



NUCLEAR POWER - PUBLIC ACCEPTANCE: ARGENTINE EXPERIENCE

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Latin America Section - American Nuclear Society

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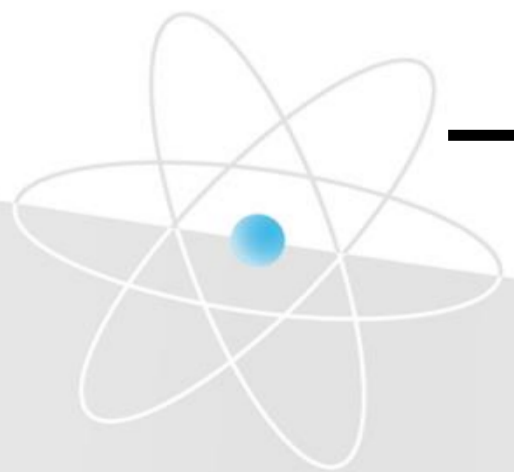


CNEA ACTIVITIES



After 74 years of nuclear development in Argentina, our activities are well distributed all along the country in:

- Atomic Centers
- Nuclear Power Plants
- Research and Radioisotope Production Reactors
- Nuclear Medicine Centers
- Radioactive Waste Management Areas
- Fuel Elements Production Plants
- Mining sites



