Path to nuclear: the Argentinean case

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de Energía Atómica

The Argentine nuclear sector

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INVAP

NUCLEOELECTRICA ARGENTINA S.A.

Conuar

dioxitek

ENSI

Associated companies

Autoridad Regulatoria Nuclear
PRESIDENCIA DE LA NACIÓN

Regulatory agency

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Pillars of the **Nuclear Programme**

- Government - Industry - University
- Development of in-house capabilities vs Turnkey Projects
- Maximization of the local content
- Knowledge Management/Human Resources Education & Training

Phases of Argentina's Nuclear Plan

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01 Promotion of Human Resources
Education & Training

02 Laboratories and First Activities: Focus in radiochemistry, nuclear metallurgy, and uranium mining.

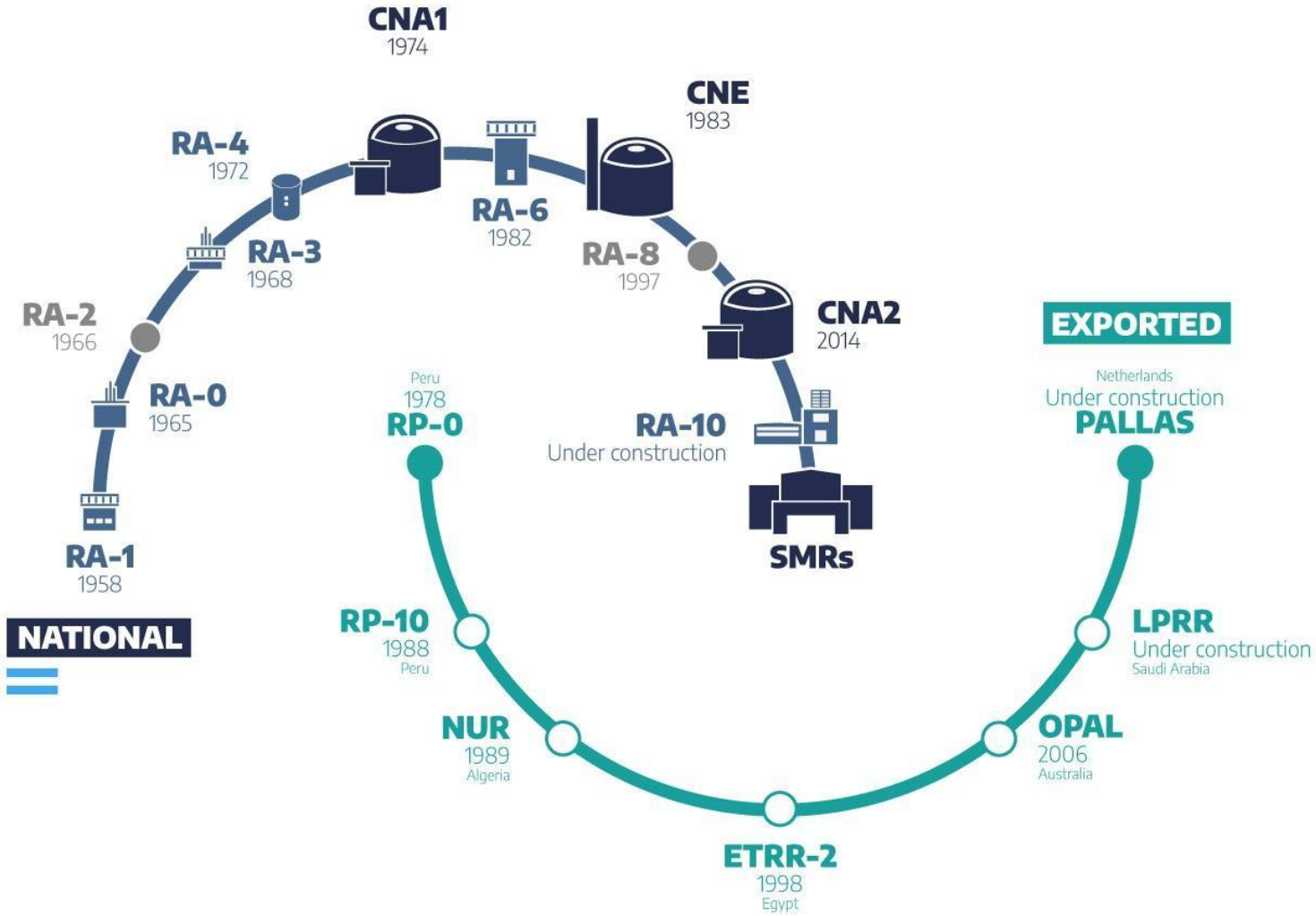
03 Research Reactors: Design, construction, and operation, including fuel production.

