



# Preliminary Results of Environmental Review R.E. Ginna Nuclear Plant

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Nuclear Regulatory Commission  
August 7, 2003



## Purpose of Today's Meeting

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- Discuss NRC's license renewal process
- Describe the environmental review process
- Discuss the results of our review
- Provide the review schedule
- Accept any comments you may have today
- Describe how to submit comments

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## R. E. Ginna Nuclear Plant License Renewal

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- Operating license expires in 2009
- Application requests authorization to operate R.E. Ginna Nuclear Plant for up to an additional 20 years

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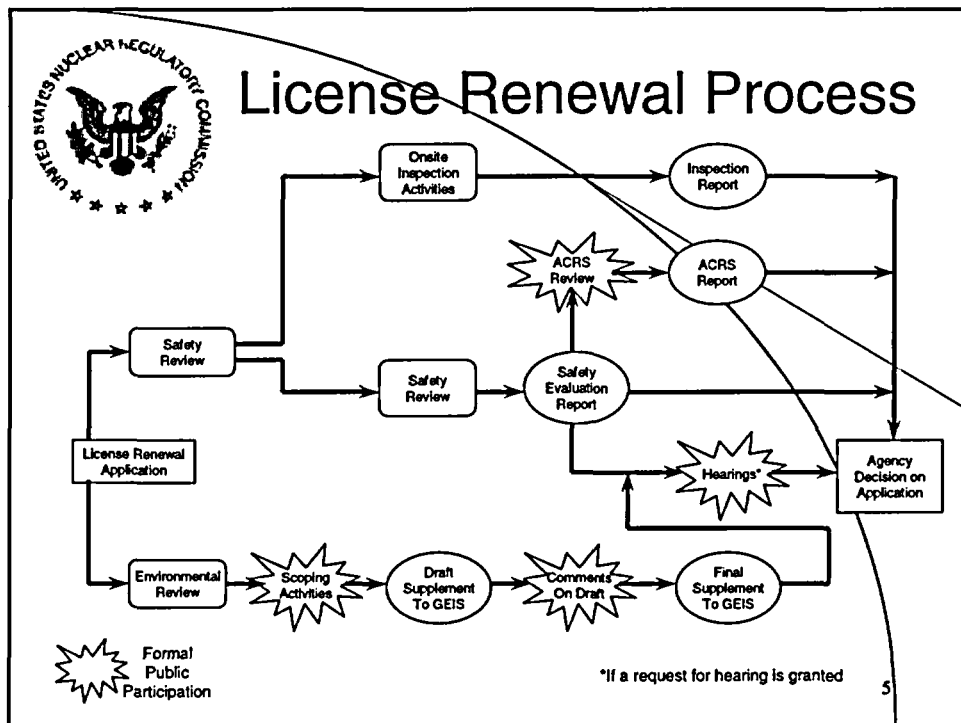


## NRC's License Renewal Review

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- Safety review
- Environmental review
- Plant inspections
- Advisory Committee on Reactor Safeguards (ACRS)


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The slide, titled "National Environmental Policy Act", features the NRC logo in the top left. Below the title, a horizontal line is followed by two bullet points:

- NEPA requires Federal agencies to use a systematic approach to consider environmental impacts
- Commission has determined that an environmental impact statement (EIS) will be prepared for a license renewal action

The number "6" is located in the bottom right corner.