Argentina, a nuclear country

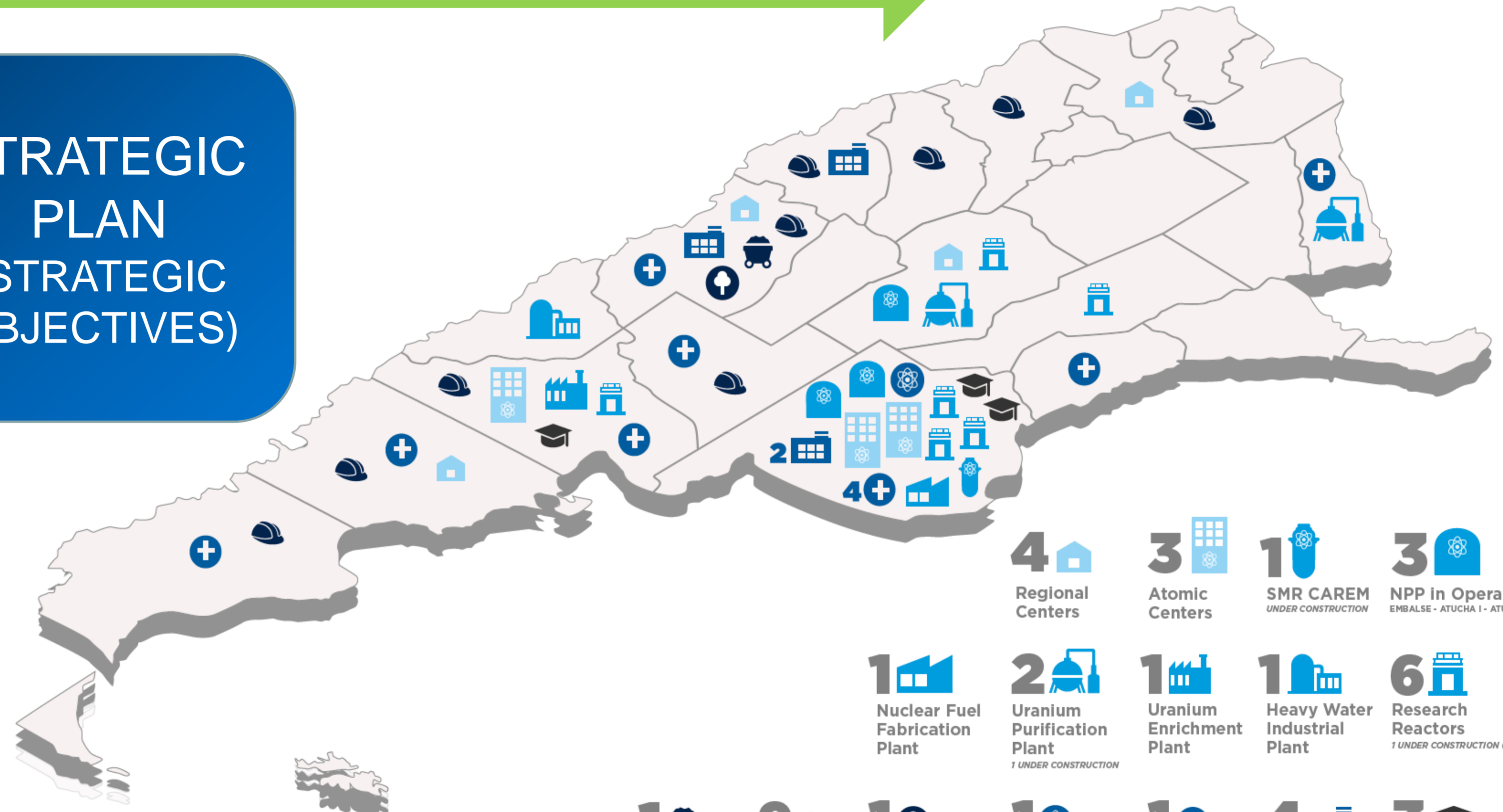


Comisión Nacional de Energía Atómica

Economic, Environmental and Social dimensions

MISSION
(LEGAL OBJECTIVES)

STRATEGIC PLAN
(STRATEGIC OBJECTIVES)



- 4 Regional Centers
- 3 Atomic Centers
- 1 SMR CAREM UNDER CONSTRUCTION
- 3 NPP in Operation (EMBALSE - ATUCHA I - ATUCHA II)
- 1 Nuclear Fuel Fabrication Plant
- 2 Uranium Purification Plants (1 UNDER CONSTRUCTION)
- 1 Uranium Enrichment Plant
- 1 Heavy Water Industrial Plant
- 6 Research Reactors (1 UNDER CONSTRUCTION (RA-10))
- 1 Industrial Mining Complex
- 9 Uranium Mining (PROVINCES WITH EXPLORATION ACTIVITIES)
- 10 Environmental Remediation (MALARGUE SITE PROJECT)
- 1 Protontherapy Center UNDER CONSTRUCTION
- 1 Nuclear Medicine National Plan
- 4 Irradiation Plants for Industrial Uses
- 3 Academic Institutes



HISTORY



- The regulation of our activities has been done, historically, by the Nuclear Regulatory Authority (ARN); with nationwide jurisdiction.
- At the early years, no direct intervention was given to the provincial authorities, nor to the public, for new nuclear projects. Only for the periodic control of conventional issues.



PREVIOUS EXPERIENCE



Gastre Project

- Deep geological repository in the '80s
- Negative influence of Chernobyl nuclear accident banned the development of the project
- New provincial legislations were developed that prohibit nuclear activities, except nuclear medicine



