test (Primary Assessment)

◆ Conducted a stress test (primary assessment) to quantify the effectiveness of safety measures.

【 Points evaluated 】

- The safety margin and vulnerability of the entire plant during an event beyond expectations.
- Assurance of multiple means to deal with an event beyond expectations.
- The degree to which emergency safety measures have enhanced safety.

【 Main items evaluated 】

- Earthquake: The degree to which an earthquake beyond expectations can be endured without fuel damage
- Tsunami: The degree to which a tsunami beyond expectations can be endured without fuel damage
- Station Black Out and Loss of Ultimate Heat Sink:
  The degree to which the power station can endure a total black out (total loss of AC power) and loss of the ability to take in ocean to remove the heat from fuel (loss of ultimate heat sink) without fuel damage in the absence external help
- Severe Accident Management:
  The effectiveness of severe accident management measures developed from the viewpoint of defence in depth

Results of stress test (Primary Assessment)

◈ **Confirmed improvement of the safety accomplished by emergency safety measures consist of multiplexing/diversification of power and water feeding measures.**

Outline of the accident

All reactors shutdown automatically in the wake of the earthquake (1.26 times Ss). While a collapsed off-site transmission tower and other causes led to loss of external power supply, the emergency diesel generator actuated properly and the equipment necessary for cooling the reactors functioned.

↓

A tsunami 2.6 times as high (15.5 m) as had been anticipated in design hit the station following the earthquake caused the emergency diesel generator, sea water pumps, switching board and other structures and equipment been submerged.

↓

Resulted station black out and loss of ultimate heat sink. Insufficient preparation for the situation made the accident worse, eventually leading to fuel damage.

Evaluated safety of Ohi Unit 3 and 4 of Kansai Electric Power

By introduced emergency safety measures,

Ensured the safety of the station even if 1.8 times standard earthquake Ss occurs.

Ensured the safety of the station even if 4 times (11.4m) higher than design anticipated tsunami (2.85m) hits the station.

Enable to maintain cooling of reactor for 16 days and SFP for 10 days even if station black out or loss of ultimate heat sink occurs.

Efforts to Further Enhance Safety

Efforts to Further Enhance Safety

◆ In addition to the emergency safety measures ever applied, we will make continuous improvements in terms of facilities and operations, and organizational efforts in order to achieve the excellence of safety.

Efforts to date
Ensuring safety with emergency safety measures

Viewpoint of measures

Never let another similar accident occur

Multiple and diversified measures

- **Secure power supply**
  (Secure power supply to the main control room by deploying a power source vehicle)
- **Secure cooling**
  (Secure water supply to reactors and steam generators by deploying fire pumps and other means.)
- **Flooding measures**
  (Take measures prevent switching board, battery, and pump from submersion)

