

Reform of Japan's Nuclear Safety Regulation

January, 2012

- The nuclear accident at TEPCO's Fukushima Dai-ichi Nuclear Power Stations severely damaged society, economy and people's mind. Especially in Fukushima prefecture, many challenges such as safety management of the decommissioning and health management of the residents remain.
- Nuclear power plants are located all over Japan, and fears that Japanese citizens and local governments have are growing while the government lost credibility on nuclear policy.
- The international society closely looks at Japan's action with fears in their mind.
- In this situation, new nuclear safety regulations, namely, "prompt establishment of the new nuclear safety agency," "introduction of strict regulation," and "reinforcement of nuclear emergency preparedness" are the most pressing issues. We must inaugurate the new regulatory system in April.

Highlights of the reform of nuclear safety regulatory organizations

- NSSA (tentative name) will be established as an agency, an external organ of the MOE by separating the nuclear safety regulation section of NISA from METI and unifying relevant functions of other ministries. (Size: 500 Staff, 50 billion yen Budget)
- NSIC, a council-type third party to be created with NSSA, will review the effectiveness of regulatory actions taken by NSSA, investigate causes of nuclear accidents and make recommendations to monitor the regulatory independence of NSSA.(Diet agreed personnel)
- Crisis management will be one of the most important roles of NSSA, and NSSA will lead the entire government.

Highlights of the introduction of new nuclear safety regulation

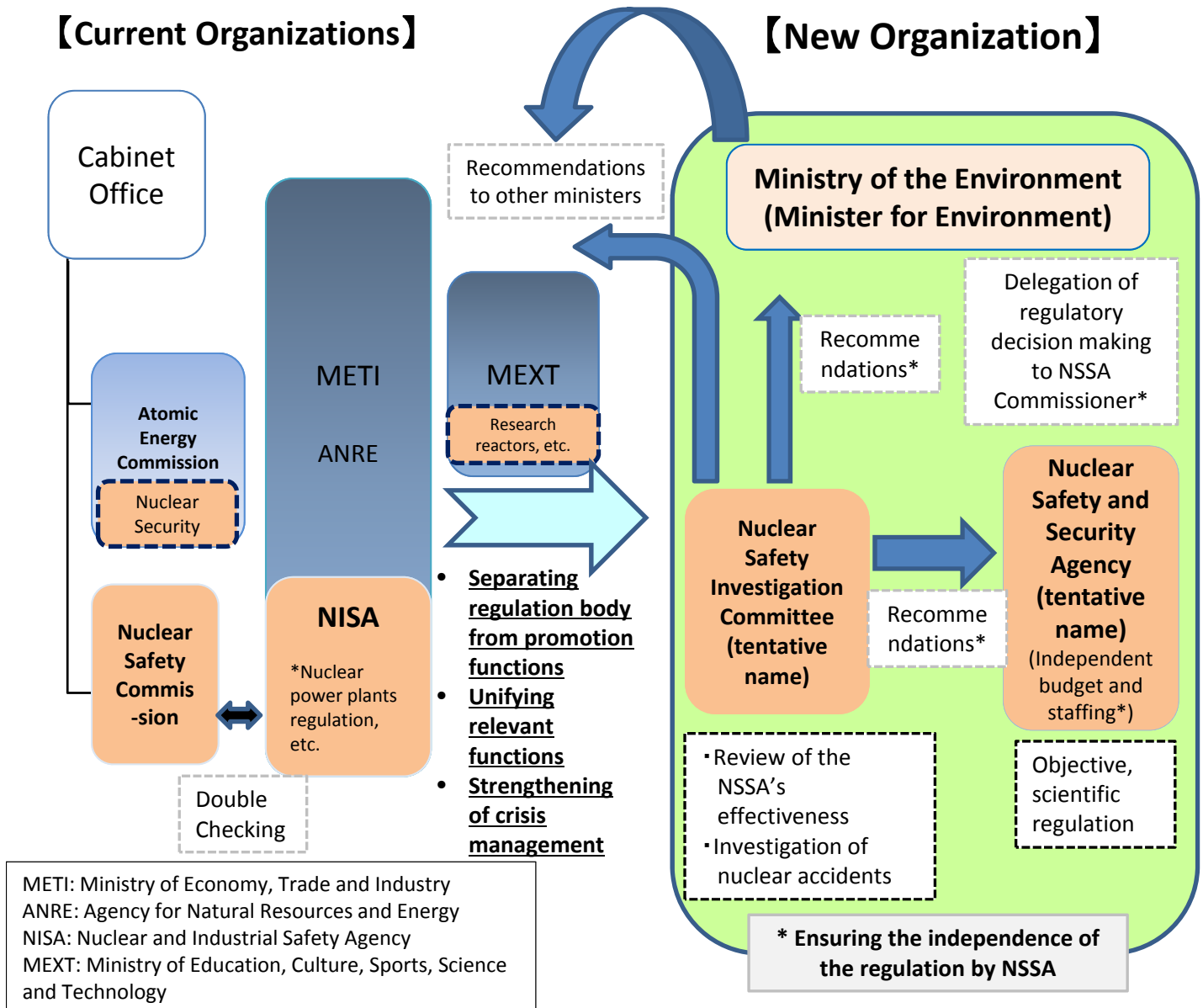
- The new regulation features protecting human being and the environment from harmful effects of ionizing radiation.
- The new regulation takes severe accidents into consideration.
- The new regulation applies latest scientific/technical knowledge on safety issues to existing facilities. (backfitting)
- Introduction of an operation limit of 40 years to deal with aged reactors

