

Cernavoda nuclear power plant (units 3 & 4)

Romania

Sectors: Nuclear Electric Power Generation

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[Project website](#)

Sectors

Nuclear Electric Power Generation

Location

About Cernavoda nuclear power plant (units 3 & 4)

The plans to build Romania's Cernavoda nuclear power plant are old - they were part of an energy policy devised by the dictator Nicolae Ceausescu who was deposed in 1989 and wanted to build five reactors. The Cernavoda 3 and 4 reactors are based on the Canadian CANDU6 design which, according to the Western European Nuclear Regulators Association, has not changed since 1979. There are big question marks over the reactor's safety which shares the same design flaw as the reactor which caused the Chernobyl disaster in 1986.

Construction on reactors 2, 3, 4, and 5 was halted at Cernavoda in 1991 to concentrate on reactor 1, which was commissioned in 1996 almost 20 years after negotiations first started, costing the state \$2.2 billion. Cernavoda 2, commissioned in October 2007, was the last nuclear power station to start operation in Europe. Cernavoda 3 and 4 are not expected to start operation until 2014 and 2015 at the earliest.

Nuclearelectrica, the state run owner and operator, says the project will cost about 4 billion euros. As with nearly all nuclear reactor projects, that estimate will almost certainly rise and quickly. The Romanian government is aware of the financial risks involved. In order to keep the six strategic investors happy, it has put extensive state aid into the project. The Government has made a guarantee of EUR 220 million, an EUR 350 million subsidy for 855 tons of heavy water, and contributed EUR 800 million from the National Development Fund. CEE Bankwatch and Greenpeace have complained about this state aid to the European Commission.

After all this, the two new reactors will not even be used to supply electricity to Romanian consumers. They will instead export electricity to neighbouring countries.

Latest developments

Jun 28 2009

What must happen

Banks should refuse to provide capital for this project or for Electronuclear or any of the strategic investors, as the project does not work with state of the art nuclear technology (a 2nd generation reactor design), has unacceptable effects on the environment (e.g. tritium emissions), and goes counter the development of a sustainable energy policy for Romania.

Issues

Human rights and social issues

Cernavoda is a small town of slightly more than 20,000 residents in the southeast of Romania located on the Danube River, not far from the Black Sea. Cernavoda 1 and 2 produce approximately 18% of Romania's electricity. Water from the Danube is used for cooling the reactor. Traces of tritium, a radioactive isotope of hydrogen, have been found in the water that is released back into the river from the reactor.

Recommendations have been made to relocate pregnant women and mothers with very young children, and local residents have been advised not to eat produce grown in local gardens.

During the Environmental Impact Assessment of Cernavoda 3 and 4, Greenpeace organised a presentation of a report by Dr. Ian Fairlie into tritium emissions from the existing reactors. During the presentation in the town hall in Cernavoda, the state owned operator Nuclearelectrica disrupted the meeting and used intrusive surveillance on Dr. Fairlie and the Greenpeace team. All attendants at the meeting were registered by taking in their ID cards at the entrance of the town hall. Local human rights activists criticised the resulting lack of opportunity for local inhabitants to discuss the findings presented by Dr. Fairlie freely. Romanian law clearly assigns responsibility for the safe operation of the reactors to the operator, Nuclearelectrica.

Environmental issues

The level of tritium emitted from the CANDU6 reactors will increase to unacceptable levels if reactor 3 and 4 are permitted to upgrade. On average 60% of tritium releases occur in the Danube and 75% in the atmosphere.

The power station is located in an area that is seismic active (the Vranca breach) which has seen heavy earthquakes in recent history. An earthquake in 1977 destroyed much of the Romanian capital Bucharest and caused damage in the area surrounding of Cernavoda. The CANDU 6 reactor also lacks sufficient protection against terrorist attack.

Gender aspects

Clearly, pregnant women and children up to 4 years old are more vulnerable to the high tritium emissions of CANDU 6 reactors. This risk of exposure will become even higher should the two new planned reactors come on stream.

Other issues

The Romanian Government is aware of the financial risks involved in this project. In order to convince the six strategic investors, they decided to put extensive state aid into the project, but did not sufficiently realise this will be in breach with European state aid regulations.

The Government decided to grant a government guarantee for 220 Million Euro, a subsidy for 855 tons of heavy water for the sum of 350 Million Euro and 800 Million Euro from the National Development Fund, from which 20 Million Euro is to be allocated in 2009. CEE Bankwatch and Greenpeace [have complained](#) about this state aid to the European Commission.

Governance

Updates

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The Environmental Impact Assessment of the Cernavoda 3,4 is currently in its final stages.

The Romanian government is looking for possible financial models for the project. A government decision including government loan guarantees, subsidies for heavy water and direct investment from the government budget structural funds had to be reconsidered, as they would constitute illegal state aid.

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