Ensure the safety of the power station

Evaluated and confirmed by stress test

Further Efforts
To achieve the excellence of safety

Goal

Achieve the excellence of safety

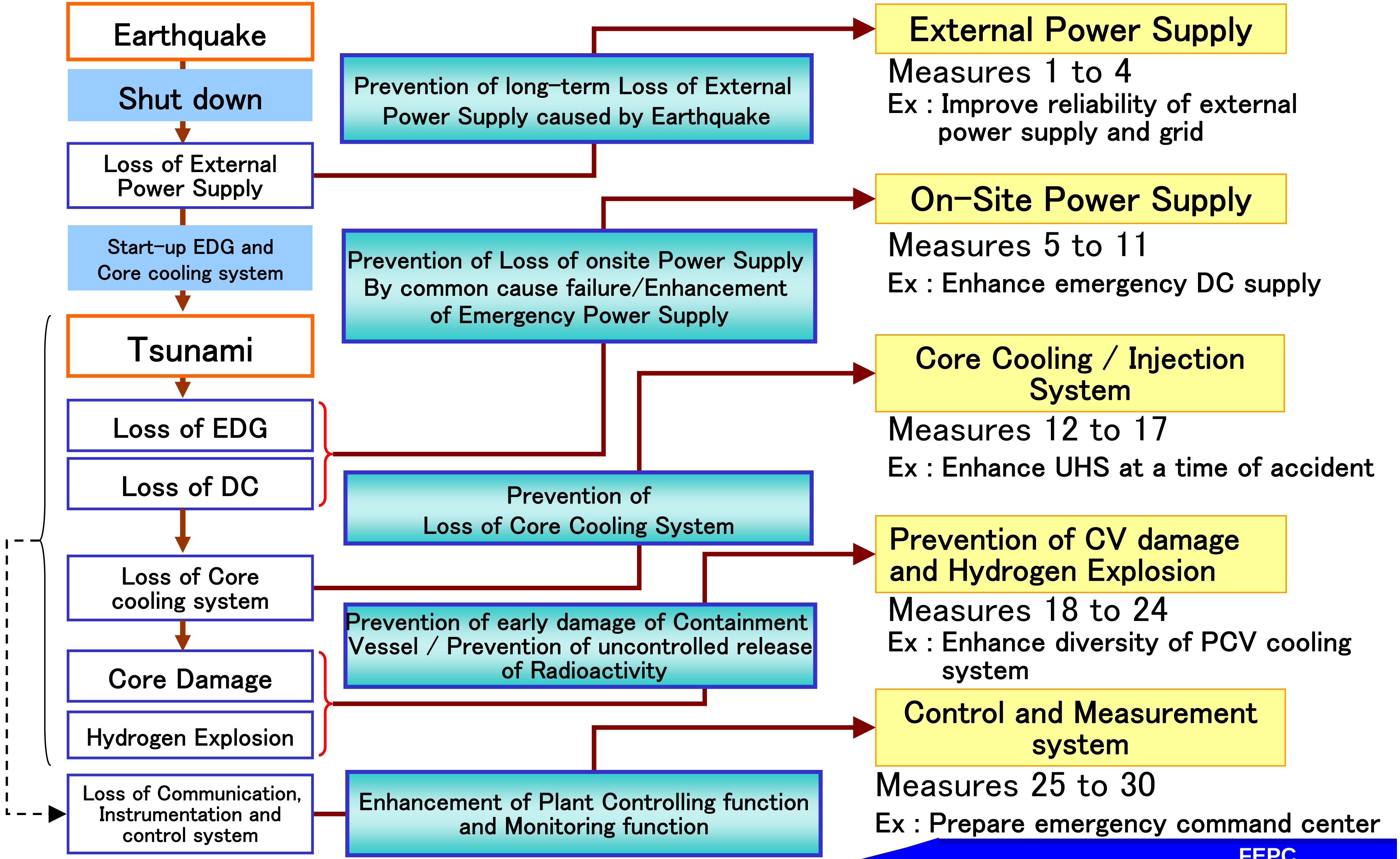
① Continuous improvement in facilities and operations
(Measures for 30 items derived from technical knowledge about accident)

- Measures for external power supply
- Measures for on-site power supply
- Measures for core cooling / injection system
- Measures for prevention containment vessel damage and hydrogen explosion
- Measures for control and measurement system

② Organizational efforts (New Organization)

- As a mechanism to continuously drive safety enhancement measures, establish a new organization

30 countermeasures derived from technical knowledge about accident at Fukushima Dai-ichi NPP (Interim report issued by NISA)



Continuous facility and operational improvement in Ohi 3 and 4 (1/2)

Current status for 30 countermeasures derived from technical knowledge about accident at Fukushima Dai-ichi NPP

◆Dedicate continuous facility and operational improvement to achieve higher safety based on the technical knowledge about the accident

