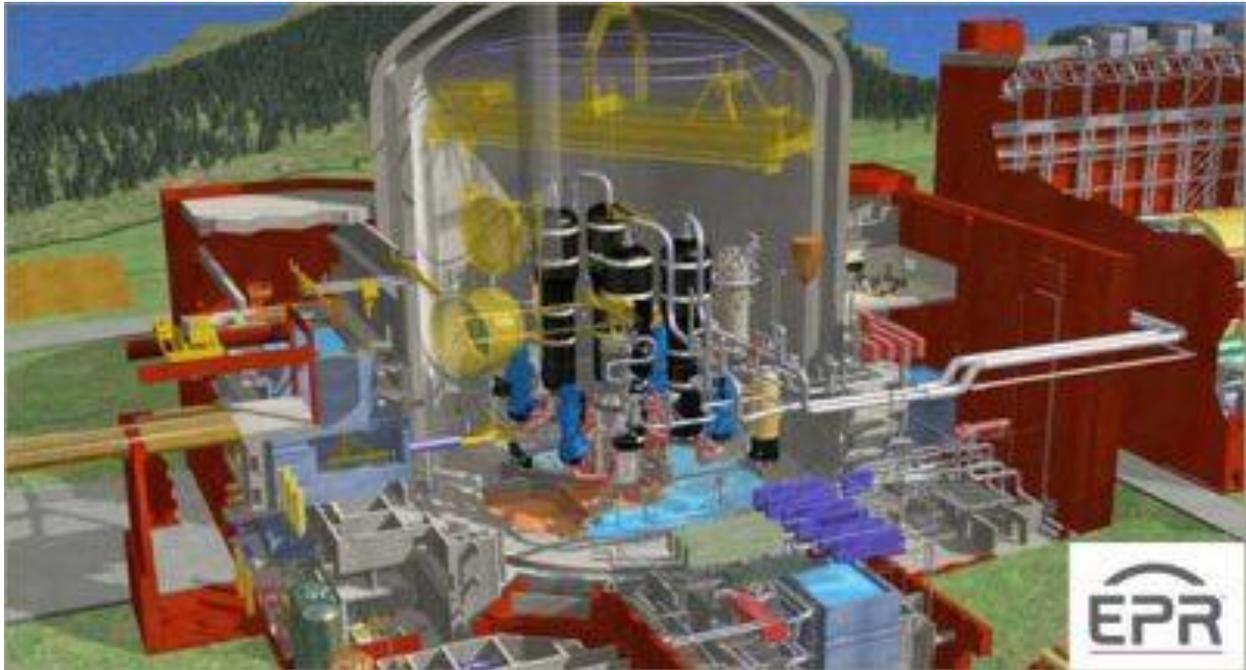


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EPR reactor design meets UK approval

National nuclear regulators have formally approved the European Pressurized Reactor (EPR) design for construction in the UK, saying that the design meets regulatory expectations on safety, security and environmental impact.



The EPR is the first Generation III reactor design to gain UK approval (Image: EDF/Areva)

EDF and Areva's EPR is the first design to complete the UK's generic design assessment (GDA) process with the award of a Design Acceptance Confirmation from the UK's Office for Nuclear Regulation (ONR) and a Statement of Design Acceptability (SoDA) from the Environment Agency. The completion of the GDA signals the final regulatory step for the design, although various site-specific consents and approvals, plus planning permission, will be needed before construction can begin.

Acting chief inspector of nuclear installations Colin Patchett said the new approach to regulation had proved to be a success, enabling the identification of significant issues at the design stage. "We have done what we set out to do and our assessment has been effective, ensuring the

protection of people and society from the hazards of the nuclear industry," he said.

The Environment Agency's head of radioactive substances regulation, Joe McHugh, also praised the success of the GDA process. "Through robust scrutiny we are satisfied that this design can meet the high standards of safety, security, environmental protection and waste management that we and ONR require," he commented.

The GDA has taken five years to complete in a program covering 17 technical areas. The open and transparent process required reactor designers to publish their safety design cases and environmental reports and open them up to public comment. Regular bulletins and updates have been published on the process, as well as all GDA guidance and technical reports. ONR estimates that the GDA process for EPR has involved 27,000 days of assessment time and literally thousands of technical documents. The cost of around £35 million (\$56 million) per reactor design is charged back to the design companies.

Four reactor designs were initially submitted for the GDA process in 2007: EPR; Westinghouse's AP1000 pressurized water reactor; GE-Hitachi's ESBWR boiling water reactor; and AECL's ACR-1000 reactor. The applications for ESBWR and ACR-1000 were subsequently withdrawn or suspended by their designers. The AP1000 is still undergoing the GDA process. The recent acquisition of Horizon Nuclear Power by Hitachi means that Hitachi's ABWR boiling water reactor design would be a likely candidate for a future GDA exercise.

EDF Energy is planning to build the first UK EPRs at Hinkley Point C, for which it received a nuclear site licence in November. EDF Energy CEO Vincent de Rivaz described the acceptance of the design as a major achievement for the project, offering a "huge boost for the predictability of costs". He reiterated that the company intends to make a final investment decision on the project "at the earliest possible date." UK government decisions on the strike price that will determine contracts for difference - which will stabilise revenues for investors in low-carbon generation and help them to secure the necessary upfront investment - are likely to be crucial to EDF Energy's final decision.

Areva prepares

One day ahead of the GDA decision, Areva announced that it had signed memoranda of understanding with 25 UK-based companies for components and services for the EPRs planned at Hinkley Point. The products and services covered by the agreements include forgings, valves, pumps, cranes, electronics, piping, tanking and refrigeration units. According to Areva, the agreements could also be extended to other UK EPR projects, including those planned at Sizewell C.

Areva has identified 50 UK-based companies with the potential capability to meet its specifications. The 25 companies it has signed agreements with are all pre-qualified, and Areva says will start a pre-qualification process with the remaining 25 once it receives a firm order from EDF Energy.

*Researched and written
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