INTEGRATING LIFE CYCLE COST AND RISK ANALYSIS

Sanjeev Dusjia  Fluor Corporation, 281-263-4369, Leisa.Porter@Fluor.com
Leisa Porter  Fluor Corporation

Abstract

Life Cycle Cost (LCC) Analysis is a method that compares the mutual effects of capital expenses, operating expenses, logistics, and revenue to achieve an optimum design based on consistent economic criteria. It involves an economic evaluation of all current and future costs associated with investment alternatives. Life-cycle costs are often analyzed to ensure that unnecessary costs are avoided by considering future operations, maintenance, and reconstruction requirements. Longer design lives may have to be considered and traditional strategies for equipment sparing and maintenance activities may have to be re-evaluated to determine whether they adequately consider future costs. LCC analysis is a time consuming activity and the re are challenges on a large capital project to determine the triggers that necessitate the LCC analysis. By integrating LCC analysis with risk analysis, it is possible to perform trade-off studies, which help compare projected unavailability costs (e.g., lost production) to associated capital investments. This can help to ensure an optimal design, i.e., one that adequately meets the project objectives while avoiding unnecessary “gold-plating.”