Highlights of the reinforcement of nuclear emergency preparedness system

- The main office will be staffed with Director-General for Emergency Response Measure, Director-General for Residents Crisis Management and a section for crisis management. Regional emergency preparedness will be reinforced by Nuclear Safety Inspectors' Offices that locate near the nuclear facilities, Regional Nuclear Safety Contact Officers dispatched at related prefectures, and Environment and Nuclear Safety Divisions created in each Local Environment Office.
- The structure and function of the Nuclear Emergency Response Headquarters will be enhanced.
- Under the legally based nuclear emergency preparedness guidance, the government will promote the planning of local disaster management by local governments. The government, together with local governments, will also promote the improvement of offsite center.

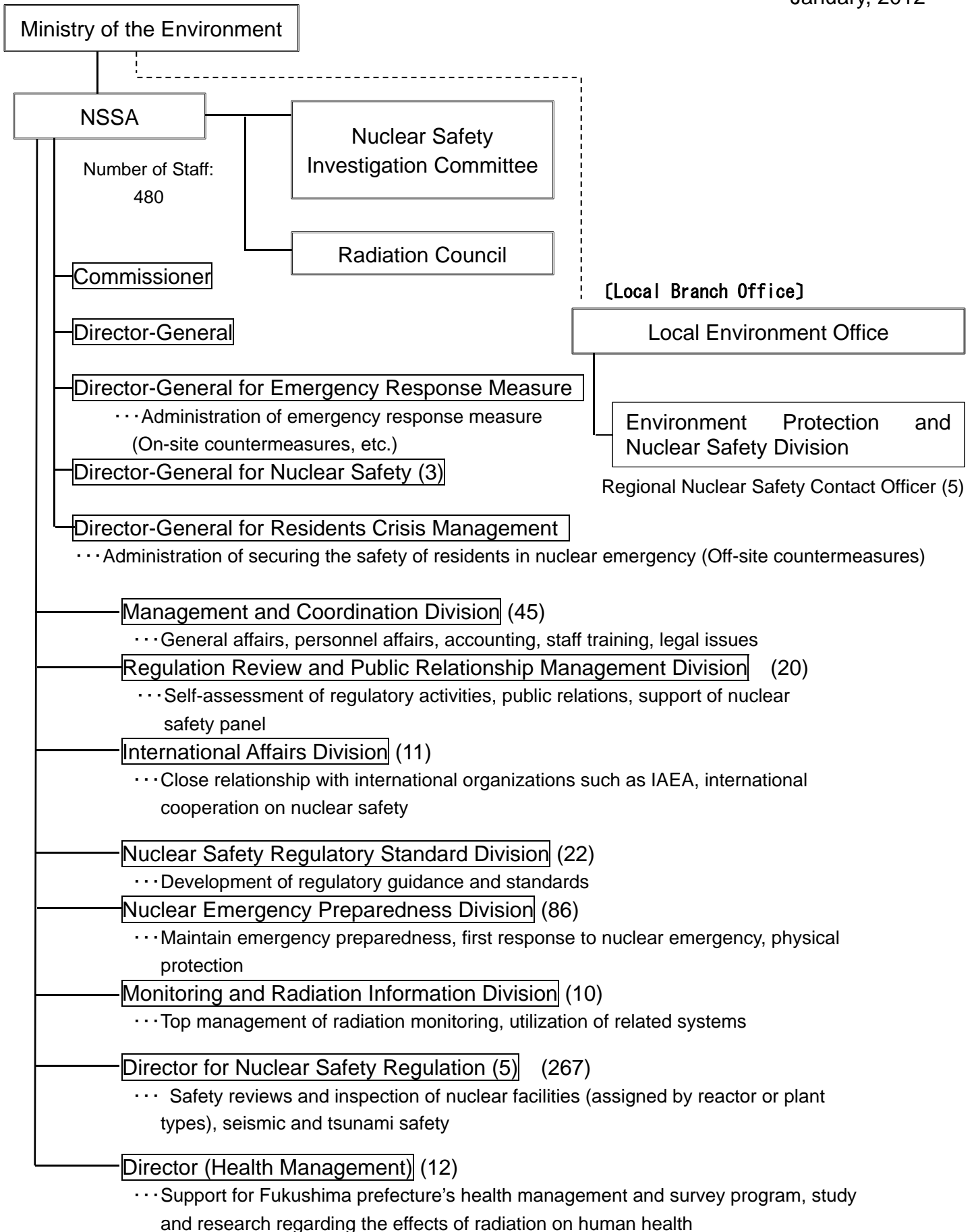
A New Organization for Nuclear Safety Regulation

