

This report presents the state of the art in design approaches for the protection from external event impacts of nuclear power plants (NPPs) with evolutionary and innovative reactors. It provides both the general and the technical information background to assist designers of advanced NPPs in the definition of consistent strategies in selected issues of the design and siting ev...Â – How to Access IAEA e-books. Orders and requests for information may also be addressed to A nuclear reactor or nuclear power plant consists of nuclear reactor fuel, control rods, moderators, pressure vessels, coolant and containment.Â – Some design options, such as powering the main large feedwater pumps with electric motors (as in EPR or Hualong One) rather than steam turbines (taking steam before it gets to the main turbine-generator), explains some gross to net differences between different reactor types. The EPR has a relatively large drop from gross to net MWe for this reason, and as noted above, the Hualong One needs 20 MW to run its primary pumps. What will advanced nuclear power plants cost? A Standardized Cost Analysis of Advanced Nuclear Technologies in Commercial Development. An energy innovation reform project report prepared by the energy options network. Table of contents. Executive Summary 1.Â – Appendix A: Nuclear Plant Cost Categories Appendix B: Operating Costs for a Nuclear Plant Appendix C: Cost Category Details and Modeling Methodology Appendix D: External Expert Review of Draft Report. 34 35 36 43. The future of nuclear technology: a standardized cost analysis. @inproceedings{Kuznetsov2007AdvancedNP, title={Advanced Nuclear Plant Design Options to Cope with External Events}, author={Vsevolod Kuznetsov}, year={2007} }. Vsevolod Kuznetsov. There is a renewed interest in many Member States in the development and application of nuclear power plants (NPPs) with advanced reactors. Decisions on the construction of several NPPs with evolutionary light water reactors have been made (e.g., recently, EPR for Finland and France, AP1000 for China, VVER-1000 for Bulgaria and India, etc.) and more are under consideration. High level of safety and improved economic