04 Radioisotope Production: Enabling medical diagnosis and treatment.

05 Nuclear Power Generation: Construction and operation of nuclear power plants.

06 Nuclear Fuel Cycle: From uranium mining to fuel production and waste management.

Nuclear Power Plants and Research Reactors



Nuclear power option included in national energy strategy

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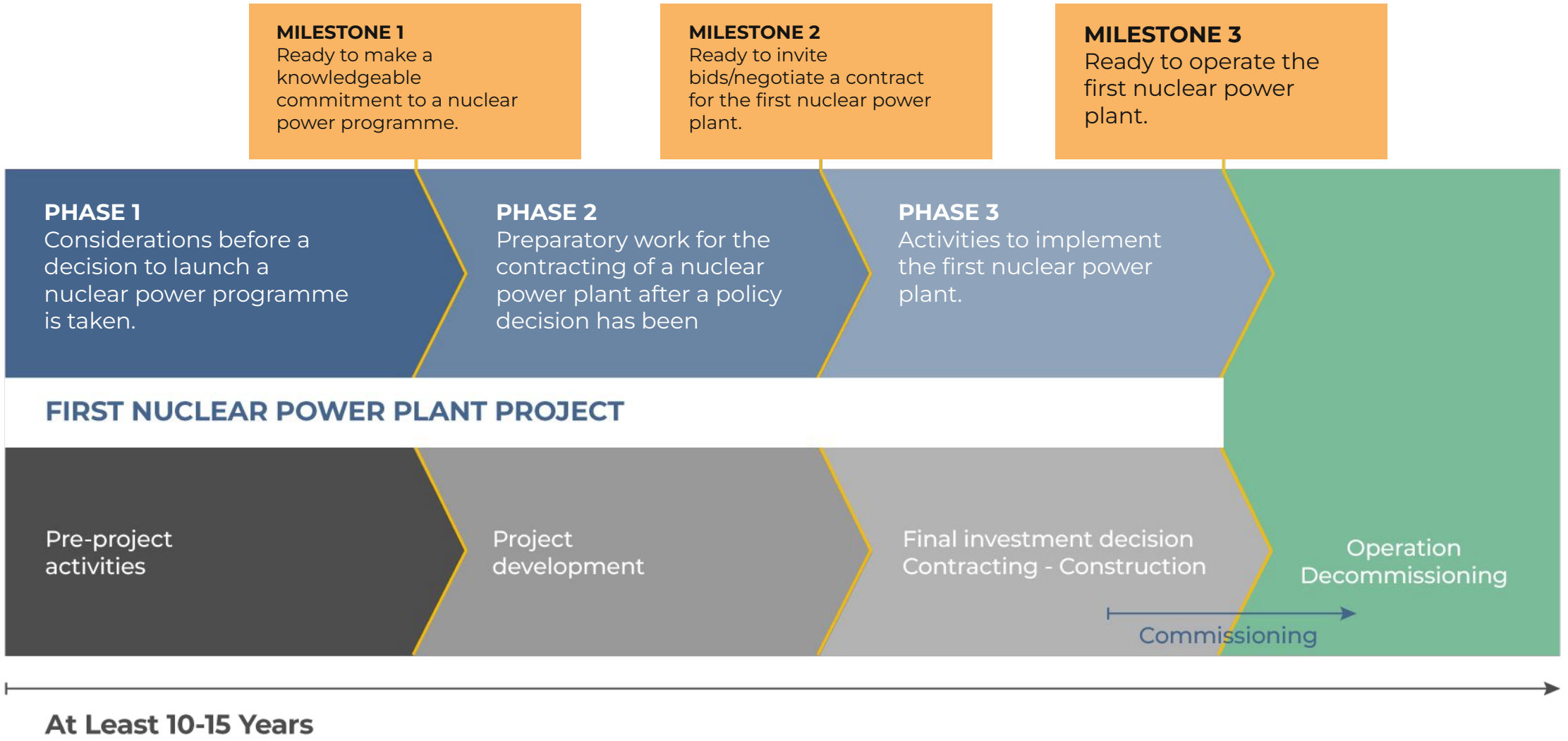