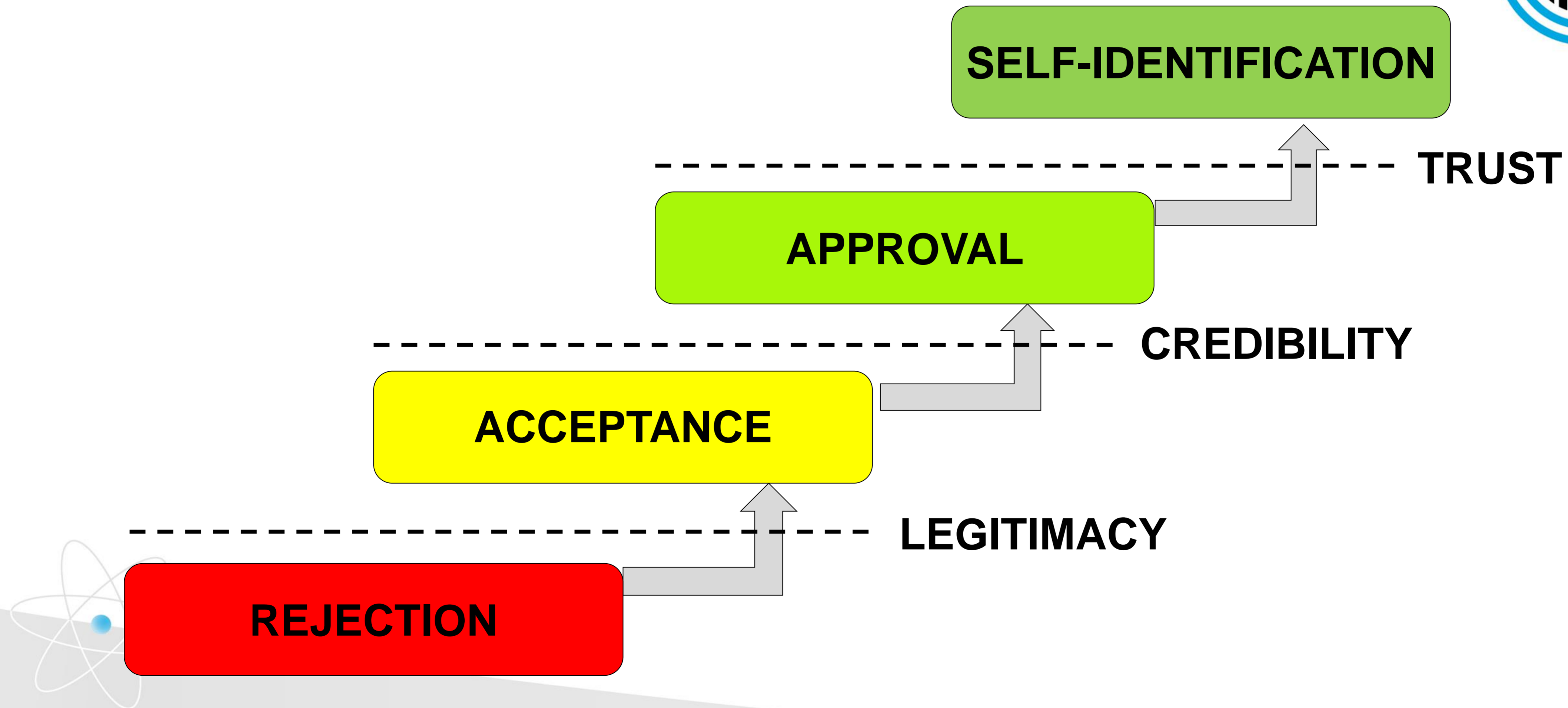
GAINING SOCIAL LICENCE



- The 1994 Constitution and the Nuclear Activity Law began to change the landscape, incorporating the participation of the provinces in new projects.
- In 2006 Argentina decided to reboost its Nuclear Plan
- A new policy has been decided; based on the TRANSPARENCY, that contribute to the acceptance, approval and self identification of the public with the development of our activities.



GAINING SOCIAL LICENSE



INITIATIVES



At National Level

Social Communication Plan:

- Social research (Surveys)
- Communication and dissemination of activities



INITIATIVES – NATIONAL LEVEL



Main conclusions of public opinion studies (qualitative and quantitative)

- Nuclear energy is mostly associated with scientific and technological development (72%).
- The most recognized use of nuclear energy is electricity production and nuclear medicine (30%). 63% are unaware of its utility.
- The majority agree with its peaceful uses but only if aspects related to contamination and nuclear waste management are controlled (64.4%).
- Nuclear energy is associated with work/progress (37.2%), and secondly, cause of risk/fear (25.4%).
- When other uses such as pest control, environmental protection, and forensic activities are mentioned, they are found to be highly innovative and unknown.
- The majority agree that it contributes to generating autonomy and sovereignty.