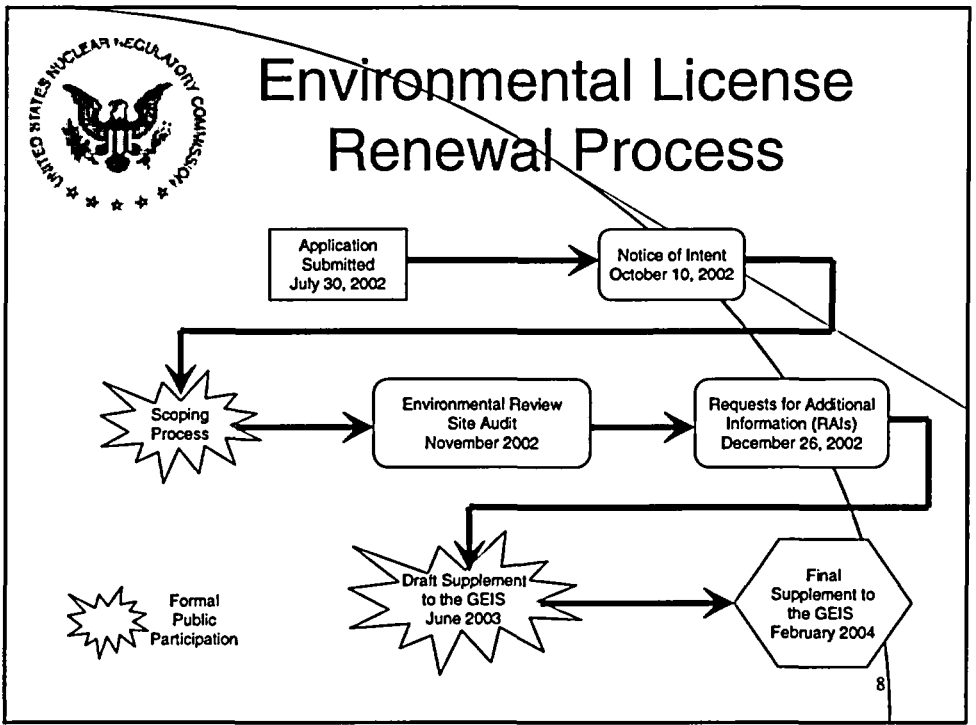


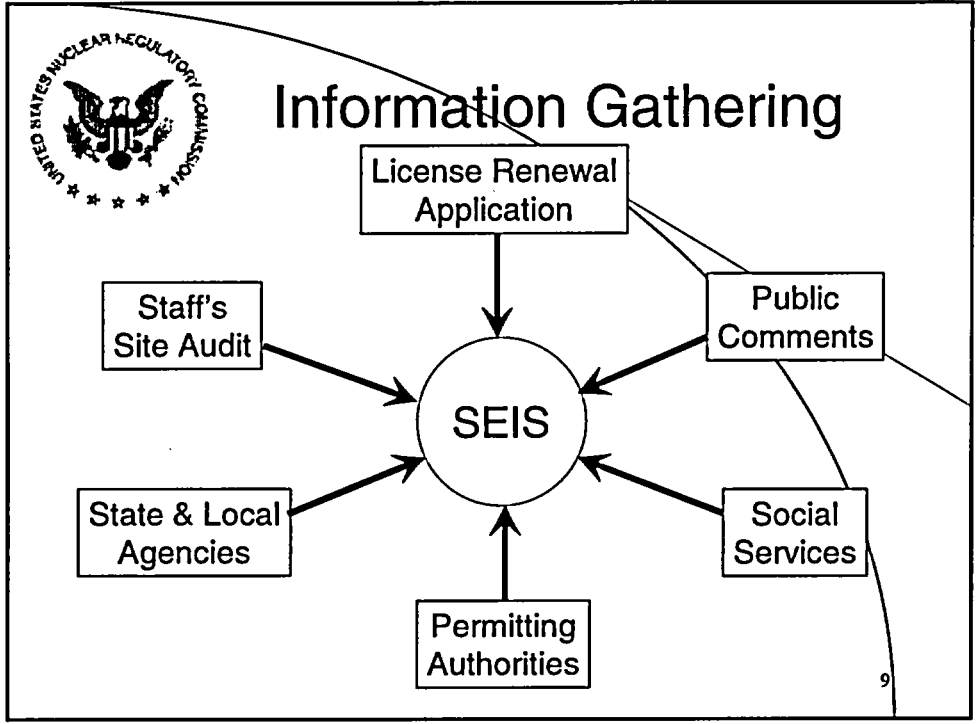
# Decision Standard for Environmental Review

