

"CIGEO" Geological Disposal for HLW and ILW: A Technical Dialogue between the Public Expert and Civil Society – 14106

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ABSTRACT

With a National Public Debate on HLW and ILW-LLW management scheduled for 2013, the French Institute for Nuclear Safety and Radiation Protection (IRSN), along with two citizens' oversight bodies (Anccli¹ and the Clis de Bure²), launched in 2012 a joint initiative to help them get ready for this milestone and the following ones, contributing to the waste management decision-making process.

INTRODUCTION

As of today, France has produced more than a million cubic meters of radioactive waste³. Among this waste, 2 700 m³ are High Level Waste (HLW) and 40 000 m³ are Intermediate Level Long-Lived Waste (ILW-LL). The HLW and ILW-LL put together therefore account for only 3 % of the total volume of the French radioactive waste. However, these mere 3 % concentrate 99 % of the waste's radioactivity. This is why they must be managed with extra care.

The issue was not discovered yesterday. The process towards the safe management of the French HLW and ILW-LL started decades ago. Over the years, its road has been paved with research, reports, commissions' meetings and Parliament Acts, which led to progress and steps backwards alike. The current operating framework has been set by the 1991 Waste Act, a major milestone which selected three management options for the HLW and ILW-LL: geological disposal, long-term storage and separation/transmutation. Each option was to be investigated over the next 15 years before the Parliament could make a decision in 2006. The 2006 Waste Act was then adopted, choosing the geological disposal as the "reference" way to manage the HLW and ILW-LL and confirming the role of Andra, the French agency for nuclear waste management, in designing it.

In 2013, the issue has been brought front and center again by a new milestone: a public debate on the "Cigéo"⁴ project of geological disposal prepared by Andra.

The public debate marks the beginning of the administrative process designed to lead to the construction of a geological disposal facility in North-Eastern France starting in 2025. It is a mandatory and strictly regulated process which is not specific to nuclear projects but required for all projects with planned cost exceeding €300 million. Its purpose is to allow the public at large to discuss the opportunity, the aims and the characteristics of major infrastructures such as highways, bridges, train tracks, or nuclear plants. This process is carefully framed. A public debate lasts four months, with a possible two-month extension. It is organized and supervised by the National Commission for Public Debate (Commission Nationale du Débat Public or CNDP), a

1 Anccli: National Association of Local Information Committees and Commissions

2 Clis de Bure: Local Information and Oversight Committee attached to Bure's geological laboratory.

3 The volume reached at the end of 2010 is exactly of 1.32 million of cubic meters (Andra, Inventaire national 2012).

4 « Cigéo » stands for « Centre industriel géologique », which means « Geological Industrial Center ».

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public institution independent from the government, which decides the form the debate should take (series of public meetings, web interactions, consensus conferences, etc.). Documents from the contractor (Andra) are made available and the public can have its own position papers circulated by the CNDP in the form of 4-page “stakeholders’ notebooks”. At the end of the debate, the CNDP issues a report which does not take a position on the merits of the project but relays the arguments and concerns heard throughout the discussions. The contractor then follows up with its own report three months later.

The image shows two screenshots side-by-side. The left screenshot is a 'CAHIER D'ACTEURS' (stakeholder's notebook) for the CLIS (Comité Local d'Information et de Suivi). It features the CNDP logo and a title 'DÉBAT PUBLIC sur le projet de CENTRE DE STOCKAGE RÉVERSIBLE PROFOND DE DÉCHETS RADIOACTIFS EN MEUSE/Haute-MARNE (Cigéo)'. The content includes a calendar for November 2013, a section on the CLIS mission, and a detailed text block about the project's timeline and the role of the CLIS. The right screenshot is the website for the Cigéo Public Debate. It features the CNDP logo and a title 'DÉBAT PUBLIC sur le projet de CENTRE DE STOCKAGE RÉVERSIBLE PROFOND DE DÉCHETS RADIOACTIFS EN MEUSE/Haute-MARNE'. The website includes a navigation menu, a section for 'Participation au débat public' with dates and topics, a section for 'Débats contradictoires', and a large banner for a public debate on November 13th at 19h. The banner asks questions about the project's costs and financing. Below the banner, there are sections for 'Donnez votre avis', 'Posez une question', 'Participez au forum citoyen', and 'Rédigez un cahier d'acteur'. There is also a newsletter sign-up form and a search bar.

Example of the CLIS stakeholder's notebook

Website of the Cigéo Public Debate

The Cigéo public debate is a major step in the geological disposal decision making process. It is not the last one, not by far, but it represents a chance for the citizens to get involved and express their viewpoint on the opportunity and the technical specificities of the project submitted by Andra before the licence application for the disposal is submitted in 2015.

Conscious of the importance of the public debate, the Ancli and the Clis of Bure, two citizens' oversight bodies, sought the support from IRSN in their preparation for this event.



