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## Europe plans binding rules for nuclear waste



**EU Energy Commissioner Guenther Oettinger presented proposals for the safe storage of nuclear waste on Wednesday. The rules would force national nuclear authorities to draw up disposal plans to be vetted by the EU.**

*Europe wants to coordinate a long-term strategy for nuclear waste*

Europe's energy chief said that the EU needed binding rules for the long-term storage of nuclear waste in Europe, namely in deep underground bunkers that would be safe from accidents or sabotage.

"We have to make sure that we have the highest safety standards in the world to protect our citizens," Guenther Oettinger said on Wednesday in Brussels. "Safety is indivisible. If an accident happens in one country, it can have devastating effects also in others."

Oettinger said the current situation within the EU, where most nuclear waste is stored in bunkers or warehouses until it cools down, is no longer acceptable.

The EU's energy body says "deep geological repositories," or caverns at depths of between 100 and 700 meters underground, are the best places to permanently store spent fuel rods, which can remain dangerous to humans for up to a million years.

The 50,000 cubic meters of waste generated by the EU annually is currently held in temporary above-ground facilities, although lower-grade nuclear waste, which includes such things as equipment from de-commissioned reactors, is permitted below ground.

Oettinger is keen to change this because of surface storage facilities' vulnerability to environmental damage and terrorist attacks.

"The vast majority of experts agree that you need to have deep storage, in other words at least 300 meters below the earth's surface," he said.

The EU's executive wants each of its member states to come up with a national plan for long-term storage within four years of new EU legislation. Those plans would then be vetted by Oettinger's team.

**Not so black and white**



Where Europe currently stores its waste

But not everyone trusts the burial technique, which has never been put to the test due to the vast timeframes involved.

Munich Environmental Institute board member Christina Hacker told Deutsche Welle that the problem is in the use of the word "safe".

"Who knows what is going to be safe for a million years?" she asked. "We have never had a depot like this before so it is impossible to guarantee its safety."

Proponents of the idea counter that rock provides a better natural barrier than any man-made constructions and that it is the best possible solution to a complex problem.

They say thirty years of research has established which geological structures are best for the job, and point to structures of clay in Germany and granite in Sweden.

But nuclear waste expert, Stefan Alt from the environmental research centre Oeko-Institut says there are some critical questions that need to be answered before any legislation can be signed off.

"Storing waste deep under the ground is the most responsible way to go," he told Deutsche Welle. "But we still have to decide whether we will want access to it in the future or whether we want to seal it away forever."

### A bad precedent

Alt says the difficulties in predicting environmental changes over the next centuries and millennia make it impossible to foresee things like the condition of the containers five hundred years down the line.



*Burying nuclear waste has proved problematic in Germany waste irreversibly.*

Furthermore, in light of revelations earlier this year that containers at the ASSE nuclear storage facility in Germany had been damaged as a result of structural instability, he believes it could be wise to make waste accessible.

It's an argument supported by local anti-nuclear campaigners.

Udo Dettmann, part of the ASSE II community organization, told Deutsche Welle it would be a critical mistake to bury radioactive

"It if would stay deep under the ground that would be fine, but there is no proof that this will be the case over a period of one million years," he said. "The only way we have to correct mis-developments is to ensure access to the storage."

He also said that there had been "insufficient" research into such sites, and that it would be irresponsible for the German government or the European Commission to decide upon deep geological repositories without having thoroughly explored other options.

### **Politics versus security**



*Oettinger says current European rules for storing waste are unacceptable*

For the time being, though that the EU's executive appears determined to find a long term, subterranean solution to the problem of dealing with nuclear waste .

In a recent article in a regional German newspaper, the Badisches Tagblatt, Oettinger said he could foresee clusters of EU countries agreeing upon a collective waste-storage site.

He did not suggest which of the EU's 27 member-states might prove suitable for such a facility, but stressed that he would not "tolerate the export of nuclear waste outside the European Union."

And while the idea of one country housing another country's – or indeed several other countries' – nuclear waste could itself prove politically tricky, Stefan Alt says that from a scientific point of view, it makes sense to find the best geological location possible.

"On this issue, security is more important than national boundaries," he said. "The alternative would mean that every country tried to locate sites which don't even exist."

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