INITIATIVES – NATIONAL LEVEL



High-impact communication actions

- Launch of a mobile cinema with 4 educational audiovisuals on nuclear technology (through 17 provinces with 3D productions)
- Advertisings about CAREM Project during sports broadcasts of the Argentine first division football League.
- CNEA360 Mobile App, with a virtual design on the uses of nuclear technology used in school courses.
- Virtual 3D tours of nuclear facilities (RA1, RA3, RA4), available on the CNEA educational portal: <https://www.argentina.gob.ar/cnea/portal-educativo/contenidos-para-nivel-secundario/visitas-virtuales>
- Participation in 7 editions of the Culture, Science&Technology Fair, Tecnópolis, with massive attendance.
- Creation of CNEA YouTube Channel and production of around 180 audiovisuals disseminating nuclear technology, distributed through digital media, available at: <https://www.youtube.com/@CNEAArg/videos>
- Courses for high school teachers on nuclear technology through the Teacher Training Institute of the National Ministry of Education (more than 6,000 participants in several editions).

INITIATIVES



At local level

In addition to obtaining the license from the Nuclear Regulatory Authority, a series of actions were developed in relation to conventional environmental issues, with the aim of obtaining the environmental license for the activities of specific sites, prioritized according to the CNEA Strategic Plan.



INITIATIVES – LOCAL LEVEL



Actions:

- Inform activities of CNEA to local Authorities
- Describe socioeconomic and cultural component of our sites
- Strengthen the contact with local authorities and the Regulatory Body, public and other stakeholders
- Local communication plan development
- Identify and fulfill legal requirements: Environmental Impact Assessment, Communication Plan, Public Audiences, Environmental Management Plan



ENVIRONMENTAL IMPACT ASSESSMENT



- Analysis of project activities during the implementation and operational phases.
- Analysis of environmental aspects or factors.
- Identification and analysis of potential significant impacts on environmental aspects due to the planned activities.
- Assessment of significant environmental impacts. Presentation of the Environmental Impact Matrix.
- Implementation of preventive and corrective measures for impacts that can be mitigated. Mitigation applies to negative impacts, while enhancement applies to positive impacts.
- Assessment of mitigated significant environmental impacts. Presentation of the Mitigated Environmental Impact Matrix.

ENVIRONMENTAL MANAGEMENT PLAN



Set of actions that must be carried out to achieve a viable and sustainable development of the project, aiming to prevent, mitigate, correct, or compensate for its adverse effects and optimize its positive effects. It encompasses a series of procedures that provide the necessary tools to achieve the proposed objectives in environmental management.

- Training
- Environmental Communication
- Compliance with Environmental Regulatory Framework
- Effluent and Waste Management
- Environmental Monitoring Program

- Registered reports
- Subject to audit
- Requires strict compliance

PUBLIC HEARINGS

- New UO₂ Production Plant Project, Formosa Province, 2014



PUBLIC HEARINGS

- Uranium Enrichment Mock Up Reactivation Project, Rio Negro Province, 2015



PUBLIC HEARINGS

- Embalse Nuclear Power Plant Life Extension Project, Cordoba Province, 2016



PUBLIC HEARINGS



- Sierra Pintada Mining Site Remediation Project (Step I), Mendoza Province, 2019



PUBLIC HEARINGS

- Centro Argentino de Protonterapia, Ciudad Autónoma de Buenos Aires Province, 2021



MAR 25

CNEA presento el CeArP Centro Argentino de Protonterapia



Se realizó en Buenos Aires la audiencia pública por el proyecto del

La CNEA presentó los principales lineamientos para la construcción y puesta en marcha de un nuevo centro de radioterapia ante las autoridades y la comunidad de la Ciudad Autónoma de Buenos Aires.



