



Nuclear safety

The term "nuclear safety" means the set of all engineering and management measures that must be adopted in nuclear plants, from the construction phase to the decommissioning phase, in order to prevent any accidents and mitigate their consequences. In the case of Italy, where nuclear power plants were permanently shut after the 1987 referendum, this refers to decommissioning nuclear plants, including radioactive waste and spent fuel deposits, and research reactors currently in operation.

In particular, these are the nuclear power plants of Garigliano, Latina, Trino and Caorso, under decommissioning, and the EUREX fuel cycle plants in Saluggia, ITREC Trisaia, which were used in the past as experimental facilities for fuel reprocessing, and the Bosco Marengo nuclear fuel fabrication plant. The research reactors currently in operation are the ENEA reactors TAPIRO and TRIGA, at the Casaccia center in Rome, the TRIGA MKII reactor and the SM1 subcritical reactor of the University of Pavia and the AGN 201 reactor of the University of Palermo. The Ispra-1 reactor and the ESSOR reactor of the Joint Research Center in Ispra (VA) and the L54M reactor of the University of Milan have been no longer operational for many years.

About nuclear safety, ISIN carries out its own controls at the preventive level, during the authorization phase and, subsequently, during the realization and operational phases and, in the case of decommissioning operations, during their performance, through specific supervision activities.

The Inspectorate is also entrusted with the control tasks on nuclear materials (Law no. 58/2015), on the passive physical protection of nuclear installations and materials, i.e. the arrangements put in place to prevent and combat any illegal acts aimed at the misappropriation of nuclear materials or sabotage. About nuclear safety, ISIN oversees the preparation of the national reports provided for by the Convention on nuclear safety, ratified by Italy with Law 19 January 1998, no. 10, participating in the periodic review conferences provided for by the Convention itself. ISIN also provides for the preparation of the national periodic report on the implementation of the 2009/71 / EURATOM and 2014/87 / EURATOM Directives for the establishment of a Community framework on nuclear safety of nuclear installations.

The Inspectorate participates in international cooperation initiatives aimed at improving the safety level of nuclear plants in operation, such as for example the "Stress Tests" conducted in Europe after Fukushima, and the Topical Peer Review (TPR) on the management of the aging of nuclear installations.

It also promotes bilateral collaboration initiatives in the field of nuclear safety with homologous foreign bodies, in particular with neighbouring countries where nuclear plants are in operation (for example, the agreements with the French, the Slovenian and the Swiss Nuclear Safety Authorities) and the agreement with the Nuclear Regulatory Commission of the United States.

Finally, it promotes the maintenance, development and enhancement of nuclear safety competences also through specific studies, assessments, research, collection and dissemination of data and information on topics of interest.

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