

Researcher wants to draw energy from nuclear waste

## Germany could be supplied with electricity for 300 years



In Germany, the last three nuclear reactors will be shut down this year

Photo: Armin Weigel/dpa

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**This man could become an energy savior: nuclear researcher Professor Bruno Merk. The energy engineer researches "iMAGINE" - nuclear power plants of the fifth generation. He could kill several birds with one stone:**

Merk wants to use the nuclear waste produced so far as a resource. The scientist argues that the spent nuclear fuel rods and the uranium residues from fuel production would be of inestimable value as a new source of energy for the power supply in Germany.

**Merk's prognosis: Simply by utilizing the 16,000 tons of nuclear waste from reactor operation, Germany could be supplied with electricity for almost 300 years and the amount of nuclear waste to be stored in the long term could be reduced to less than a tenth through innovative sorting.**



Professor Bruno Merk conducts research on fifth-generation nuclear power plants  
Photo: University of Liverpool

His goal is to generate electricity from materials that are already available in the country - but are considered waste products by today's definition. This could reduce energy imports.

► **Merk's vision: The radioactive waste will be crushed, dissolved in a chemical liquid at 500 degrees (molten salt) and then fully converted into energy in the new generation reactor.**

The evidence that this is theoretically possible was already provided in the 1960s and 1980s, says Merk.

### **Merk conducts research in England – political acceptance was lacking**

**For the next step, a reactor experiment, the scientist would need around 50 million euros. However, Merk has not relied on the German research institutes for a long time.**

He left Germany seven years ago because, according to his own statements, he was attacked because of his nuclear research. "There was a lack of political acceptance," says Merk to BILD.

The scientist raises allegations against politics and research institutes at the time he left: Attempts were made to dictate what may be technologically possible, says the professor.

**"There were recommendations to shut up in public in the future," criticizes Merk. He also heard from the Ministry of Research at this time that he shouldn't expect to get any money for it. The nuclear power plant of the future would also reach completely new dimensions in terms of safety, says Merk.**

**"I had a permanent contract as a full time scientist. Other scientists would call this a win in the lottery. I left anyway because my goal is to realize my research, but I didn't see any chance of success anymore," the nuclear expert told BILD.**

Merk is now doing research in Liverpool and is funded by the Royal Academy of Engineering. In the end, England would also benefit from the breakthrough - unless Germany would still be interested in Merk's technology and decide to invest in his research area.

**CDU Vice Carsten Linnemann (45) raises the alarm: "I am increasingly pessimistic about Germany as research and innovation location. The only discussion here is where we want to get out and what we want to ban. Even worse: Promising innovations are declared politically undesirable."**

Linnemann is committed to ensuring that this does not happen with the fifth generation of nuclear power plants. He says to BILD: "Germany must finally take off its ideological blinkers and pave the way for a new era. Into an era where we no longer have to worry about where the power for future years and centuries to come will come from. In parallel, we solve environmental problems such as the disposal of nuclear waste. We can't get any better than that. Politics must finally show its true colours."

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