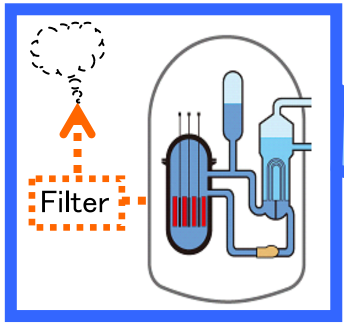
Technical Knowledge		Short term actions ; Complied	Mid/long term actions
External power supply	対策1:外部電源系統の信頼性向上	1ルート喪失しても外部電源を喪失しないことを確認	大飯3、4号機の安全系所内高圧母線に77kV線路を接続
	対策2 :変電所設備の耐震性向上	ガス絶縁開閉装置により耐震性を強化した回線を2回線確保	変電所において耐震性強化を図るため、高強度がいしへ取替
	対策3:開閉所設備の耐震性向上	開閉所電気設備の安全裕度を確認	基準地震動Ssによる評価を行い、必要に応じ耐震性向上対策を実施
	対策4:外部電源設備の迅速な復旧	損傷箇所を迅速に特定できる設備が導入されていることを確認	復旧手順を定めたマニュアルを整備、必要な資機材を確保
On-site power supply	対策5:所内電源設備の位置的な分散	空冷式非常用発電装置を津波の影響を受けない高所に配備	既存受電設備が使用できない場合も想定し、緊急用高所受電設備を設置
	対策6:浸水対策の強化	重要な機器が機能喪失しないよう建屋の浸水防止対策を実施	水密扉への取替えの実施、防波堤のかさ上げ、防潮堤の設置
	対策7:非常用交流電源の多重性と多様性の強化	空冷式非常用発電装置の設置、ディーゼル発電機用海水供給用可搬式エンジン駆動ポンプの設置などにより多重化・多様化	大容量の恒設非常用発電機を津波の影響を受けない高所に設置
	対策8:非常用直流電源の強化	空冷式非常用発電装置の設置により蓄電池への充電が可能(5時間以内)	蓄電池を追加設置
	対策9:個別専用電源の設置	重要なパラメータを監視する予備の可搬型計測機器等を手配	重要なパラメータを監視する予備の可搬型計測器等を配備
	対策10:外部からの給電の容易化	空冷式非常用発電装置の配備、マニュアル整備、訓練を実施	緊急用高所受電設備の設置
	対策11:電源設備関係予備品の備蓄	海水ポンプモータなどの予備品を保管	緊急用高所受電設備の設置
Core cooling / Injection system	対策12:事故時の判断能力の向上	事故時操作所則にて判断基準が明確化されている	現場操作機器などのマニュアルへの情報追加、教育の実施、線量予測図の作成・シビアアクシデント対応マニュアルへの反映
	対策13:冷却系設備の耐浸水性・位置的分散	重要な機器が機能喪失しないよう建屋の浸水防止対策を実施、消防ポンプなどの資機材を津波の影響を受けない場所にて保管	水密扉への取替えの実施、防波堤のかさ上げ、防潮堤の設置
	対策14:事故後の最終ヒートシンクの強化	主蒸気逃がし弁から大気へ原子炉の崩壊熱を放出する手段等の多様性を確保	水源となるタンク周りに防護壁を設置、防波堤のかさ上げ、防潮堤の設置
	対策15:隔離弁・SRVの動作確実性の向上	主蒸気逃がし弁の手動操作性、アクセス性を確認	弁作動用空気確保のためのコンプレッサー等の確保
	対策16:代替注水機能の強化	代替注水設備の駆動源の多様化として、エンジン駆動の消防ポンプを配備、水源の多重化・多様化	さらに吐出圧力の高い中圧ポンプの配備・配管の恒設化
Prevention CV damage and Hydrogen explosion	対策17:使用済燃料ﾌﾟｰﾙの冷却・給水機能の信頼性向上	海水を含む複数の水源から複数の給水手段を確保	使用済燃料ピット広域水位計の設置
	対策18:格納容器の除熱機能の多様化	大容量ポンプ・空冷式非常用発電装置により原子炉補機冷却機能を確保、ディーゼル消火ﾎﾟﾝﾌﾟによる格納容器ｽﾌﾟﾚｲを用いた減圧機能を確保	フィルタ付ベント設備の設置
	対策19:格納容器ﾄｯﾌﾟﾍｯﾄﾞフランジの過温破損防止対策	－	－
	対策20:低圧代替注水への確実な移行	主蒸気逃がし弁による減圧手段の手順の確立	SG注水機能のさらなる改善に合わせたマニュアルの充実
	対策21:ベントの確実性・操作性の向上	PWRでは炉心冷却を蒸気発生器からの冷却で行うための、主蒸気逃がし弁の手動操作は可能	フィルタ付ベント設備の設置の際にベント弁の操作性を考慮
	対策22:ベントによる外部環境への影響の低減	格納容器スプレイによるよう素除去	フィルタ付ベント設備の設置
	対策23:ベント配管の独立性確保	格納容器排気筒はユニット毎に独立	フィルタ付ベント設備はユニット毎に排気筒を設置
	対策24:水素爆発の防止(濃度管理及び適切な放出)	水素がアニュラス内に漏れ出ることも想定し、アニュラス排気ファンの運転手順を整備	静的触媒式水素再結合装置の設置
Control and measurement system	対策25:事故時の指揮所の確保・整備	中央制御室控室での指揮所機能の確保	事故時の指揮機能を強化するため、免震事務棟の設置
	対策26:事故時の通信機能確保	電源車等の電源から給電された通信設備(トランシーバー、衛星携帯電話など)を確保するとともに分散配備	衛星携帯電話の外部アンテナの設置、免震事務棟への通信手段移設
	対策27:事故時における計装設備の信頼性確保	重要なパラメータを監視する予備の可搬型計測機器等を手配	重要なパラメータを監視する予備の可搬型計測器等を配備
	対策28:プラント状態の監視機能の強化	非常用電源から電源供給される使用済燃料ピット監視カメラの設置	使用済燃料ピット広域水位計の設置、格納容器内監視カメラの活用検討
	対策29:事故時モニタリング機能の強化	モニタリングポストの電源対策として、非常用電源からの供給、バッテリー容量の増加、専用のエンジン発電機を設置	モニタリングデータの伝送ラインの2重化、可搬型モニタリングポストの追加配備
	対策30:非常事態への対応体制の構築・訓練の実施	消防ポンプなどの必要な予備品の確保、マニュアルの整備、要員の発電所常駐体制・召集方法の強化、訓練の継続実施	協力会社による支援要員派遣体制の構築、プラントメーカ技術者の若狭地区への常駐、さらに必要な資機材や予備品の検討・確保