The Ancli is the National Association of Local Information Commissions and Committees. It federates all the French CLI (Local Information Commissions), which are pluralistic bodies attached to each French nuclear installation. Their existence has been mandatory since 2006. Their role is to monitor the installation and to inform the local population on nuclear safety and radiological protection matters.

All CLI members are volunteers. They come for 50 % at least from the ranks of elected officials (city, county, and region) and for at least 10 % from each of the three following categories: representatives of environmental protection Non-Governmental Organisations (NGOs), representatives from nuclear operators' labor-unions and “qualified persons”. Some CLIs have

existed in France since the late 1970s. They became more numerous and more active over the years.



The CLIS de Bure is a special kind of CLI, created by the 1991 Waste Act. Its role is to oversee the activities and the research led by Andra at the geological laboratory of Bure (in North-Eastern France) in preparation for the geological disposal Cigéo to be built in the area in the coming years. Its 91 members, just like those from the regular CLI, come from the ranks of elected officials (local and national), unions representatives, etc.

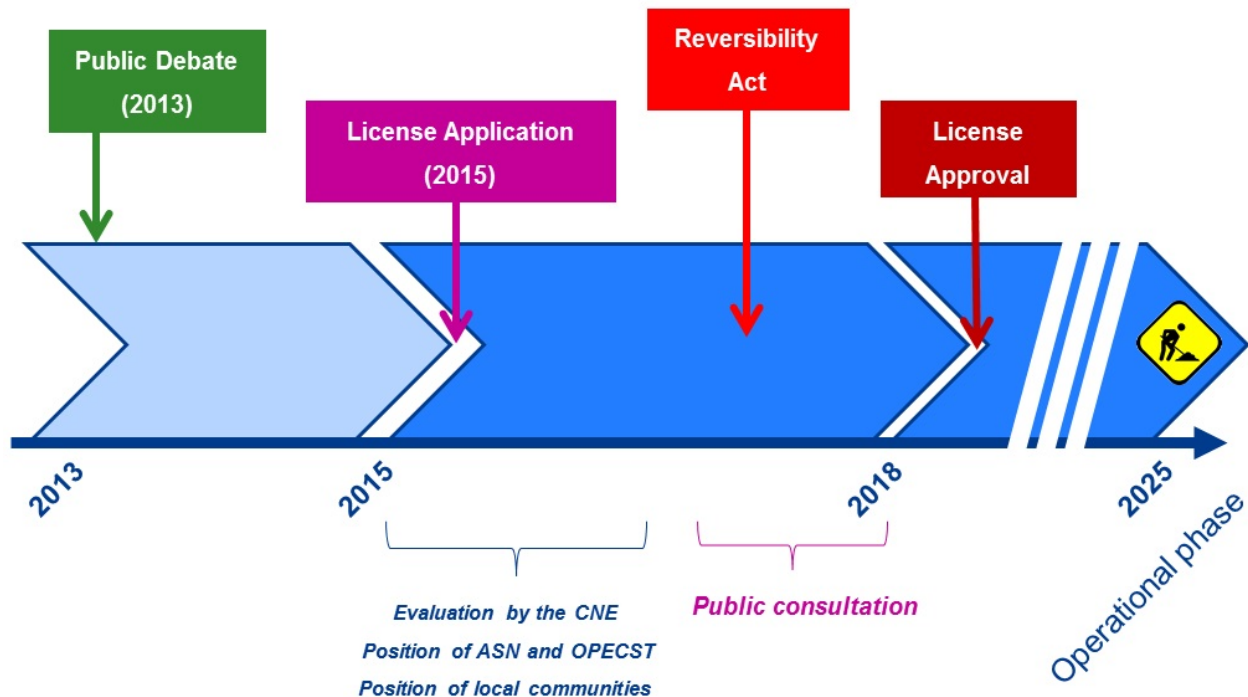


IRSN, finally, is the French institutional expert in nuclear safety and risk assessment. As such, the Institute has at the heart of its mission to engage citizens on technical issues over the years, initiating several actions designed to better involve local stakeholders and NGOs in the technical nuclear matters. IRSN has been collaborating regularly with Anccli and the Clis de Bure during the past few years, providing technical support to their capacity-building effort on nuclear safety and radiation protection in general

and on radioactive waste in particular.

In March 2012, the Anccli requested IRSN support on the HLW and ILW-LL issue and reached out to the Clis de Bure to suggest a tripartite initiative on the Cigéo project.

A TECHNICAL DIALOGUE ON RADIOACTIVE WASTE: WHAT FOR?



Cigéo Project timeline

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In launching the technical dialogue in 2012, the three partners sought to allow the ANCCLI and the CLIS to identify the main technical issues at stake before the start of the 2013 Public Debate, so as to facilitate their involvement. We mentioned earlier that the public debate is a carefully framed process which lasts four months. While that duration may seem significant, four months go by quickly for regular citizens when starting from nothing and trying to get a sense of a complex issue such as radioactive waste disposal. The dialogue, by starting discussions as soon as 2012, would give the participants more time to get acquainted with the issues, hopefully resulting in a better understanding of the project in its many dimensions and a better engagement in the debate itself.

