



Enhancing Effectiveness of Regulators and Operators in Achieving Nuclear Safety

**ATOMEXPO 2013 Forum, St. Petersburg
26-28 June 2013**

Stephen G. BURNS

Head of Legal Affairs

OECD Nuclear Energy Agency

Tel.: +33 (0)1 45 24 10 30

Stephen.Burns@oecd.org

Regulatory Bodies under the Conventions

- “Each Contracting Party shall establish or designate a regulatory body entrusted with the implementation of the legislative and regulatory framework ..., and provided with **adequate authority, competence** and financial and human **resources** to fulfil its assigned responsibilities.”
- “Each Contracting Party shall take the appropriate steps to ensure an **effective separation** between the functions of the regulatory body and those of any other body or organization concerned with the promotion or utilization of nuclear energy.”

Convention on Nuclear Safety, art. 8 [INFCIRC/449]; see also **Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management**, art. 20 [INFCIRC/546]

Basic Regulatory Functions

- To *develop and enact* a set of appropriate, comprehensive and sound *regulations*.
- To *authorize allowable activities* in accordance within the legal framework of the regulatory system.
- To *verify compliance* with such *regulations*; and
- To *enforce the established regulations* by imposing the appropriate corrective measures, in the event of a departure from licensing conditions, malpractice or wrongdoing by those persons or organisations under regulatory oversight.

See IAEA (2003), INSAG-17, *Independence in regulatory decision making*, p. 1; IAEA (2002), Safety Guide No. GS-G-1.1, *Organization and Staffing of the Regulatory Body for Nuclear Facilities*, §3.4; IAEA (2010), *Safety Standards No. GSR Part 1, Governmental, Legal and Framework for Safety*.

Regulatory bodies can take different forms

- **Commission form**

Canada: Canadian Nuclear Safety Commission (CNSC), reports to Parliament through the Minister of Natural Resources

France: Nuclear Safety Authority -- L'Autorité de sûreté nucléaire (ASN)

Spain: Nuclear Safety Council -- Consejo de Seguridad Nuclear (CSN)

United States: Nuclear Regulatory Commission (NRC)

- **Single Administrator or Directorate**

Russian Federation: Federal Environmental, Industrial and Nuclear Supervision Service -- *Rostekhnadzor*

Finland: Radiation and Nuclear Safety Authority -- *Säteilyturvakeskus* (STUK) within Ministry of Social Affairs and Health

Sweden: Radiation Safety Authority -- *Strålsäkerhetsmyndigheten* (SSM) within the Ministry of Environment

Germany: Federal Ministry of the Environment – *Bundesministerium für Umwelt, Naturschutz & Reaktorsicherheit* (BMU) and competency in individual German *Länder*

Accidents have provided impetus for reform

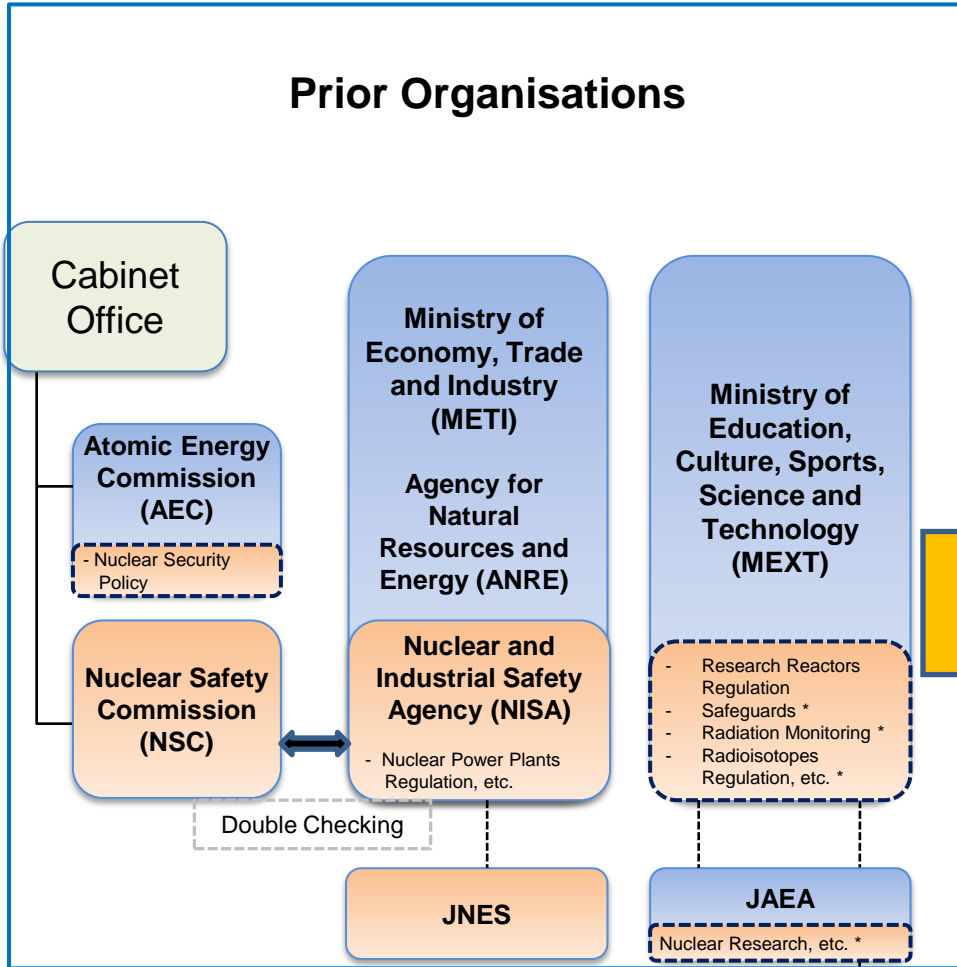
- **Three Mile Island:** “With its present organization, staff, and attitudes, the NRC is unable to fulfill its responsibility for providing an acceptable level of safety for nuclear power plants.” – *President’s Commission on the Accident at Three Mile Island* report (1980)
- **Chernobyl:** The national regulatory body “could not be regarded as an independent body.” -- *Commission to the USSR State Committee for the Supervision of Safety in Industry and Nuclear Power* report (1991)
- **Fukushima Daiichi:** The accident was a “manmade disaster” resulting from the “collusion between government, regulators, and TEPCO.” – *National Diet Investigation Committee* report (2012)