To Enhance Safety

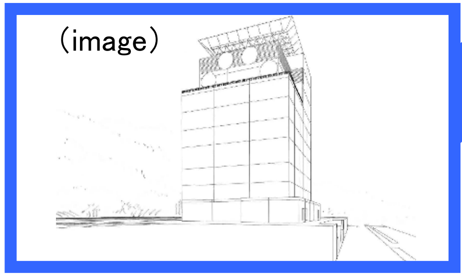
Continuous facility and operational improvement in Ohi 3 and 4 (2/2)

◆ **As continuous facility and operational improvement, filtered-venting system installation, construction of a seismic isolated office building and breakwater raising are planned in the medium- and long-term period.**

■Filtered venting system
To minimize long term evacuation area
(in 2015)

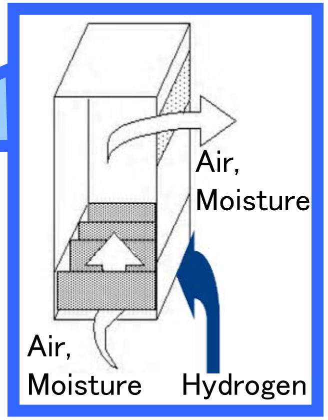


■Seismic isolated office building (in 2015)



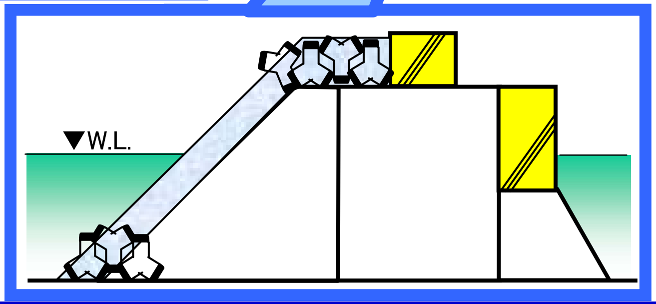
■Access road to NPP
(Mid/long term)

■Hydrogen explosion prevention
Passive Autocatalytic Recombiner
(in 2013)



■Reinforce power line
(Mid/long term)

■Raising breakwater (in 2013)



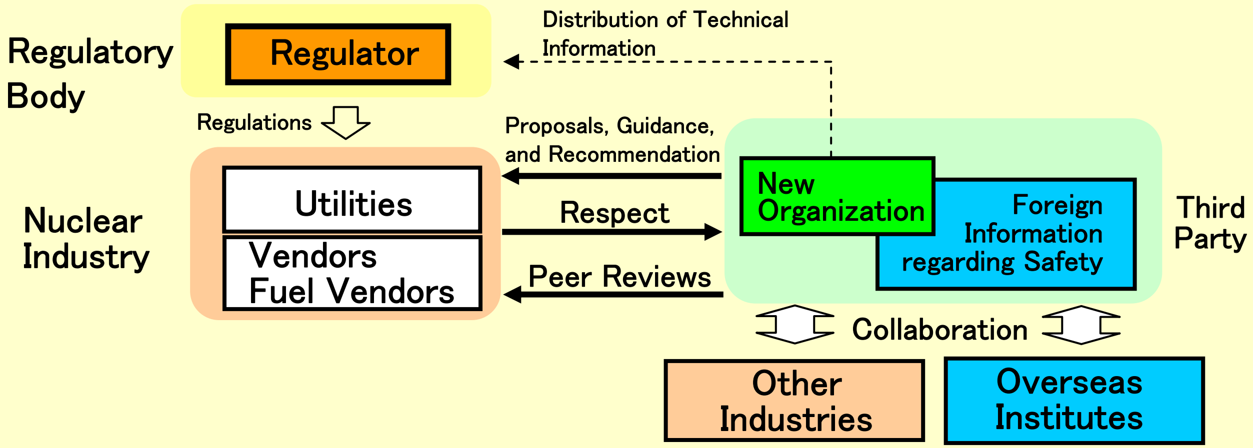
Height of breakwater
- Water Outlet Pit: T.P.+15m
- Breakwater: T.P.+8m
- Water Inlet: T.P.+6m