Audiencia Pública "Análisis del Proyecto a nombre de la Comisión Nacional de Energía Atómica"



Suscribirse

48



Compartir



PUBLIC HEARINGS, PREVIOUS ACTIONS



- Presentation of Environmental Impact Assessment and the Environmental Management Plan to local Authorities
- Communication of the project to the public and stakeholders
- Significant actions based on local interests



PUBLIC HEARINGS DEVELOPEMENT



- Organization by Environmental Provincial Authorities
- Local and National Regulators participation
- Local science and technology sector participation
- Nuclear enterprises and other productive associated sectors participation
- Strong commitment of participation from workers and unions



PH - LESSONS LEARNED



- Instead of be a problem, the PH gives us the opportunity to develop a serious debate about our activities; with territorial insertion
- The PH, as part of the environmental license obtention process, enriches the Project, the Environmental Impact Assessment and the Environmental Management Plan



PH - LESSONS LEARNED



- The PH strengthened the relation with local regulators, authorities and organizations
- The correct organization and the moderator of the PH are both essential for the development of the activity
- Communication actions are more productive for small local groups, with less influence of local and national political situation
- Strong influence of local and national political situation



RÍO NEGRO PROVINCE EXPERIENCE



Everything was fine, but...

The government launched a Nuclear Power Plant Project in Río Negro Province (2017)



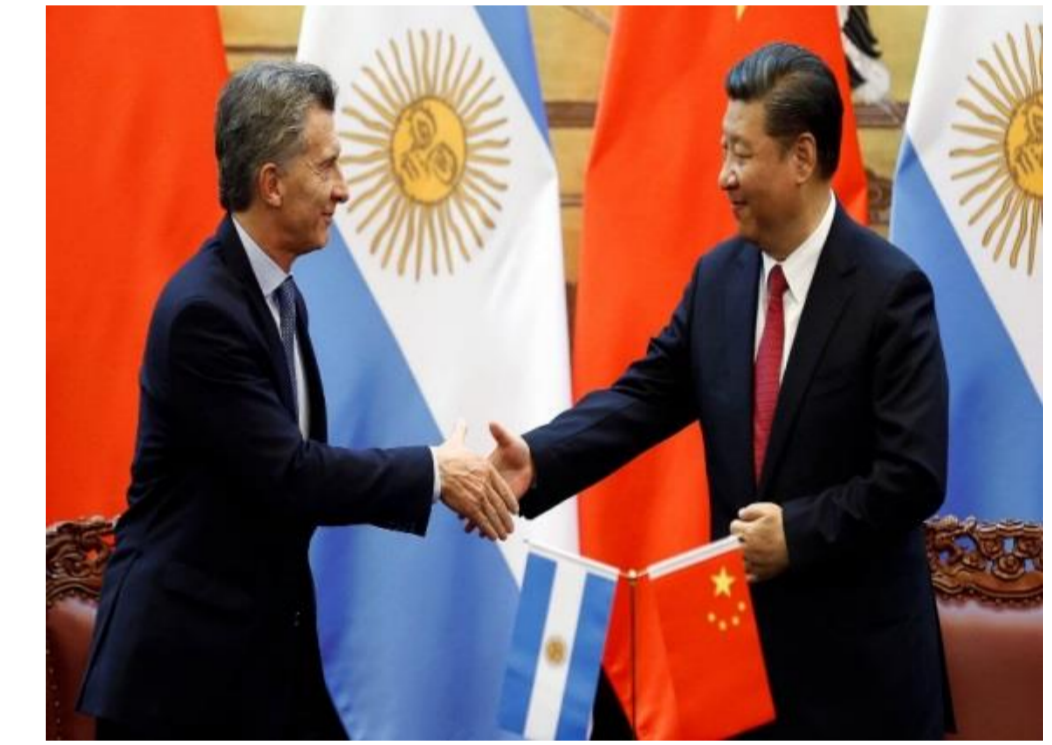
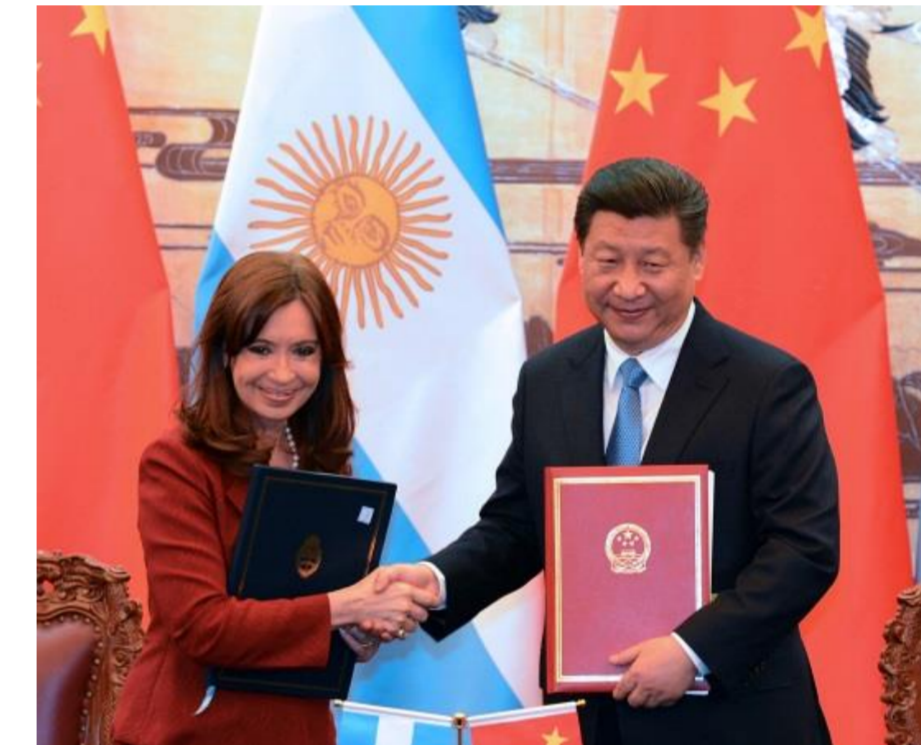
RÍO NEGRO PROVINCE EXPERIENCE

