

SERVICE MANDATE 2024–2027

of the ENSI Board of the
Swiss Federal Nuclear Safety
Inspectorate



Schweizerische Eidgenossenschaft
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Eidgenössisches Nuklearsicherheitsinspektorat ENSI
Inspection fédérale de la sécurité nucléaire IFSN
Ispettorato federale della sicurezza nucleare IFSN
Swiss Federal Nuclear Safety Inspectorate ENSI

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Inspectorate (ENSI)**

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1. Introduction

The Swiss Federal Nuclear Safety Inspectorate (ENSI) is an independent body constituted under public law with its headquarters in Brugg in the Canton of Aargau. It supervises the five nuclear power plants in Switzerland including the interim storage facilities for radioactive waste at the nuclear power plant sites. Its regulatory scope also includes the central interim storage facility for radioactive waste in Würenlingen (ZWILAG) as well as the nuclear research facilities at the Paul Scherrer Institute (PSI) and the École Polytechnique Fédérale de Lausanne (EPFL). Although its regulatory activities are limited to the nuclear safety and security of the installations, they cover a wide range: the planning of changes to nuclear installations, their implementation, the operation of the installations, decommissioning and shutdown as well as the disposal of radioactive waste. ENSI also monitors the transport of radioactive materials to and from the nuclear installations, as well as geological investigations relating to the disposal of radioactive waste in deep geological repositories. ENSI's regulatory role is particularly concerned with protecting personnel and the general public from the harmful effects of ionising radiation. ENSI promotes regulatory nuclear safety research with the aim of making the latest scientific and technical findings available for its regulatory duties. It is also an active participant in the ongoing development of international safety standards. It regularly informs the public about nuclear safety issues and events affecting the safety of nuclear installations.

The ENSI Board is ENSI's strategic and internal regulatory body. It comprises five to seven members who are elected by the Federal Council. The members of the ENSI Board have, in particular, specialist knowledge in the field of nuclear safety as well as management experience. They may not carry out any economic activity or hold a federal or cantonal office which could compromise their independence. The ENSI Board sets the strategic goals for ENSI and monitors ENSI's management and regulatory activities. In addition, the ENSI Board elects the Director General and other members of the Executive Board. It approves ENSI's budget and is responsible for adequate quality assurance and risk management.

The ENSI Board defines strategic goals in the form of a service mandate covering a period of four years. Based on this service mandate, the ENSI Board and the Executive Board then define the annual goals that are to be achieved in a service agreement. The ENSI Board reviews whether ENSI is in compliance with the strategic direction set out in the service mandate and the extent to which the goals in the service agreement have been achieved. The ENSI Board informs the Federal Council about the regulatory activities, the status of quality assurance and risk management, the achievement of the strategic goals and the condition of the nuclear installations in an annual activity and business report which is submitted to the Federal Council for approval.

2. Current situation

On 21 May 2017, the Swiss electorate adopted the revised Energy Act and with it the 2050 Energy Strategy:

The dependence on fossil-fuel based energy sources is to be reduced and renewable energies promoted. No new nuclear power plants will be approved, but the existing nuclear power plants can be operated for as long as they meet the legally defined safety requirements. There is no technology ban, and nuclear research will not be restricted by the Energy Strategy 2050; indeed, it will continue to be supported by the Federal Government.

As a result of this political turnaround, the energy supply is undergoing a structural change in the direction of decentralisation and decarbonisation. This situation also currently requires that security of

supply is maintained. This central concern has suddenly become extremely relevant given the effects of Russia's war of aggression against Ukraine. At the same time, there is increasing uncertainty about future energy policy. As the Swiss nuclear power plants continue to contribute an important proportion of the national energy supply, their safe long-term operation is increasingly becoming the focus of ENSI's regulatory activities.

The licensees are responsible for ensuring the safety of their power plants at all times. For long-term operation beyond the fourth decade of power generation, the licensees must document specific safety features. To be able to assess these documented features, ENSI must have comprehensive expertise available in accordance with the current state of science and technology, especially in respect of ageing management in nuclear installations, and upgrading projects. The increasing digitalisation of nuclear plants and other innovations also require ENSI to monitor technological developments in order to be able to identify and respond to related new challenges at an early stage. This aspect also plays a role in assessing whether, and in what manner, nuclear events abroad influence Switzerland. Moreover, it is also important to keep a close eye on the growing difficulties within the industry in employing qualified professionals, and ensuring there are sufficient numbers of qualified suppliers and service providers. The negative effects of the shortage of skilled workers must be tackled proactively. The system change in the industry resulting from the long-term phase-out of nuclear power is also associated with economic pressures acting on nuclear power plant licensees. Accordingly, ENSI must carefully monitor the relevant safety-relevant effects. In this context, the safety culture in nuclear installations is of particular importance.

Mühleberg Nuclear Power Plant ceased power production at the end of 2019. In the context of the ongoing decommissioning, ENSI must take care to ensure it continues to perform its regulatory activities in a forward-looking and competent manner. By providing safety-oriented and expert oversight of the first decommissioning project for a commercially operated nuclear power plant in Switzerland, ENSI will be able to strengthen its position as a reliable and professionally qualified partner in nuclear safety matters.

Protection against ionising radiation is a key principle of nuclear safety. In the field of emergency preparedness in general and, more recently, in the context of the endangered nuclear power plants in Ukraine, there is an increasing discussion about thresholds, and the balancing of various risks and precautionary measures.

