

El Salvador's Nuclear Energy Program

The Next Generation of Nuclear Regulators: The Case of El Salvador.
Panel Discussion.

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ORGANISMO PARA LA
IMPLEMENTACIÓN DEL
PROGRAMA DE ENERGÍA
NUCLEAR EN EL SALVADOR



Dirección General de
Energía, Hidrocarburos
y Minas



Organization for the Implementation of Nuclear Energy Program in El Salvador (OIPEN)
General Directorate of Energy, Hydrocarbons and Mines - DGEHM

Republic of El Salvador

- 🌐 Location: in Central America; borders Guatemala, Honduras and the Pacific Ocean
- 📏 Area: 21,041 km²
- 🏙️ Capital: San Salvador
- 👥 Population (2024): 6.5 million inhabitants approx.
- ⚡ Maximum altitude: Cerro El Pital – 2,730 meters above sea level
- 🗣️ Official language: Spanish (Nahuat is an endangered indigenous language)
- 🇺🇸 Currency: U.S. Dollar (USD) and Bitcoin (BTC)
- 🌐 Political division: 14 departments
- 🏖️ Coast: 307 km in the Pacific Ocean
- 🌡️ Climate: Tropical, with rainy and dry season
- 🕒 Official Time: GMT-6 (no Daylight Saving Time)
- 🌐 Demonym: Salvadoran/a



Republic of El Salvador



Stablising legal and regulatory body

- ❑ Approval of the OIPEN (NEPIO) Law – 2024
- ❑ Approval of the Nuclear Energy Law – 2024/ Entry into force of the regulatory body – June 2026.

Recruiting talent for new regulators

Early development of talent as a strategic priority.



Efficient capacity building (small country).



Young professionals trained under IAEA standards.



A young regulator ensures long term institutional continuity.

Key challenges for El Salvador as a new regulator

- Absence of local academic curricula: No national university programs in nuclear engineering, radiation protection, or nuclear regulation.
- Limited field experience: Due to the absence of operating nuclear facilities or structured internship programs.
- Insufficient multidisciplinary skill sets: The nuclear sector requires combined expertise in radiation engineering, safety analysis, environmental assessment, legal frameworks, and emergency preparedness—skills that are difficult to acquire early in a professional career.
- Retention of young professionals: Regulatory bodies face challenges in retaining qualified personnel due to competition from industry and international organizations.



National Recruitment and Retention Strategy

- Implementation of dissemination and awareness programs to attract young professionals.
- Development of non-financial incentives, including: Continuous professional development opportunities.
- Recognition programs. Supportive and mission-driven work environments.
- Promotion of youth participation across all areas of the nuclear sector.
- Establishment of clear and transparent career pathways to ensure sustainable professional growth.
- Strengthening institutional identity and sense of purpose by positioning the nuclear program as a transformative milestone in the country's development.



El Salvador's Capacity Building Strategy

International cooperation:

IAEA support: Specialized training, workshops, and technical meetings in Nuclear Law, Nuclear Safety, Nuclear Security, and National Position development.

Existing bilateral agreements supporting nuclear capacity development (training, workshops, scholarships):

United States of America: MoU on Strategic Civil Nuclear Cooperation. Cooperation agreements with NRC and DOE. 123 Agreement process.

Argentina: Memorandum of Cooperation with the National Atomic Energy Commission (CNEA) Three scholarships granted.

Spain: MoU with the Nuclear Safety Council (CSN)

United Arab Emirates: Non-Disclosure with Emirates Nuclear Energy Company (ENEC).

These partnerships support the development of multidisciplinary career pathways for young regulators.



Lessons Learned



- Early development of nuclear regulatory body is essential.
- Establishing a robust legal and regulatory infrastructure from the outset provides long-term stability.
- Early identification and training of the senior leaders.
- Technical development and legal frameworks must progress in parallel to ensure effective oversight.
- Small countries particularly benefit from early planning, international cooperation, and scalable regulatory approaches.

Next Steps



- Strengthen the academic pipeline through targeted nuclear education and training programs.
- Institutionalize a clear career path for nuclear professionals within the regulatory framework.
- Enhance international cooperation to support capacity building and knowledge transfer.
- Gradually consolidate an independent and technically nuclear regulatory body.

Thank you!



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