Organizational Efforts –– Establishment of a new organization

◆ As a mechanism to continuously improve safety measures, we will establish a new organization by the end of 2012 to reflect the best practice and the latest findings, domestic and overseas.

Outline of the new organization

- Promote leading-edge safety measures, while considering measures in other countries
  - Close cooperation with overseas institutions (INPO, WANO etc.)
  - Collect and analyze information from foreign countries and deploy the latest findings to enhance the safety of each power station.
- Structure based on the commitment of top management at each electric utility
  - With independent power and authority, provide proposals, guidance, and recommendation to electric utilities in order to control over ourselves.
- Secure human resources with high technical capability
  - Combine the technical capability among the industry.



Mission statement for the new organization

Lessons learned with regards to safety enhancement activities

In spite of the efforts to enhance nuclear safety including management of natural disaster, have we electric utilities been insufficient in;

- Management for natural disasters beyond design basis such as massive tsunami, massive earthquake, whose occurrence is extremely low?
- Examination, analysis and introduction of safety measures made in the other countries?
- Continuous pursuit of "Excellence" as whole nuclear industry in addition to putting focus highly on compliance under stable operational experiences and experience of scandals?
- Utilization of the Japan Nuclear Technology Institute (JANTI), which was established to support the safety enhancement activities of electric utilities?

Need to create a structure promotes utilities pursuing voluntarily the world's highest level of safety.