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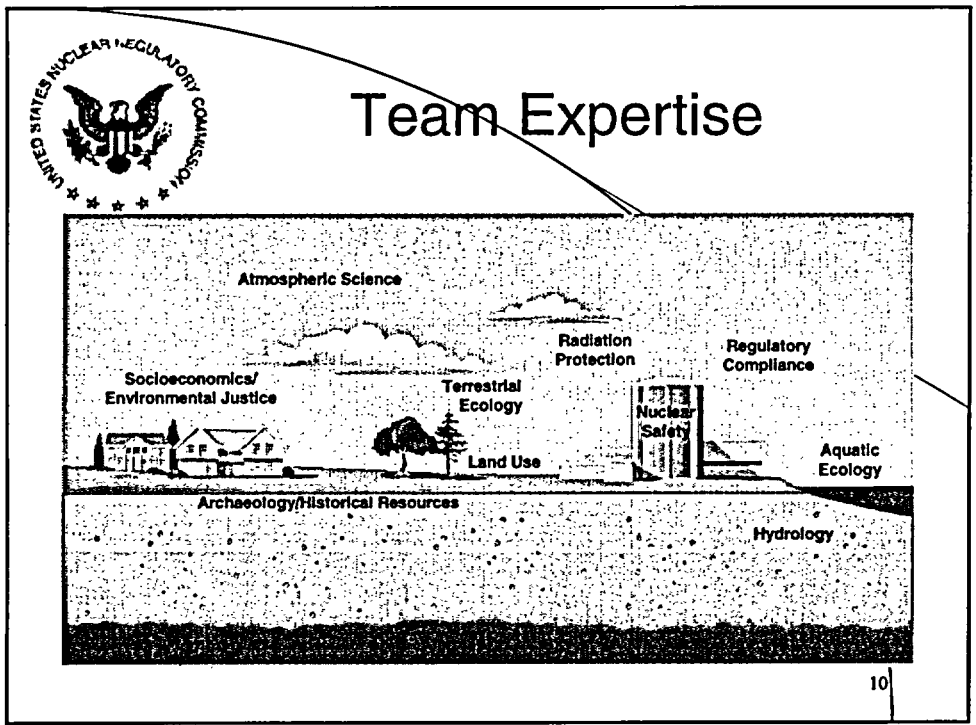
To determine whether or not the adverse environmental impacts of license renewal for Ginna are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.

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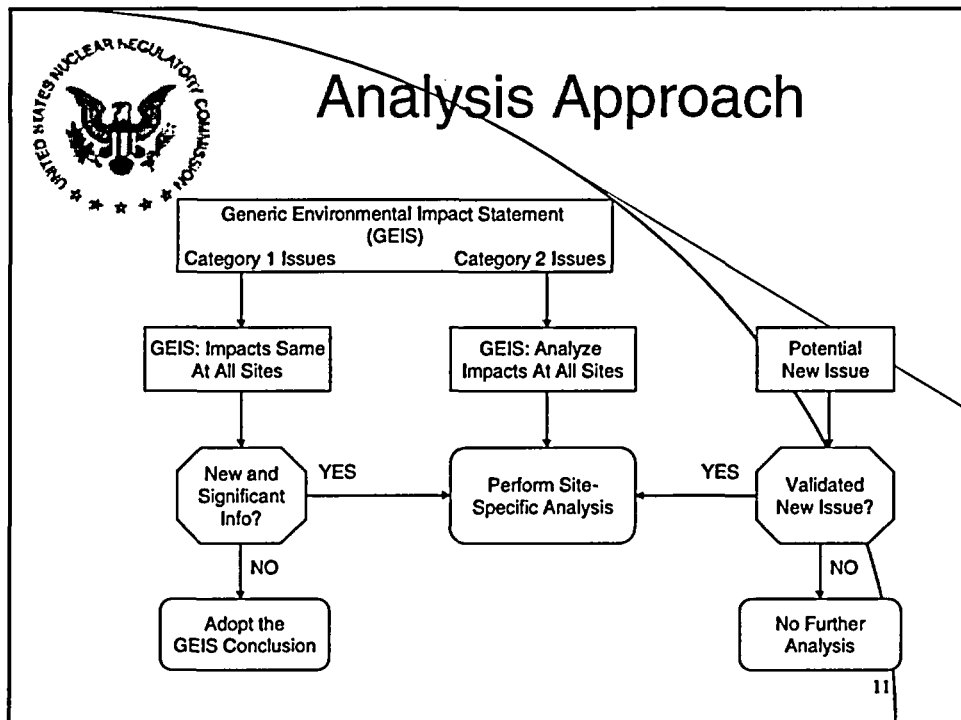




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**How Impacts are Quantified**

The slide features the NRC logo and the title 'How Impacts are Quantified'. Below the title is a horizontal line. The content is as follows:

- NRC-defined impact levels:
  - **SMALL:** *Effect is not detectable or too small to destabilize or noticeably alter any important attribute of the resource*
  - **MODERATE:** *Effect is sufficient to alter noticeably, but not destabilize important attributes of the resource*
  - **LARGE:** *Effect is clearly noticeable and sufficient to destabilize important attributes of the resource*
- Consistent with the Council on Environmental Quality guidance for NEPA analyses



