Oroville Facilities Relicensing

Power Economics

Engineering and Operations Work Group

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Oroville Facilities Relicensing

- Power Economics
  - Need for power
  - Operation and power studies
  - Facility condition assessments
  - Economic studies

Power Economics

- Need for power
  - Load requirements
  - Forecasted generating capacity
  - Stimulation of economic growth
  - Support necessary reserve margin

Power Economics

- Need for power (cont.)
  - Provide less expensive power
  - Displace depleting and foreign oil supplies
  - Provide reliable power source
  - Reduce reliance on external power supplier

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- Operation and power studies
  - Type of operation – manual or automatic
  - Annual plant factor and dependable capacity
  - Average annual energy
  - Minimum, maximum,and mean recorded flows

Power Economics

- Operation and power studies (cont.)
  - Flow-duration and area-capacity curves
  - Estimated unit hydraulic capacity
  - Tailwater rating curves
  - Power plant capacity versus head curves

Power Economics

- Operation and Power studies (cont.)
  - Resource use and use of power generated
  - Power value (capacity and energy)
  - Plans for future developments

Power Economics

- Operation and power studies (cont.)
  - FERC's guidelines indicate engineering and environmental studies should be thoroughly integrated
  - Review environmental resource values in project vicinity
  - License Application, Exhibits B and H

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- Facility condition assessments
  - Current engineering assessments
    - Safety and adequacy of project structures
    - Engineering Guidelines for Evaluation of Hydropower Projects
  - Project compliance with Part 12
  - Existing and planned flood operations

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- Facility condition assessment (cont.)
  - Existing and planned safety measures
  - Project modifications affecting Emergency Action Plan or structure stability
  - Monitoring devices
  - License Application, Exhibits A, B, and F

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- Economic studies
  - Compare cost of project power to least cost alternative power source
  - Economic information
    - Fuel costs
    - Escalation rates
    - Growth rates in peak demand
    - Existing and planned generating resources

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- Economic studies (cont.)
  - Feasibility of proposed project modifications
  - Estimate of project's net present value
  - Capital and operation and maintenance costs of project modifications
  - Capital and operations and maintenance costs of all proposed PM&E measures

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- Economic studies (cont.)
  - Estimate of relicensing costs
  - License Application, Exhibits B and H