1) MODERNIZATION PROGRAM OF NPP KOZLODUY 5 & 6

Marion Protze, SIEMENS AG KWU

The Modernization Program of NPP Kozloduy, Units 5&6 was established by the Bulgarian Power Utility and national institutes, supported by EDF and Russian design institutes (MOHT) in 1994/95.

General and plant specific IAEA reports, proposals of the original plant designer, Bulgarian studies and operational feedback, as well as the assessment of German and French institutions were incorporated in the program. Early in 1997 two framework contracts were concluded with two vendors.

The major part of the modernization project, about 120 work items, was awarded to the European Consortium Kozloduy, consisting of Siemens (leader), Framatome and Atomenergo-export.

Actually a basic engineering phase for about 50 measures as well as implementation projects for very urgent measures (non-interruptible power supply, born meter replacement) are under way (since fall 1998).

The contract for main implementation phase is due to be designed in mid 1999.

The scope of measures for European Consortium includes the fields of RPV integrity, mechanical analysis, ECCS and EFW improvements, SG safety valves, diagnostic systems, hydrogen detection/recombination, seismic analysis and improvements, main steam and feedwater line break protection, fire protection, electrical equipment and DG upgrading, safety analysis, turbine plant improvements, means for maintenance, etc.