Consensus with People's Republic of China

Following the proposal made in the 2006 Nuclear Plan, the Government launched an international tender process. This bid included certain pre-conditions that had to be fulfilled in order to move forward with the project. Negotiations with China started.



Alberto Weretilneck, Governor of Río Negro Province announces the construction of Argentina's 4th NPP



Presidents Cristina Kirchner and Mauricio Macri and Xi Jinping (sign agreements)

Among the requirements established were:

- **Accesible financing,**
- **Technology transfer,**
- **Domestic localization.**

China National Nuclear Corporation (CNNC) fulfilled all pre requirements. The original agreement contemplated the construction of a PWR Hualong I reactor and a CANDU type reactor.

RÍO NEGRO PROVINCE EXPERIENCE

At the beginning, strong support of local authorities:



*“Never before the Province has received such investment. We are full with pride and satisfaction”,
The Río Negro Province Governor, May 2017 in his official visit to China.*

“We are certain that this public initiative is so important that it surpasses any other. These are enterprises that profoundly and definitively change a region”, The Río Negro Province Governor, July 2017

“This NPP construction is the most important investment, both Public and Private, in the history of the Province” The Río Negro Province Governor, May 2017

RÍO NEGRO PROVINCE EXPERIENCE

Clear social stance in relation with the NPP



- Rio Negro's Civil Society clearly rallied against the NPP construction.
- This in spite of hosting one of the most important Atomic Centers in Argentina.
- All efforts to convince local society of the benefits of the NPP were unsuccessful.



There were few and not that large popular expressions of support to the NPP as expected.