While the preparation for the public debate was the main and immediate purpose of the initiative, it is not the only one. The second aim of the dialogue is remain active after the debate and to accompany the following steps of the decision making process, all the way to the beginning of the construction work. The public debate indeed is the first milestone of the Cigéo decision-making process, but it is not the last one, and the Anccli as well as the Clis de Bure wish to keep overseeing the process, with the support from IRSN.

IMPLEMENTATION

The Dialogue unfolded in two phases, the first being the clarification of the issues and challenges of a geological disposal, the second allowing to start addressing these technical queries.

Defining the Issues (June-December 2012)

On June 26, 2012, the main stakeholders of the Cigéo project (implementer, local actors, NGOs, authority, experts...) were each invited to expose what the issues of the Cigéo project were according to them. The discussions triggered by the presentations allowed the 25 participants to agree on three issues considered as particularly significant. They were the following:

- Radioactive waste inventory, management options and impact of energy policy changes on those.
- Storage vs. disposal, and reversibility
- Safety, radiation protection, health and environmental monitoring.

Once these few topics had been singled out, the Anccli, the Clis and IRSN decided to proceed with the creation of working groups on each topic, to better determine the questions raised by each issue. The groups met during the Fall of 2012. The output was a document gathering many questions raised by participants. Among these questions were the following:

- Which waste is designed to go to Cigéo?
- What hypotheses are chosen to create Cigéo's waste inventory?
- Is there waste without management solution as of today? How will this waste be dealt with?
- What are the options in case of changes in the energy policy?
- What is a long-term storage? Is it a viable alternative to disposal? Is it a solution while waiting for better management solutions?
- Is temporary storage considered (radioactivity decline)? If so for how long?
- What does reversibility mean? Does it apply during operation or even after the closing of some parts of the disposal?

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- What is the monitoring need before construction, during operation and after closing of the disposal?
- ...



Working groups meetings

In December, an extended seminar was organized to share and discuss the first results with any CLI member interested in the issue. It was attended by more than 60 people, most of whom were NGOs members and elected officials. Representatives from the authorities, the implementer, the waste producers, as well as the president of the Cigéo Commission on Public Debate participated, bringing multiple viewpoints and relevant information to the discussions. By the end of the day, the participants agreed that the questions raised by the working groups were a good summary of the preoccupations of the public and agreed on keeping the dialogue alive to start address these issues.

Step 2: Addressing Technical Queries (2013-...)

The second phase began with a two-day workshop held in April 2013 in Paris. On the first day, a conference open to all CLI members on the topic “Your Waste: What Solutions?” served as a teaser for all CLI members unfamiliar with radioactive waste. It gave to the 80-odd participants an overview of the situation in France and abroad. Its main purpose was to introduce the topic to people, in the perspective of the upcoming public debate, which would start a month later, on May 15th. The following day was much more technical, featured the presentation by IRSN of its main expertise findings, addressing the issues raised during the first phase of the “Dialogue”. More than 80 persons participated in this two-day workshop, including representatives from 20 different CLIs as well as representatives from the implementer, the authorities and the waste producers. They engaged in animated discussions on technical and societal issues alike.

From May to December 2013, the “Dialogue” has been suspended to avoid any confusion or interference with the official process and allow the Public Debate to run its course. It will resume in earnest in 2014 to address issues such as reversibility, confinement properties of clay, etc.



April 8-9 Workshop

LESSONS LEARNED

As mentioned earlier, the dialogue is not over yet, since one of its purposes is to keep accompanying the decision making process over the following years. However, one can already draw some conclusions on the first phase, which came to an end in May 2013.

From June 2012 to May 2013, the dialogue allowed a fruitful technical discussion not only between IRSN experts and civil society representatives from Anccli and the Clis, but also with other stakeholders such as the implementer (Andra), the nuclear safety authority (ASN), the waste producers (EDF, Areva, CEA), the CNDP, etc. According to the participants, it contributed to a allowing them a better access to scientific information and techniques and replies to their queries. In a more general sense, it allowed the participants gaining a better understanding of the radioactive waste management issues in France.

In a very concrete way, Anccli used the output of the dialogue to engage in the Cigéo public debate. It published its third White Paper on radioactive waste as well as its public debate stakeholders' notebook in the wake of the dialogue. The CLIS de Bure also used the elements from the dialogue to produce its own stakeholders' notebook. So did IRSN, who once more gained from its discussions with the public a broader view of technical issues and enhancing them with societal preoccupations. The dialogue's main effect cannot be seen on paper: it remains with the people who participated and brought back with them new knowledge, new questions, and a wish to further engage on this issue.

As it happened, the unfolding of the public debate itself didn't provide the expected opportunities for citizens' engagement, leaving many - supporters and opponents of the project alike – frustrated. But this other story, of missed opportunities, will have to be told another time.

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