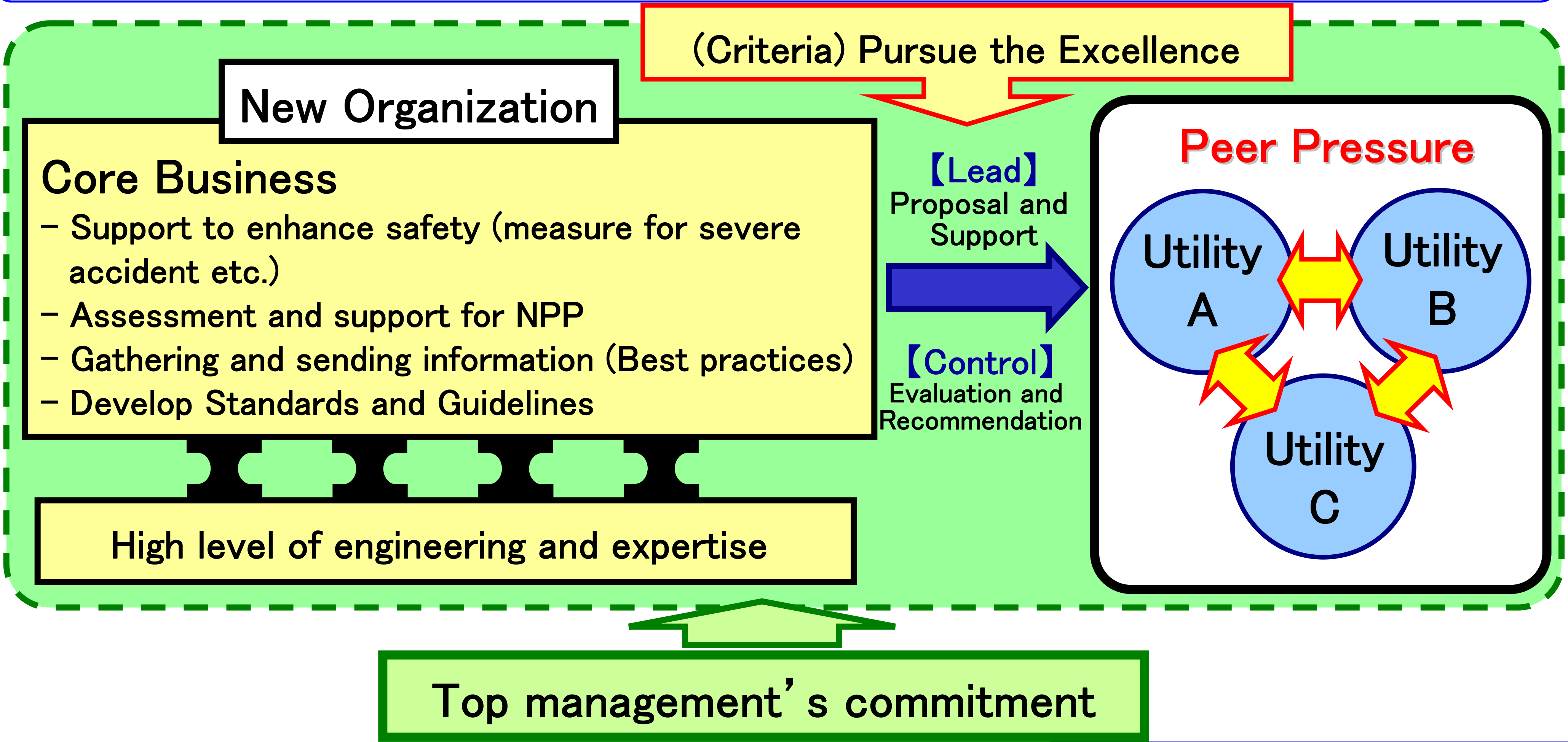
Mission

Achieve the world's highest level of safety in Japan's nuclear industry

-- **Pursue the "Excellence" continuously** --

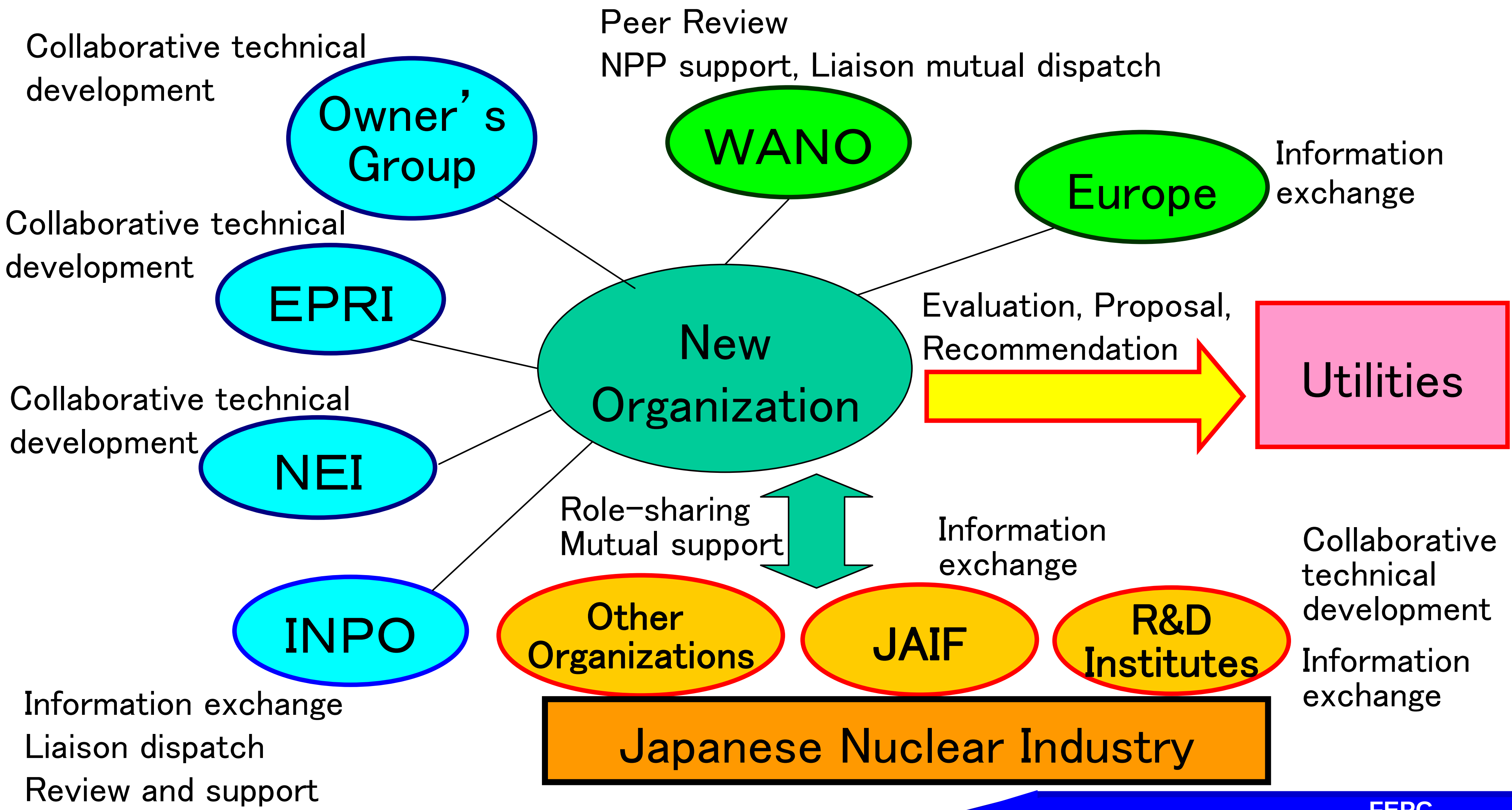
Role of the new organization to achieve the mission

