

## 1.011 Term Project – Case Studies in Project Evaluation

**Motivation:** project evaluation is not an exact science. While it is possible to apply standard techniques of engineering economics in assessing costs and benefits, most large-scale projects have significant costs and benefits that are either difficult to predict, difficult to convert to monetary terms, or highly controversial to at least some of the parties involved in or affected by the project. Furthermore, the process of project evaluation will generally be quite distinct from, although obviously dependent upon, the process of engineering design. Studying how benefits and costs of actual projects were evaluated is an excellent way to learn about the complexities of project evaluation.

**Assignment:** prepare a case study of the evaluation process for a major CEE project. You may select a project that you have worked on or one that you are interested in (but not one that has been done by someone in the prior two years). Possible sources of information include CEE journals, books concerning the history of major projects, MIT theses or project reports, newspaper articles, web sites for current projects, etc. The project could be historical, recent past, current, or proposed; it could be a project that was successfully implemented, implemented but unsuccessful, or never implemented. The case study should be 15-25 pages long, including:

- Background on the project
- Summary of the costs and benefits that were considered and how they were analyzed
- Summary of the major issues that affected the project evaluation
- Summary of what decisions were made regarding project design and implementation
- Status of the project and results if it has been completed
- Discussion and critique of the project evaluation process

**Assignment due dates:**

- a. March 5 – 1-page description of project plus team assignments
- b. May 7 – copy of presentation
- c. May 9, 12, 14 – presentations to class
- d. May 15 – final report due

Teams of 2-3 students may choose to work on the same or related projects and prepare a common background and summary of the costs & benefits. If a group is looking at one project, each team member should address a separate set of issues and decisions. If a group is looking at a several related projects, then each student should prepare their own paper on one of the projects and contribute to an executive summary that compares and contrasts the various projects.

**Grading Method:** Maximum of 100 points for paper awarded as follows:

Factor	Max. Points (Allocation if team)
Case Study submitted on time	10 (Team)
Case Study structure & appearance	20 (Team)
Summary of project evaluation	50 (20 team; 30 individual)
Discussion & critique	20 (Individual)