## Environmental Impacts of Operation

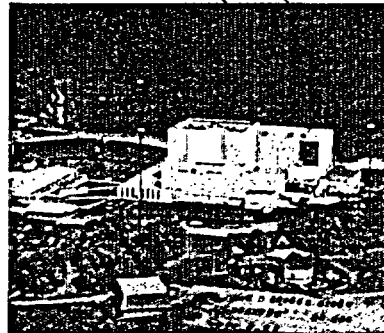
- Cooling System
- Transmission Lines
- Radiological
- Socioeconomic
- Groundwater Use and Quality
- Threatened or Endangered Species

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## Cooling System Impacts

- Category 2 issues
  - Entrainment
  - Impingement
  - Heat Shock
- Preliminary findings
  - Impacts are SMALL
  - No additional mitigation required



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## Radiological Impacts

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- Category 1 issues - exposures to the public and to workers
- Preliminary findings
  - No new and significant information identified
  - GEIS concluded impacts are SMALL

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## Potential New and Significant Information

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- No new and significant information identified:
  - as a result of the scoping process
  - by the licensee
  - by the staff
- GEIS Category 1 conclusions not affected by presence of shoreline revetment

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## Cumulative Impacts of Operation

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- Considered impacts of renewal term operations combined with other past, present, and reasonably foreseeable future actions
  - evaluated to end of 20-year renewal term
  - geographic boundaries dependent on resource
- No significant cumulative impacts

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## Other Environmental Impacts Evaluated

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- Uranium Fuel Cycle and Solid Waste Management
- Decommissioning

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## Alternatives

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- No-action
- Alternative energy sources
  - New generation (Coal, Natural Gas, Nuclear)
  - Purchased electrical power
  - Other alternatives (Oil, Wind, Solar, Conservation)
  - Combination of alternatives

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## Preliminary Conclusions for Alternatives

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- Alternatives (including the no-action alternative) may have environmental effects in at least some impact categories that reach MODERATE or LARGE significance

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## Postulated Accidents

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- Design-basis accidents
- Severe accidents
  - Severe accident mitigation alternatives (SAMAs)

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## SAMA Evaluation Process

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- Characterize overall plant risk
- Identify potential improvements
- Quantify risk reduction potential and implementation costs
- Determine whether implementation of any of the improvements is required to support license renewal

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## Preliminary Results of SAMA Evaluation

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- Approximately 200 candidate improvements considered
- Set of SAMAs reduced to 8 based on multi-step screening process
- Detailed cost/benefit analysis shows that 2 of the 8 candidates are cost beneficial:
  - obtain a skid-mounted 480V diesel generator for station blackout events
  - modify procedures to allow cross-connection of charging pumps

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## Preliminary Results of SAMA Evaluation

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- Two SAMAs found to be cost beneficial
  - not related to managing the effects of aging
  - not required to be implemented as part of license renewal
  - entered into Ginna plant change request system for prioritization with other plant improvements

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## Preliminary Conclusions

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- Impacts of license renewal are **SMALL** for all impact areas
- Impacts of alternatives to license renewal range from **SMALL** to **LARGE**
- The staff's preliminary recommendation is that the adverse environmental impacts of license renewal for Ginna are not so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable

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## Environmental Review Milestones

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- Draft EIS issued – 6/25/03
- Comment period – 7/3/03 to 9/16/03
- Issuance of Final EIS – February 2004

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## Point of Contact and Reference Documents

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- Agency point of contact:  
Robert Schaaf  
(800) 368-5642, Ext. 1312
- Documents located at the Ontario Public Library, 1850 Ridge Road, Ontario, New York, and the Rochester Public Library, 115 South Street, Rochester, New York
- Draft SEIS can also be viewed at the NRC's Web site ([www.nrc.gov](http://www.nrc.gov)) at: [www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437/supplement14/](http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437/supplement14/)

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## Submitting Comments

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- By mail at: Chief, Rules and Directives Branch  
Division of Administrative Services  
Mailstop T-6D59  
U.S. Nuclear Regulatory Commission
- In person at: 11545 Rockville Pike  
Rockville, Maryland
- E-mail at: [GinnaEIS@nrc.gov](mailto:GinnaEIS@nrc.gov)

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