

FOR ALTERNATIVES TO NUCLEAR



# STOP EPR

Produced by:  
Beyond Nuclear at NPRI  
6930 Carroll Avenue, Suite 400  
Takoma Park, MD 20912  
301.270.2209  
info@beyondnuclear.org  
www.beyondnuclear.org  
[www.beyondnuclear.org/stop\\_EPR\\_USA.html](http://www.beyondnuclear.org/stop_EPR_USA.html)  
[www.stop-epr.org](http://www.stop-epr.org)

POUR DES  
**ALTERNATIVES**  
AU NUCLEAIRE  
**STOP EPR**



10/10/08



## TABLE OF CONTENTS

What is the EPR?.....	3
Where is the EPR?.....	3
Why the EPR is opposed in France.....	4
Why the EPR is opposed in the U.S.....	5
EPR opposition movements.....	5
The French Players.....	6
10 reasons to oppose all new reactors...7	



### STOP EPR USA

[www.beyondnuclear.org/stop\\_EPR\\_USA.html](http://www.beyondnuclear.org/stop_EPR_USA.html)

Beyond Nuclear

6930 Carroll Avenue, Suite 400

Takoma Park, MD 20912

Tel: 301.270.2209

Fax: 301.270.4000

Email: [info@beyondnuclear.org](mailto:info@beyondnuclear.org)

Collectif STOP EPR: [www.stop-epr.org](http://www.stop-epr.org)

## 10 reasons to oppose all new reactors

1. New reactors are too expensive, anticipated to exceed \$9-12 billion each of taxpayer and ratepayer money, with a cost-overrun history that tripled the original estimates.
2. From licensing through construction to operation, reactors take too long to come on line to address climate change in time – at least 6-10 years each with longer delays likely.
3. A meltdown could cause tens of thousands of deaths and hundreds of billions of dollars in damages and spread radioactive contamination across vast areas for centuries.
4. Security at reactors is inadequate due to cost-cutting by an industry otherwise unable to compete in the electricity market. Distributed renewable energy is far more secure.
5. Reactors are not required to withstand aircraft attacks, making them potential dirty bombs in our backyards. Attacks on non-containment structures are a safety concern.
6. Civilian nuclear programs provide the materials, knowledge and technology to transition to nuclear weapons production and encourage a nuclear arms race worldwide.
7. There is still no solution to the radioactive waste problem. The proposed Yucca Mountain repository is scientifically flawed and its capacity would be exceeded by existing reactor and weapons wastes before the dump could open.
8. Reactors require enormous quantities of water to operate. If water sources diminish significantly or become too hot—due to droughts and heat waves that will increase under global warming—reactors cannot operate safely.
9. Nuclear power is not emissions-free. Reactors routinely release radioactivity harmful to health. From uranium mining to waste storage, nuclear power emits greenhouse gases.
10. Radiation exposure can alter DNA, cause cancer, and shorten life-expectancy. Wildlife near the Chernobyl reactor explosion have demonstrated decreased longevity.





## The French Players

### Areva

Areva, the giant French nuclear corporation, is almost entirely state-owned and involved in every phase of the nuclear fuel chain from uranium mining to waste management. It operates the reprocessing facility at La Hague on the northern coast of France. Reprocessing, the chemical separation of plutonium and uranium from irradiated reactor fuel, has resulted in high levels of radioactive contamination in the air and sea. Medical studies also found elevated rates of leukemia in the area raising concerns about radiation exposures from La Hague. In the summer of 2008, a series of radioactive leaks and spills at Areva-owned facilities cast doubt on the company's safety and environmental management. During the worst instance, at Tricastin, where radioactivity leaked into two rivers and entered the ground water, the company waited 16 hours before warning the public. Areva is marketing the EPR across the globe including in the U.S. where it currently supplies reactor fuel and dry cask storage. Areva holds U.S. contracts for a uranium enrichment facility in Idaho and a MOX fuel fabrication plant in South Carolina and is pushing a resumption of reprocessing at the Savannah River Site.

### Électricité de France

EDF, also largely state-owned, is active in electricity production, transport, energy supply and trading. In the U.S., EDF is part of UniStar which plans to operate four EPRs. In May 2008 EDF came under fire when the French security agency halted construction at the Flamanville EPR site for an unacceptable lack of rigorous oversight. A similar lapse of quality control occurred in July 2008 when 100 workers at EDF's Tricastin power plant in Bollene, southern France, were contaminated as waste particles escaped from a pipe during maintenance work. In the fall of 2008, EDF took over British Energy, effectively seizing control of the British nuclear energy sector.

