

N409. EFFECT OF NUCLEAR POWER PLANT DECOMMISSIONING COSTS ON PLANT LIFE CYCLE DECISION

Nuclear utilities implementing Life Cycle Management (LCM) Programs and facing run-relicense-retire decision need to evaluate the financial cost/benefit of such decisions. Baltimore Gas and Electric (BGE) is responsible for assuring sufficient funds are available for decommissioning Calvert Cliffs Nuclear Power Plant (CCNPP) when the units cease operation. Costs and financial factors that must be considered include the actual cost of decommission costs must be evaluated in regards to determining a strategy for future plant operation.

Prior to beginning the study, BGE had selected DECON (immediate dismantlement and decontamination) as the preferred decommissioning method. The project team used the commercially available software, DECAS, to calculate decommissioning costs. The team calculated costs according to two different time periods: (1) Preparation for decontamination and dismantlement; and (2) Dismantlement and decontamination.

The estimated cost for decommissioning both Units 1 and 2 at CCNPP is \$536 million. The estimate assumes that both units operate for their current license life and that BGE will use current technology for decommissioning under present federal regulations. If the decommissioning cost estimated is totally funded through rate recovery and investment compounding by the end of the current license term, the busbar cost impact is about \$0.002 per kWh when a recovery rate of approximately \$20 million per year is authorized. Compared with overall busbar costs for generating units on the east coast in a typical range of \$0.05 to \$0.20 per kWh, this rate for accumulating a decommission fund is small. A 20-year life extension has the potential to decrease this recovery rate, but the effect will be minimal and a prudent financial plan would call for continuing to recover at the current rate at lease until there is some assured situation of achieving a substantial extended operating period.

For BGE, the financial benefit gained by deferring the expenditure of the decommissioning fund by 20 years is not a significant consideration in the decision process for life extension.

For more, "Effect of Nuclear Power Plant Decommissioning Costs on Plant Life Cycle Decisions," EPRI TR-104829, Final Report, November 1995.