

# Advanced Requirements Ensuring Nuclear Power Plants Safety

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In the presentation the advanced requirements for the safety of nuclear power plants based on a review of major international documents and practices in developing Generation 3 are discussed. The knowledge gained from the assessment of NPP Belene is used. According to the documents of IAEA, the EC and the BNRA, the modern requirements for nuclear safety is provided by the application of fundamental principles for management, defense in depth and general technical principles ensuring the safe operation of NPPs.

The basic principles of accident management are reported and a general description of Severe Accident Management Guidance (SAMG) basic goals are given.

Based on NPP Belene project an improved preventive level of defense in depth by reducing the likelihood of severe accidents using a combination of active and passive safety systems are discussed in the presentation.

The main differences between Generation 2 and Generation 3 are shown on the basis of comparing the safety system features.