## What is the EPR?

The EPR, or Evolutionary Power Reactor, is a 1600 megawatt nuclear fission reactor created by Siemens and Framatone in 1992 and marketed by Areva, the 90% government-owned French nuclear corporation. Outside of the U.S. it is known as the European Pressurized Reactor.

### Where is the EPR?

**FINLAND:** The first EPR began construction in 2005 at the Olkiluoto nuclear site in Finland. It has been plagued by construction errors and quality control and safety issues and is already at least two and half years behind schedule and more than 50% over budget.

**FRANCE:** Construction of an EPR reactor at the existing Flamanville two-reactor site on the Normandy coast began in July 2006. Construction was halted at the site in June 2008 due to lack of quality control in the concrete base and reinforced steel rebar.

**UNITED STATES:** U.S. plans call for at least seven EPR reactors at six sites: Bruneau, Idaho; Calvert Cliffs, Maryland; Nine Mile Point, New York; Callaway, Missouri; Bell Bend, Pennsylvania; and Victoria Co., Texas (2 units.)

**CANADA:** Nuclear-free Alberta is threatened by plans to install as many as 13 reactors, most if not all the EPR design. Ironically, one of the expressed purposes of bringing nuclear energy to Alberta is to use it to extract oil from the tar sands. In reality much of the electricity will be exported to the United States.

**REST OF THE WORLD:** The French government is actively marketing nuclear energy around the globe, inking deals for the EPR and other nuclear technology with any government willing to pay and with little regard for the presence of a democracy. Many experts believe interest in nuclear energy will provide the pathway to nuclear weapons development.





## Why the EPR is opposed in France

1. **Too much nuclear electricity.** France produces more electricity than it needs. Consequently, it exports electricity but takes all the risk from an 80% dependence on nuclear energy plus it must manage all the waste.
2. **The EPR is expensive.** A new French study, “Wind or Plutonium,” found that reallocating the EPR funding to wind would produce twice as much electricity as nuclear plants and five times as many jobs. A second study showed that the use of renewable energy and energy efficiency in France could produce 15 times more jobs than nuclear energy.
3. **The EPR will not give France energy independence.** Reliance on nuclear power has not reduced oil dependence and the EPR cannot change that. France still uses large amounts of oil for transportation and heating and no longer mines uranium which is 100% imported, including from politically sensitive countries.
4. **Expanding nuclear energy undermines renewable energy development.** Budgeting for the hugely expensive EPR takes away support from renewable energy. The French nuclear monopoly has effectively stunted the growth of sustainable energy in France which has excellent capacity for wind and solar power.
5. **The EPR presents a security risk.** The French EPR is designed to use MOX fuel that incorporates plutonium, posing a proliferation risk. A publicly leaked document showed that the EPR, despite claims to the contrary, could not withstand the impact of a commercial jet airliner. The release of the radioactive inventory from the 1600 megawatt reactor could have disastrous consequences for huge population areas in Normandy where the only French EPR is currently under construction.

## Why the EPR is opposed in the U.S.

1. **The EPR is expensive.** With the highest capital costs of any of the new designs, the EPR is the most financially risky reactor to build with current estimates at close to \$12 billion per unit. The life-cycle costs of an EPR, including the eventual cost of decommissioning the world’s largest reactor, are impossible to predict although the State of Missouri estimated a potential bill of \$19 billion to \$41 billion for the Callaway EPR.
2. **The EPR design will not be certified for years.** The U.S. NRC plans to close out many public safety licensing hearings before the design is finalized. No one knows how the U.S. version of the EPR will perform but there is considerable uncertainty about a design requiring more safety-related parts in a worldwide shortage of nuclear-grade parts manufacturers.
3. **The EPR has no track record.** Despite its claim to be “evolutionary,” no EPR project is completed and operational anywhere in the world. In Finland and France, the EPR has encountered quality control problems affecting safety. (See page 3).

## EPR opposition movements

### In Europe

Construction of the EPR at Flamanville sparked some of the largest protests in French anti-nuclear history including a nationwide rally of 62,000. Three years before ground was broken, 10,000 people demonstrated against the EPR in Paris. Protests continue. A national STOP-EPR campaign keeps activists informed. (See [www.stop-epr.org](http://www.stop-epr.org)).

### In the United States

The U.S. Stop EPR campaign is underway. To join or learn more, see [www.beyondnuclear.org/stop\\_EPR\\_USA.html](http://www.beyondnuclear.org/stop_EPR_USA.html) or send an email to [info@beyondnuclear.org](mailto:info@beyondnuclear.org).