- New organization “leads” and “controls” utilities to achieve “Excellence” through their business; such as counter measures for severe accident.
- Utilities’ top management implement firm commitment in order to enhance effectiveness of new organization.



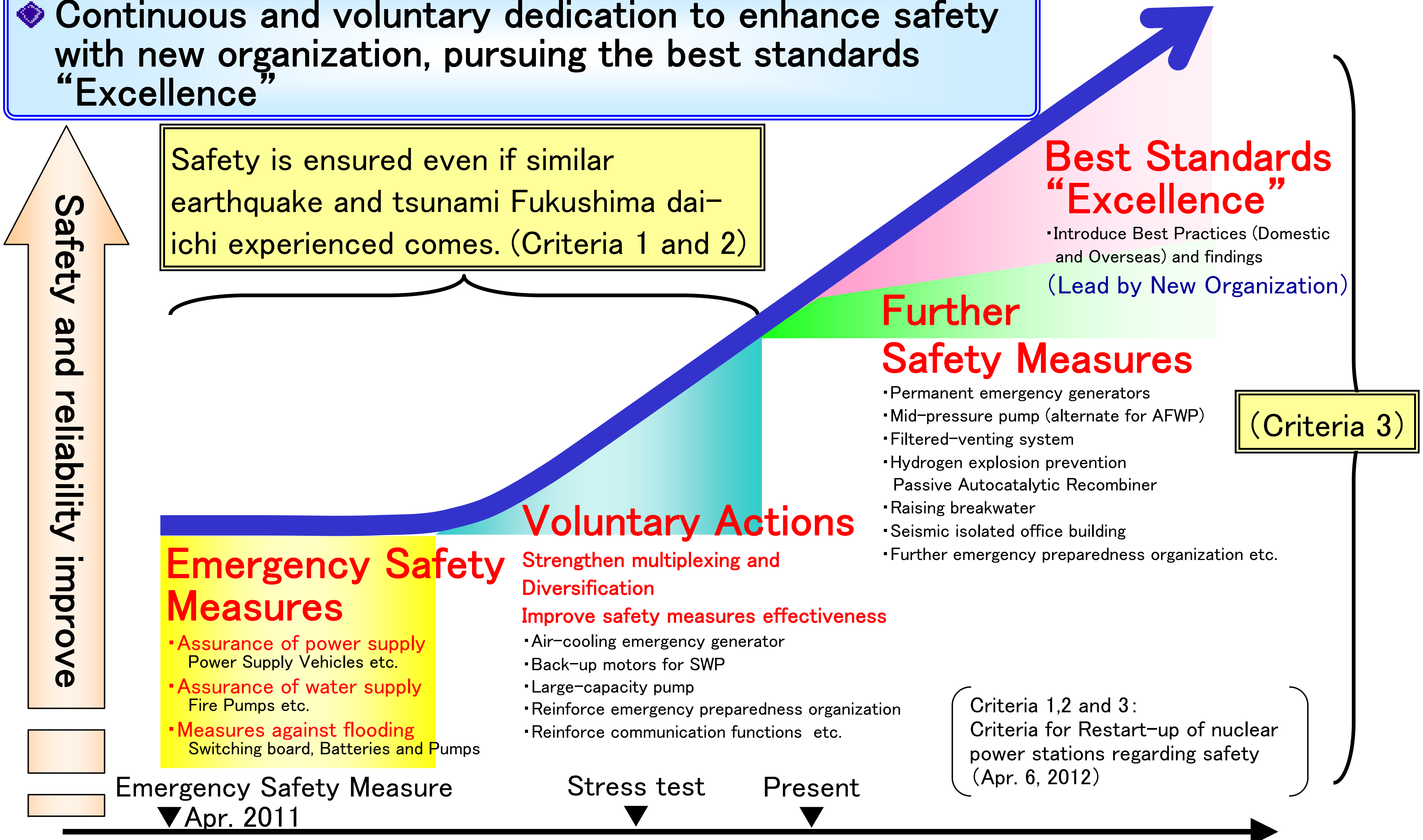
Role of the new organization: Collaboration with other organizations

