Safety focused strategies on storage option - centralized storage facility (ATC)
• **2004.** Spanish Parliament’s Industry Commission recommended the Government to develop a centralized storage facility (ATC).

• **2006.** 6th National RADWaste Management Plan prioritizes the facility construction of the facility (ATC).

• **From December 2009 to December 2011.** The Government carried out public consultation for site selection and coordinated a national consent based process, resulting 4 final candidates.

• December 2011. The Government took a final decision on the site for construction of ATC in Villar de Cañas (Cuenca).

More information: www.emplazamientoatc.es
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SPANISH SPENT FUEL STRATEGY

- Operating NPP
- * 1 Ceased of com. op. NPP
- NPP under decommissioning
- Dismantled level 2 NPP
- Centralized Storage Facility (ATC)
- On-site Storage

Map of Spain showing different nuclear power plant status.
Nuclear Facility description

• Centralized Storage facility for current nuclear fleet:
  — 6700 Ton Spent nuclear fuel (19571 Fuel assemblies)
  — 12 m$^3$ High level waste + 4 m$^3$ ILW from Vandellos I reprocessed spent nuclear fuel
  — Intermediate level waste from NPP dismantling

• Estimated operational life time of 60 years. Design life 100 years

• Research Center and Industrial park
The facility will include:

1. Reception
2. Processing
3. Storage vaults
4. Technical services
5. Auxiliary services
6. Radwaste treatment
7. Electricity
8. General services
7 GENERAL LICENSING PROCESS

PRELIMINARY OR EARLY SITE LICENSE

Applications (Enresa)

ENVIRONMENTAL IMPACT DECLARATION

Previous works

Construction Phase I

Phase II

Construction License

Physical Protection Security Plan

Applications

Enresa

tests

Operation

OPERATION LICENSE

Operation Casks Storage Building

Art. Spanish Regulation on nuclear and radioactive facilities
ATC LICENSING PROCESS (1) : PRELIMINARY OR EARLY SITE LICENSE

- Site and Facility justification, statement of needs
- Organizational aspects and QA
- Infrastructure and previous works description
- Site Characterization Study
- Project description
- Preliminary Construction Project

Assessment

Meteorology
- Seismology
- Geology
- Hydrology
- Hydrogeology
- Geotechnical and civil engineering

Human Factors and organization

Quality assurance

CSN technical findings
9 ATC LICENSING PROCESS (2) CONSTRUCTION LICENSE

- Project General description
- Procurement Program
- Financial Budget
- Preliminary Safety Analysis
- Dismantling provision
- Administrative authorizations

CSN Technical findings

- Radiation Protection and shielding
- Offsite Radiological impact
- Environmental radiological surveillance
- Physical Protection
- Emergency preparedness
- Dismantling

- Mechanical, electric Engineering
- Confinement analysis
- Fire protection
- Thermal analysis
- Criticality
- SNF and Waste management
- Transportation

CSN assessment
The Centralized Storage Facility must be able to face extreme natural conditions, multiple failure and unintended man-made hazards.

A draft CSN technical instruction will require that Design Extended Conditions (beyond design) analysis be performed.

11 ATC LICENSING PROCESS: (3) OPERATION LICENSE

- Final Safety Analysis
- Conduct of operations
- Technical Specifications
- Emergency Plan
- Nuclear Test Program
- Quality Assurance Program
- Radiation Protection Program
- SNF and waste management Program
- Final economic study
- Dismantling provisions
- Physical Protection Program
THANK YOU FOR YOUR ATTENTION