

**PREDECISIONAL**  
**BEING PROVIDED TO SUPPORT THE 2/7/2017 ACRS REGULATORY**  
**POLICIES AND PRACTICES SUBCOMMITTEE MEETING**  
**AND NOT TO SOLICIT EXTERNAL STAKEHOLDER FEEDBACK**

**APPENDIX I: NATIONAL ENVIRONMENTAL POLICY ACT COST-BENEFIT**  
**ANALYSIS GUIDANCE**

Draft Outline

1. Purpose
2. Cost-Benefit Analysis for National Environmental Policy Act (NEPA) Reviews
  - a. Regulatory Requirements
  - b. NRC Guidance
    - i. NUREG-1555, "Standard Review Plans for Environmental Reviews for Nuclear Power Plants"
      1. Assessment of Need for Power
      2. Benefits
      3. Costs
    - ii. Regulatory Guide 4.2, "Preparation of Environmental Reports for Nuclear Power Stations"
      1. Cost-Benefit Analysis
      2. Economic and Social Effects of Station Construction and Operation
    - iii. NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs"
      1. Cost-Benefit Analysis
3. Environmental Justice
  - a. Commission's Policy Statement
  - b. NRC Guidance
    - i. LIC-203, "Procedural Guidance for Preparing Environmental Assessments and Considering Environmental Issues"
    - ii. NUREG-1748
4. Public Health
  - a. Severe Accident Mitigation Alternatives (SAMA)
    - i. NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants"
    - ii. NEI 05-01A, "Severe Accident Mitigation Alternatives (SAMA) Analysis"
  - b. Severe Accident Mitigation Design Alternatives (SAMDA)
    - i. Design Certification – Generic
    - ii. Combined License – Site-Specific
      1. ESRP 7.2, "Severe Accident Analysis"
        - a. Level 1 and Level 2 PRA Information
          - i. Quantification of MAACS Input Parameters
      2. NUREG/BR-0058 Appendix H Severe Accident Analysis

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- a. Averted Cost (averted public exposure costs + averted offsite property damage costs + averted occupational exposure costs + averted onsite costs)
- 3. ESRP 7.3, "Severe Accident Mitigation Alternatives Analysis"
  - a. Selection of Design Alternatives
  - b. Cost Screening Based on Averted Costs vs. Costs of the Alternatives
    - i. 7% and 3% Discount Rates
    - ii. Sensitivity and Uncertainty Analysis
  - c. Material Licenses
- 5. References