Nuclear Infrastructure Issues

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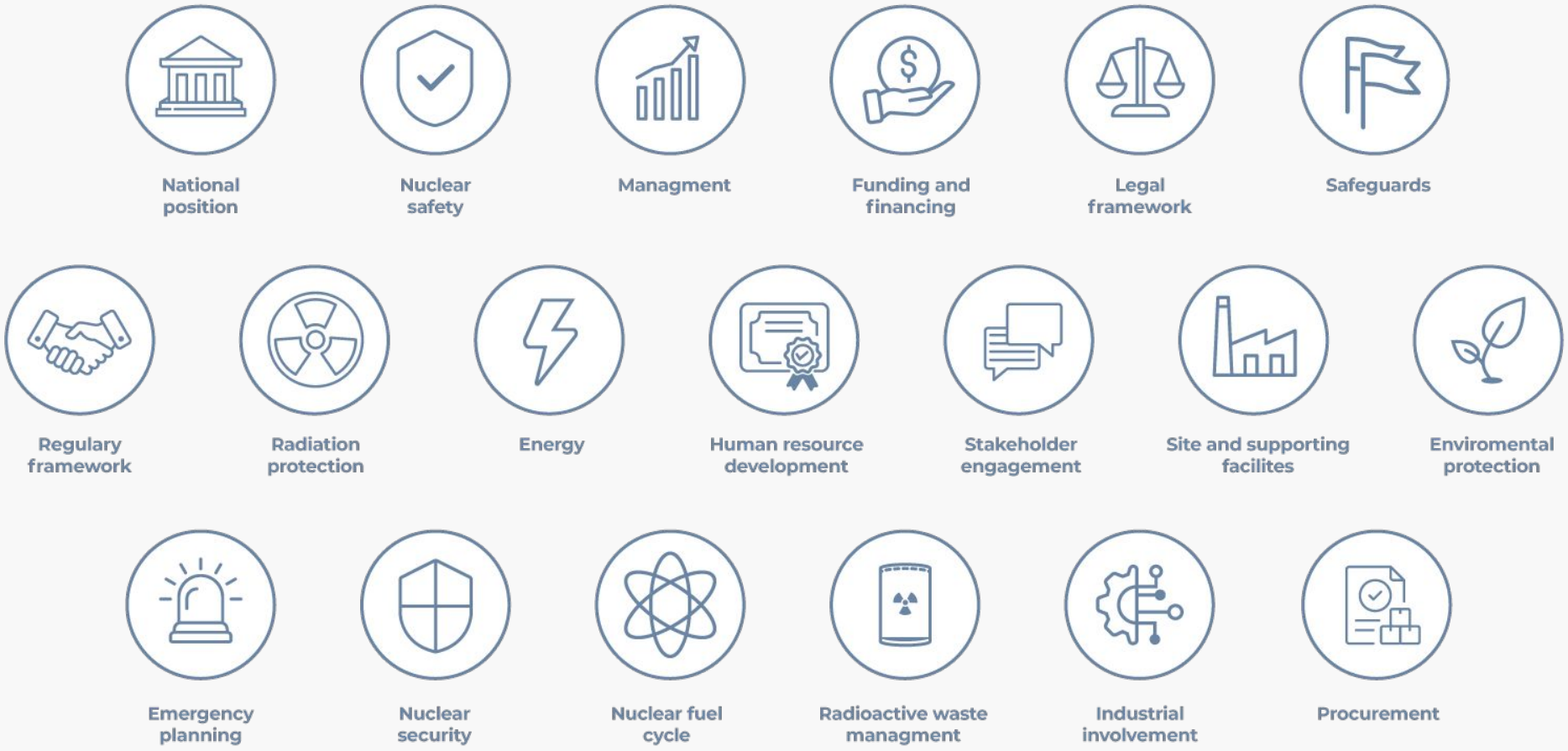

