The CIGEO project in France
*(CIGEO: Industrial Center for Geological Disposal)*

MP François-Michel GONNOT
Chairman, ANDRA
FRANCE
The action framework is defined by the Parliament

- **A first law for 15 years research on High Level waste**
  - 1991 to 2006, geological repository and alternative solutions

- **A new Planning Act passed in 2006 for RW Management**
  - All types of radioactive waste are considered through
    - A National Inventory
    - A Management Plan for Radioactive Materials and Waste (PNGMDR)

- **Both laws define**
  - Clear objectives and schedules
  - Assessment system: CNE, ASN, OPECST
  - Information, transparency, reporting requirements
  - Funding schemes for the Agency
    - Polluter-pays principle: contracts or tax system
    - Subsidies for Public Missions
The Callovo-Oxfordian argillite at the MHM site (Bure)

- **Age:** 155 million years
- **Depth at the site:** ~500 m
- **Thickness at the site:** ~130 m

**Mineralogy:** ~45% clay + carbonates and silicates

**Poor water content:** < 15%

**No free water, no water flow**

**Diffusive transfer only**
Demonstration of the favourable properties of the Callovo-Oxfordian layer of the Meuse & Haute Marne Districts for a HLLL waste geological repository

- feasible from a technical standpoint
- demonstrable from a scientific standpoint
- safe (its safety may be demonstrated)
Delineation of the Transposition Zone (TZ)

- Properties considered as equivalent to those observed in the URL
- Characteristics suitable for the implementation of the repository

250-km²
New set of experiments in the Underground Laboratory
CIGEO: Geological Repository Project

SCHEMA DE PRINCIPE DU STOCKAGE PROFOND

Descenderies d'accès au stockage

Installations de surface zone 2

Installations de surface zone 1

Verse à déblais

Verse à déblais

HA

MAVL

Puits d'accès au stockage

Alvéole MAVL

Alvéole HA
Delineation of a ZIRA
Continuing the studies and preparing for the public debate
Geological Disposal: A Project with a High Added Technological Value
Moving forward: site-selection process

Transposition zone of the Laboratory (250 km²)

Interest zone ~30 km²

Surface: 2 or 3 implementation scenarios

2005

Early 2010: Validation by the government of the underground interest zone and of surface scenarios

2009

Exchanges and dialogue

2010-2011: Comprehensive survey of the interest zone and development studies on implementation scenarios of surface facilities

2012

Proposal by Andra of an implementation site

2013

Scientific advice

Opinion from territorial authorities

Law on Reversibility

Public Inquiry

Authorization decree

2015

Licence application for the construction of the geological repository

2016