- NSSA (tentative name) will be established as an agency (Size: 500 Staff, 50 billion yen Budget), an external organ of the MOE by separating the nuclear safety regulation section of NISA from METI and unifying relevant functions of other ministries NSIC, a council-type third party to be created with NSSA, will review the effectiveness of regulatory actions taken by NSSA, investigate causes of nuclear accidents and make recommendations to monitor the regulatory independence of NSSA.(Diet agreed personnel)
- Crisis management will be one of the most important roles of NSSA, and NSSA will lead the entire government.



Structure of Nuclear Safety and Security Agency (tentative)

January, 2012



Highlights of the Nuclear Safety and Security Agency 's Budget

January, 2012

(JPY in 100 millions)

[Total budget] Approximately 504

(General Account 27, Special Account for Energy Resources 414, Special Account for Reconstruction 62)

[Major Area]

1. Strengthening Crisis Management Functions

Crisis Management System will be reinforced by improved functions such as better regional emergency preparedness and enhanced offsite centers.

*JPY in 100millions. Numbers in parentheses are the budget of current government organizations for FY2011.

(Major Item)

- Emergency Preparedness Grants 89.7 (31.5)
- Program to support Emergency Preparedness Technology for Nuclear Power Plant 37.9 (29.9)
(Functional improvement of offsite centers and emergency responding centers, etc.)

2. Upgrading nuclear safety regulation

Nuclear safety regulation will be upgraded by requiring backfitting and countermeasures to severe accidents.

(Major item)

- Program to analyze safety of nuclear facilities 16.0 (11.9)
(Safety evaluation of existing nuclear facilities, etc.)
- Program to study upgrading regulations for nuclear emergency preparedness 16.8 (5.6)
(Preparing evaluation methods for severe accident situations, etc.)

3. Health management and survey for the residents

The health management and survey for those who suffered from the nuclear accident will be implemented in cooperation with Fukushima prefecture.

(Major item)

- Health management and survey program for the nuclear accident victims 19.0 (0)
(Survey and study regarding dose assessment, risk communication, etc.)

4.Strengthening the base for nuclear safety

The base for nuclear safety will be strengthened by establishing radiation monitoring system for nuclear accidents, human resource development, deeper cooperation with international organizations and a better safety research program, etc.

(Major item)

- Expenses for surveying effects of the nuclear accident (Booked collectively) 18.5 (0)
- Program to promote radiation monitoring 13.8 (0)
(Preparation for emergency radiation monitoring by NSSA, need-based outsourced environmental survey)
- Expenses for international meetings on nuclear safety 2.1 (0)
(IAEA ministerial meeting, IRRS)
- Expenses for promoting safety research (including items already stated) 154.7 (152.4)

New Accounting Classification for nuclear safety regulation

* In the special account for energy resources “nuclear safety regulation measure” will be established from FY2012 as a new accounting classification.

Improvement of Japan's Nuclear Safety Regulation

With a strong determination "To protect people and the environment from harmful effects of radiation," the Government of Japan will establish "a new regulation that applies the latest scientific/technical knowledge on safety to existing facilities and operation (backfitting)," reinforce "a licensee's responsibility of seeking to constantly improve the safety of its facilities," and make the regulation visible by statutory transparency.

○ Reform of the Atomic Energy Basic Act

Considering the international understanding of nuclear safety, the objective of nuclear safety in the use of nuclear energy, that is "to protect people and the environment from harmful effects of ionizing radiation," will be clearly written in the Atomic Energy Basic Act.