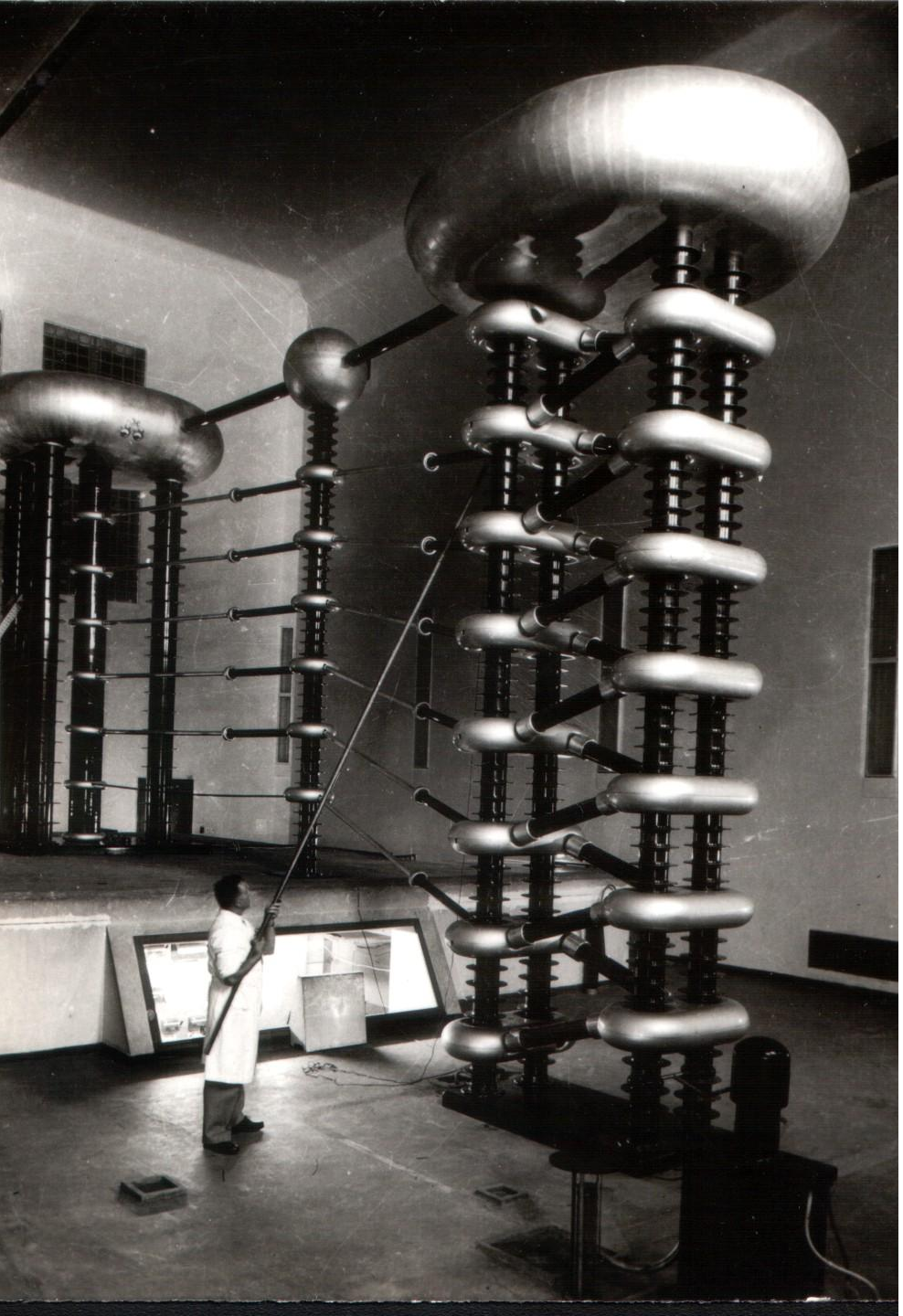

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National position

- On May 31, 1950, the **National Atomic Energy Commission (CNEA)** was created by Decree No. 10.936/50.

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Nuclear safety

- The commissioning of **Atucha I** in 1974 was a milestone in the Latin American nuclear development, not only for its technological significance but also for the robust nuclear safety standards it incorporated.

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Management

- The Argentine nuclear reactors have been operated and managed by highly trained **local personnel since their commissioning**.

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Funding and financing

- Nuclear projects in Argentina are primarily funded by the **National Treasury.**

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Legal framework

- Argentina has a comprehensive legal framework for the development and regulation of nuclear activities, established by National **Law No. 24.804 on Nuclear Activity**, enacted in 1997. This law sets the institutional and legal basis for the peaceful use of nuclear energy in the country, establishing the responsibilities of CNEA and the Nuclear Regulatory Authority (ARN), while ensuring compliance with international commitments on nuclear safety, safeguards, and non-proliferation.

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Safeguards

- Argentina & Brazil established the **Argentine-Brazilian Agency for Accounting and Control of Nuclear Materials (ABACC)** in 1991. ABACC is the only binational safeguards agency in the world and plays a key role in verifying the peaceful use of nuclear materials in both countries jointly with the International Atomic Energy Agency (IAEA).

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Regulatory framework

- The **Nuclear Regulatory Authority (ARN)** is devoted to the regulation, and oversight of nuclear activities, with national competence in the areas of radiological safety, nuclear safety, radiation protection, safeguards and non-proliferation, physical protection and security.

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Radiation protection

- Dan Jacobo Beninson, a leading Argentine physicist and international expert, played a key role in promoting the fundamental principles of radiation protection adopted in 1990 by the International Commission on Radiological Protection (ICRP), which continue to guide radiological safety standards worldwide.

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Energy

- Nucleoeléctrica Argentina S.A. is the company responsible for operating the three nuclear power plants currently in service in Argentina: Atucha I, Atucha II, and Embalse.

  The company generates nuclear energy through the operation of the Atucha I, Atucha II, and Embalse plants. The total installed capacity of its three plants is 1,763 MW.

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Human resource development

- 3 academic institutes – IAEA Collaborative Centre - Taylor-made courses for foreign students