In addition to the safe operation of nuclear installations, the safe disposal of radioactive waste must also be ensured. After Nagra proposed the North of Lägern site area for the deep geological repository in autumn 2022, ENSI is expected to check the corresponding general licence applications in relation to safety issues during the service mandate term 2024–2027 and to examine the submitted documents. Thanks to its independent and competent examination, ENSI is creating confidence in the process for the establishment of a deep geological repository and enabling a factual and purposeful debate both among politicians and the public; a debate that will result in a decision by the Federal Council and Parliament as well as a possible national referendum.

3. Strategic goals

The strategic objective of the ENSI Board is to ensure that both people and the environment are protected from dangers caused by ionising radiation resulting from the use of nuclear energy (Article 1 sentence 2 and Article 4 para. 1 sentence 1 NEA).

Accordingly, ENSI must, where its regulatory activities are concerned, be best prepared to face current and future challenges in the area of nuclear safety. Safety must be given the highest priority. In particular, this requires strict independence from economic and political influence.

The ENSI Board has set strategic goals in the following areas for ENSI's regulatory activities for the years 2024–2027:

1. Operation of nuclear installations
2. Radiation protection and emergency preparedness
3. Shutting down and decommissioning
4. Radioactive waste management
5. International activities
6. Research
7. Information and communication
8. Organisational optimisation
9. HR policy
10. Financial policy
11. Quality management
12. Risk management

3.1 Operation of the nuclear installations

ENSI ensures that safety in Swiss nuclear installations has top priority and based on international comparisons, is of a high level. In this respect, ENSI particularly takes into account long-term operation, IT security, safety culture and the challenges of skills retention in the nuclear power industry.

3.2 Radiation protection and emergency preparedness

ENSI continues to strengthen its position as a competent and trustworthy contact in matters relating to radiation protection and emergency preparedness. It coordinates its actions with the responsible bodies in the Federal Government, cantons and third parties and actively participates in shaping any new regulations.

3.3 Shutting down and decommissioning

ENSI proactively regulates the ongoing decommissioning of nuclear installations in Switzerland and in doing so takes particular account of safety culture and radiation protection.

3.4 Radioactive waste management

ENSI actively oversees the disposal of radioactive waste and timely examines Nagra's general licence applications in accordance with the development of specialist science and technology.

3.5 International activities

ENSI continues to be actively involved in the exchange of international regulatory information and experience. In doing so, it is committed to the continuous improvement of nuclear safety and security as well as to the strengthening of nuclear regulation both in Switzerland and at a global level. The main focus of the activities is continued fulfilment of memberships, functions and cooperations, the further development of international safety standards and active participation in events.

ENSI receives international review missions in Switzerland and as a competent partner participates in corresponding missions in other countries.

If necessary, ENSI supports other federal bodies in the performance of their duties relating to nuclear safety and security issues, for example the SFOE and the FDFA.

3.6. Research

ENSI promotes regulatory safety research, especially concerning long-term operation, radiation protection, the effects of earthquakes on nuclear installations, the long-term storage of fuel elements and the long-term safety of deep geological repositories. ENSI identifies ways to improve the integration of issues of "human and organisational factors" into regulatory safety research.

ENSI endeavours to ensure that the scope of regulatory safety research in Switzerland increases.

3.7. Information and communication

ENSI is strengthening its public relations activities and is a recognised centre of excellence for nuclear safety and security in Switzerland. It communicates issues that are relevant for the public in an effective, quality-assured, differentiated, and timely manner.

3.8. Organisational optimisation

ENSI adapts to changes in its operating environment, in an effective, timely and accurate manner. In doing so, it pays particular attention to the regulatory culture, the networking within the company and the suitability of employees.

ENSI ensures that the findings of international review missions are implemented promptly and accurately.

3.9. HR policy

ENSI operates an up-to-date and forward-looking HR policy and positions itself as an attractive employer. It ensures the long-term maintenance of its competencies and promotes the development, motivation, and flexibility of its employees so that they can adapt to and tackle new tasks. ENSI ensures the compatibility of family and work, gender equality and diversity within the organisation.

3.10. Financial policy

ENSI continuously reviews its processes in respect of business management principles and implements measures to optimise these processes.

ENSI maintains reserves and equity at least at the existing level.

3.11. Quality management

ENSI keeps its quality management up to date, ensures its proper implementation and regularly evaluates its potential for optimisation.

ENSI supplements its quality assurance with a compliance system adapted to its operations.

3.12. Risk management

ENSI monitors its environment for possible new risks. It keeps its risk management system up to date, ensures its proper implementation and regularly evaluates its potential for optimisation.

4. Financial framework

ENSI must comply with the statutory mandate expressed in Article 14 of the ENSI Act to create reserves amounting to at least one third of the annual budget.

To support the achievement of these goals, the ENSI Board has made available a budget of around CHF 258.3 million for the 4-year service mandate term from 2024–2027. The increase in the budget, especially in expenditure, is a result of additional projects that are expected on the one hand, and, on the other, of the resulting adjustment of HR planning for the service mandate period 2024–2027.

Operating statement	Comparison period	Period
	2020–2023*	2024–2027
Total	In CHF million	In CHF million
Revenue	256.60	265.70
Expenditure	241.40	258.30
Balance	15.20	7.40
Cost recovery ratio	106.3 %	102.9 %

* Actual 2020–2022 and budget 2023

Statement of investments	Comparison period	Period
	2020–2023	2024–2027
Budget	In CHF million	In CHF million
Income	0	0
Expenditure	-7.5	-6.8
Balance	-7.5	-6.8

Issuer :
ENSI Board
Industriestrasse 19
CH-5201 Brugg

+41 (0)56 460 86 78
fachsekretariat@ensi-rat.ch
www.ensi-rat.ch/en

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