Recent regulatory reform initiatives

- **Korea:** establishment of Nuclear Safety & Security Commission under Act No. 10912 (Oct. 26, 2011).
- **Japan:** creation of Nuclear Regulation Authority under Law No. 47 of 2012.
- **India:** proposed Nuclear Safety Regulatory Authority Bill, No. 76 of 2011.
- **United Kingdom:** establishment of Office of Nuclear Regulation and proposed status as a separate statutory entity.
- **European Commission:** proposed amendment of Safety Directive (2009/71/EURATOM) addressing regulatory organisations and effectiveness.

Evolution of the Japan's Regulatory Body

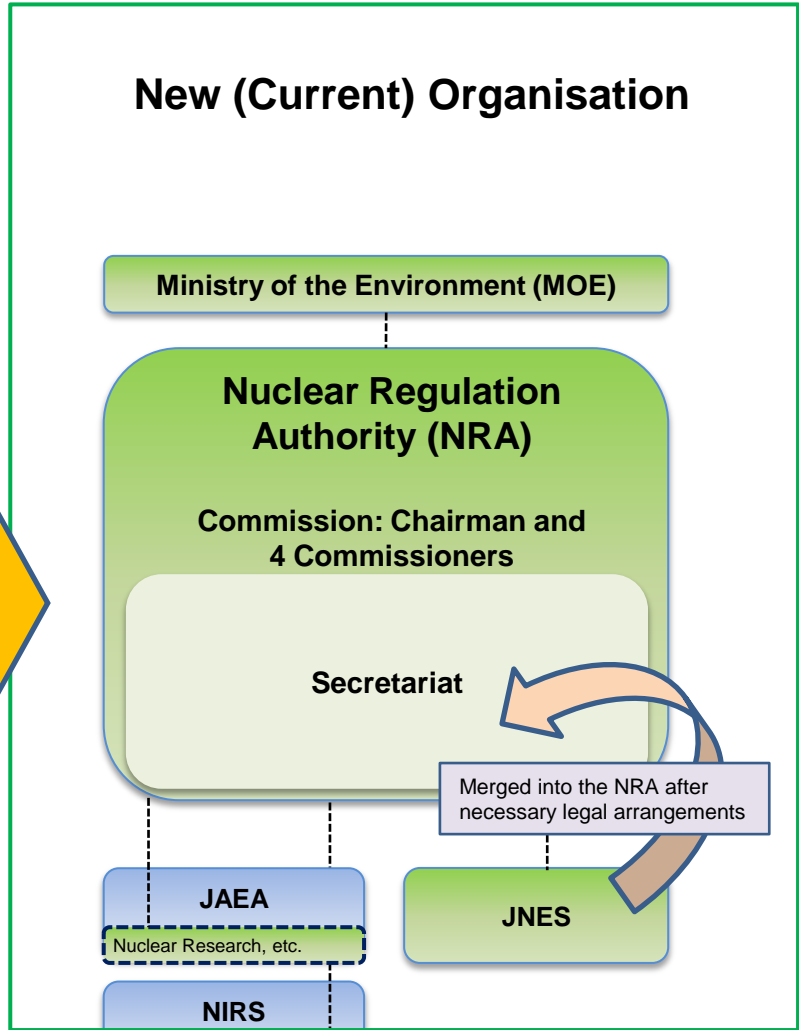
Prior Organisations



Independent Administrative Agencies
 - JNES: Japan Nuclear Energy Safety Organisation
 - JAEA: Japan Atomic Energy Agency
 - NIRS: National Institute of Radiological Sciences

* Transferred by 1st April 2013

New (Current) Organisation



The Operator's Responsibility for Safety

- *Convention on Nuclear Safety*, article 9, states:
“Each Contracting Party shall ensure that prime responsibility for the safety of a nuclear installation rests with the holder of the relevant licence and shall take the appropriate steps to ensure that each such licence holder meets its responsibility.”
- The *Joint Convention on the Safety of Spent Fuel Management* reiterates this obligation in the context of the management of spent fuel and radioactive waste.

The Role of Industry Self-Evaluation

- Industry-driven peer pressure can encourage licensees to maintain a strong safety record.
- Operators are in some respects “Hostages of each other.”
- Relevant bodies:
 - World Association of Nuclear Operators
 - World Nuclear Association
 - Institute of Nuclear Power Operations (INPO) in the USA
 - Liability Insurers
- Peer evaluations can complement insights from the regulator’s inspection and oversight.
- Voluntary safety enhancements may be implemented by licensees through affiliation with these organizations.
- But, voluntary measures are not legally enforceable and can create perception of a passive regulator.

Improving Accountability and Effectiveness of Regulators and Operators

- Attention to strengthening the peer review system, e.g., IRRS and OSART missions.
- Addressing regulatory effectiveness through the review meetings of the contracting parties to the Convention on Nuclear Safety (CNS).
- Greater transparency to national reports and reviews through the CNS.
- Improved accountability of operators through industry peer reviews and coordination with related efforts at an international level, e.g. through IAEA.
- Drawing on insights through other forums on international cooperation, e.g. through NEA.

Thank you!