RÍO NEGRO PROVINCE EXPERIENCE



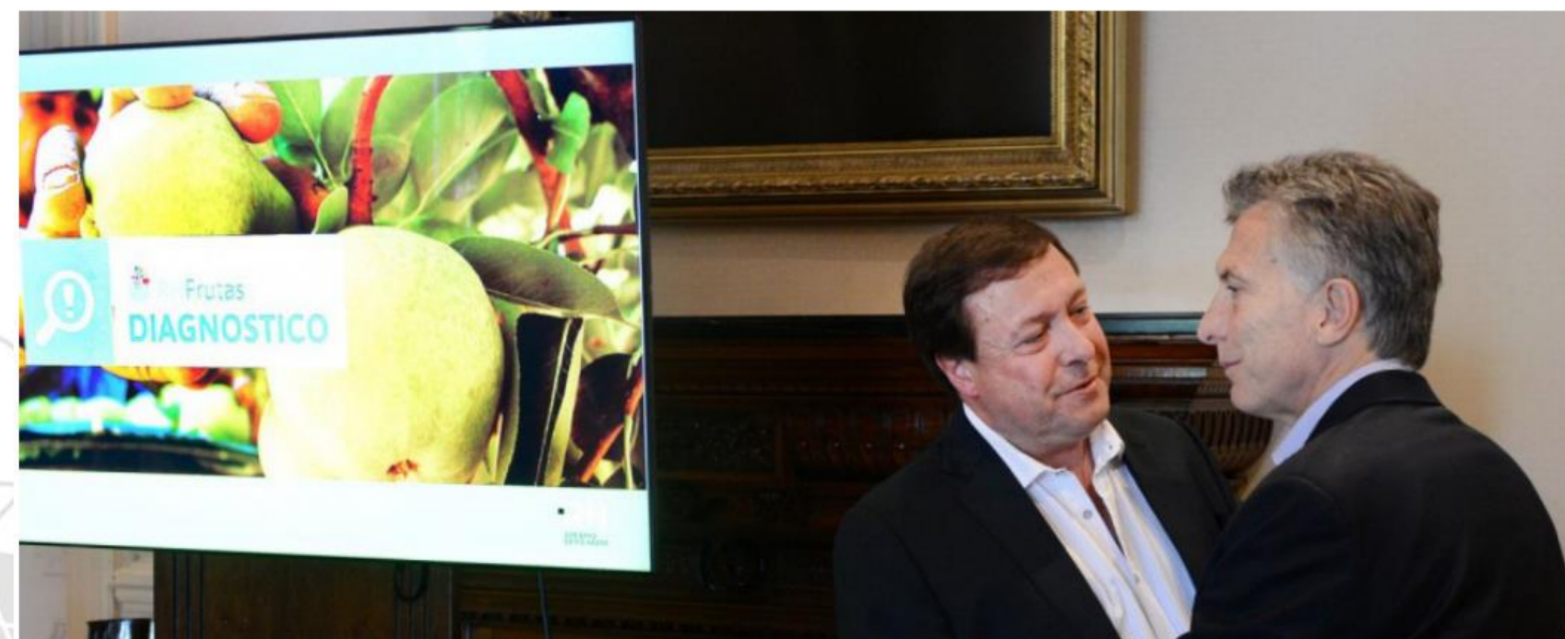
Provincial Elections as a breaking point...

Late August 2017, the Provincial Government lost primary elections at Legislative level. This causes an 180° course change.

Río Negro

Weretilneck rechaza la central nuclear que acordó Macri con China

Mandó una ley para prohibir la central nuclear, que hasta hace poco impulsaba. Furia en Cambiemos.



“... noticing social rejection to the NPP, and lack of consensus, we will not insist on the deployment of the facility”.

(we)... “sustain the firm position of not authorizing the construction of an NPP in the territory of this province”.

The Río Negro Province Governor, late August 2017

RÍO NEGRO PROVINCE EXPERIENCE

Consequence: Further local restrictions for Nuclear Activities



Legislatura de la Provincia
de Río Negro

LEY N° 5227

Sancionada: 01/09/2017

Promulgada: 05/09/2017 - Decreto: 1232/2017

Boletín Oficial: 11/09/2017 - Nú: 5597

LA LEGISLATURA DE LA PROVINCIA DE RIO NEGRO

SANCIONA CON FUERZA DE

LEY



Law N° 5227 (September 2017)

Article 1° - It is hereby forbidden that a NPP is constructed in the territory of Rio Negro Province.

Article 2° - The construction of a locally designed NPP, which will use CAREM technology, being developed by CNEA and INVAP S.E., is exempted from what is established in article 1°.

RÍO NEGRO PROVINCE EXPERIENCE



LESSON LEARNED:

NEVER underestimate the public opinion!





Thank you!