Instituto Balseiro

INSTITUTO DE TECNOLOGÍA SABATO

Dan Beninson
Instituto de Tecnología Nuclear

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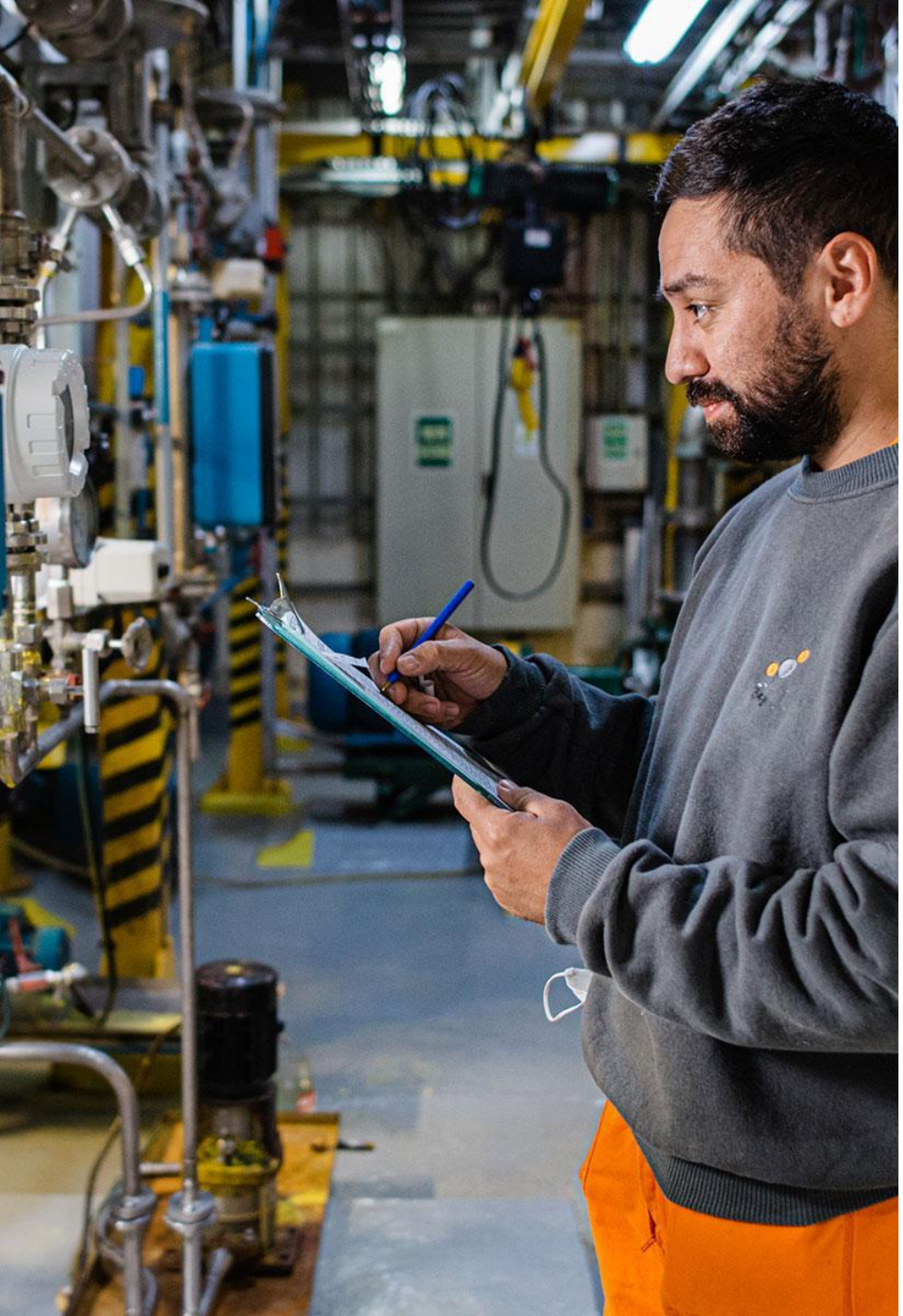
Environmental protection

Emergency planning

Nuclear security



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Nuclear fuel cycle

- Since the early stages of the nuclear power programme, Argentina has worked to develop domestic capabilities in technologies of the nuclear fuel cycle — including uranium mining, milling, conversion, fuel fabrication, and spent fuel management.

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Radioactive waste management

- Argentina manages radioactive waste in accordance with international safety standards and national legislation, particularly National Law No. 25.018 (1998) on Radioactive Waste Management and the international treaties such as the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

Industrial involvement

Procurement

CNEA Collaboration at **International Level**

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- Human resources
- Services
- Provision of strategic supplies
- Technical cooperation projects at bilateral level
- Strong presence at international fora
- Exportation of Nuclear Technology

Contributing to the development
of innovative solutions for global challenges.

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