○ Reform of the Nuclear Regulation Act

1. Dealing with "the unexpected" - The new regulation takes severe accidents into consideration.

- (1) Regulatory standards and criteria for nuclear facilities will be drastically revised to stricter ones. (multiple, diversified AC/DC power supplies, watertight equipment, improved vent systems, etc.)
- (2) Countermeasures to nuclear accidents (Accident Management), which have been considered "a voluntary action" by licensees, will become a statutory requirement.
- (3) Comprehensive risk assessment of the safety design and operation of each power reactor will be required. Regarding the result of the assessment, reporting to the government and publication will be required.

2. Regulation based on the latest knowledge - The new regulation applies latest scientific/technical knowledge on safety issues to existing facilities. (backfitting)

- (1) The so-called backfitting requirement, where regulatory standards and criteria that considers the latest scientific/technical knowledge are applied to existing facilities, will be introduced.
- (2) Specified modifications that obviously make a facility safer will solely need reporting instead of acquiring permissions and approvals.
- (3) Design certification can be obtained for a standardized design of equipment.

3. An Operational limit of 40 years will be introduced to ensure the safety of aged power reactors.

Power reactors will be banned from operating for more than 40 years. As an exception, only if 1) assessment of the aging of the facility and 2) an operator's technical ability to conserve the facility considered sufficient, certain period of operational extension will be approved.

4. Specified licensee's responsibility - a licensee's responsibility to constantly improve the safety of its facilities

- (1) That it is a licensee's responsibility to implement necessary measures to prevent nuclear disasters will be stipulated.
- (2) Quality assurance activities will be required not only after the start of operation but from the design and construction phase.
- (3) Comprehensive risk assessment of the safety measures for each power reactor, reporting the result to the government and publication of it will make the safety of a reactor visible to citizens and subject to social evaluation. (Shown in 1.(3))

5. Thorough protection of the lives and health of citizens in case of nuclear disasters

- (1) Special safety regulations (designation of facilities, planning for the plant safety, inspections, etc.) for those facilities where nuclear disaster have occurred (for example, TEPCO's Fukushima Dai-ichi NPP) will be introduced.
- (2) Authority to order emergency actions such as suspension in order to ensure public safety or prevent disaster will be given.

6. Unification of legislation – Separation from the Electricity Business Act

- (1) Regulations for nuclear power plants in the Electricity Business Act (approval of construction plan, pre-use inspection, etc.) will be incorporated into the Nuclear Regulation Act.
- (2) The concept of planned development and utilization of nuclear energy will be removed from the objectives and authorization requirements of the Nuclear Regulation Act so that the regulation for the safety shall not be influenced by other aspects such as promotion of nuclear power utilization.
- (3) By stating the prevention of unplanned dispersing radioactive materials from the facility will be marked clearly as an objective of the Nuclear Regulation Act, enhancing effectiveness of protecting people and the environment will be stressed.

Reinforcing Nuclear Emergency Preparedness

January, 2012

Based on lessons learned from the accident, Japan will promptly reinforce the emergency preparedness by reforming the Act on special measures concerning nuclear emergency preparedness, revising related national and regional disaster management plans, and improving offsite centers, in order to be prepared for nuclear emergency.

1. Reinforcement by reforming the Act on special measures concerning nuclear emergency preparedness

- Enhancement of the structure and function of the Nuclear Emergency Response Headquarters
Additional vice director-general, members, restoration mission.
- Improvement in licensees' emergency drills
The government monitors licensees' emergency drills and give orders for improvement if necessary.
- Establishing legal base of the nuclear emergency preparedness guidance (currently one of the Nuclear Safety Commission's decisions)
The new nuclear emergency preparedness guidance, a replacement of the current Nuclear Safety Commission's decision, will be based on a law.

2. Better preparations by revising the national and regional disaster management plans

- Revision of the national disaster management plan and guidance to enforce the revised Nuclear Emergency Act
The section for nuclear emergency of the national disaster management plan will be revised and a guidance based on the plan will be drafted by the end of FY2011.
- Revision of the regional disaster management plan based on the national plan and guidance
A guideline will be provided for the related local governments in early 2012 to revise their disaster management plans. The national government will support local governments both technically and financially.

3. Reinforcement of the crisis management system by improvement of the offsite centers and other measures

- Functional improvement of offsite centers

Referring to the discussion by the Nuclear Safety Commission, the location, function and other aspects of the offsite centers have been reexamined since the end of 2011. From FY2012 a concrete plan for the improvement of offsite centers is to be established.

- Enhancement of equipment for radiation protection, communications, etc.

Ensuring communication at offsite centers and regional emergency responding bases and enhancing the stock of protective suits, dosimeters, etc. will be promoted (Emergency Preparedness Grants).

- Planning and implementing more effective emergency drills

Emergency drills that tailor realistic communication, commanding and onsite actions will be conducted and improved continuously.