◆ **New organization gathers information in an integrated fashion and collaborate through and with other domestic and overseas organization**



Pursue the best standards "Excellence"

❖ Continuous and voluntary dedication to enhance safety with new organization, pursuing the best standards "Excellence"



Efforts to Restore Trust in Nuclear Energy

Efforts to Restore Trust in Nuclear Energy
(Examples of Kansai Electric Power)

◆ We have been engaged in an earnest effort to clearly explain to residents in the power station's vicinity what we are doing to enhance safety and listen carefully to their opinions and concerns in the belief that this is the first step to restoring trust in nuclear energy.
We have also been actively engaged in public relations activities to highlight the efforts made by electric utilities to the public.
We will continue these efforts so that we can rebuilt public trust.

◆Directly approach residents in the power station's vicinity to obtain their understanding

○Activities in Fukui Prefecture

Conducted extensively; activity targets included opinion leaders, various organizations upon request, and the public in each ward.

○Visiting residents from door to door (Mihama Town)

◆Main public relations activities

- ○ Published inserted informational magazines in newspapers (a total of 14)
- ○ Ran commercials on TV
- ○ Aired a program on cable TV
- ○ Aired a program on a local TV station
- ○ Posted full-page ads in newspapers
- ○ Published a public relations magazine

[Advertisement in newspapers]

[Inserted informational magazines and public relations magazines]


[Visiting residents from door to door]

Summary

Summary

- Ensure station safety by implementing various safety measures based on strong determination "Never have similar accident"
  - Strengthened multiplexing and diversifications of safety measures
- Pursue the best standards "Excellence" of safety
  - Drive voluntary and proactive actions by utilities
  - Never ending, continuous effort to enhance safety, advanced from regulations
  - Establish new organization and lead utilities
  - Reinforce emergency preparedness on the presumption having a severe accident
- Restore Trust in Nuclear Energy
  - Establish transparency and keep on explaining faithfully
- The nuclear industry across the world is in the same boat
  - To feed back the knowledge to global nuclear industry is Japanese utility's mission experienced the accident at Fukushima Dai-ichi NPP.

Document 3

April 20, 2012

FEPC

Replacement of FEPC Directors

We hereby announce the replacement of FEPC directors decided by the General Policy Meeting held today.

Until April 19, 2012	From April 20, 2012
Vice Chairman Yoshitaka Sato (President and Director of Hokkaido Electric Power Co., Inc.; was appointed as a Chairman of the Company on March 29, 2012)	Vice Chairman Susumu Kyuwa (President of Hokuriku Electric Power Co., Inc.)

(No changes were made to the positions of other directors.)

Reference:

New Board of Directors of FEPC (from April 20 2012)

Chairman	Makoto Yagi (President and Director of Kansai Electric Power Co., Inc.)
Vice Chairmen	Akira Chiba (President and Director of Shikoku Electric Power Co., Inc.)
	Susumu Kyuwa (President of Hokuriku Electric Power Co., Inc.)
	Shigeru Kimura (Director of Tokyo Electric Power Company)
Senior Managing Director, Fukushima Support Headquarters	Yuji Kume (Director of Chubu Electric Power Co., Inc.)
Director, Secretary General	Yutaka Inada (Director of Kansai Electric Power Co., Inc.)
Director, Deputy Secretary General	Yasuhiro Tejima (Director of Tokyo Electric Power Company)
Director, Nuclear Fuel Cycle Promotion Headquarters	Susumu Tanuma (Kansai Electric Power Co., Inc.)
Director, Geological Repository Promotion Headquarters	Kazuya Sugiyama (Tokyo Electric Power Company)