



**PSEG**  
*Nuclear LLC*

Attachment 2

**Hope Creek**  
**Extended Power Uprate**

NRC / PSEG Nuclear Meeting

Rockville Maryland

May 8, 2003



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## **Introductions/Meeting Objectives**

- Introduction
- Meeting Objectives
  - Provide overview of Hope Creek EPU
  - Discuss licensing approach
  - Gain NRC insights from previous uprates



## Agenda

- Project Overview - R. Moore/D. McHugh
- GE14 Transition - D. Notigan
- EPU Licensing Approach - G. Salamon
- Technical Quality Assurance – D. Garchow
- Open Discussion

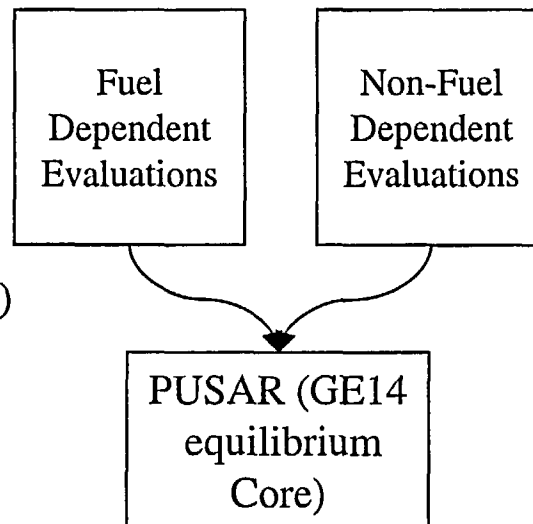


## Project Overview

- 15% Licensed Power Uprate (to 3787 MWt)
  - Evaluations performed for 120% OLTP
  - ~10% implemented in 2004
  - Remaining increases in subsequent operating cycles
  - No increase in Rx pressure

# Project Overview

**ELTR Process    CLTR Process**



- Reactor core and fuel performance (0200)
- Thermal-hydraulic stability (0202)
- ECCS LOCA performance (0407)
- Transient analyses (0900)
- ATWS (0902)



## Project Overview

- Feasibility/Scoping study completed September, 2001
- Company project approval April, 2002
- Project team formed May, 2002
- Major evaluation areas
  - NSSS (PSEG & GENE)
  - Fuel (PSEG & GNF)
  - BOP (PSEG & various AEs)
  - Environmental (PSEG)
- Project oversight
  - Grid stability (Independent system operator)

# Project Overview

- Upgrades and Replacements

- RF11 (in progress)

- Cooling tower fill and flow distribution
    - 500 kV breaker indication

- Cycle 12 online

- 500 kV breaker installation

- RF12 (Fall 2004)

- HP and LP turbines
    - Main transformers
    - Turbine moisture separators
    - FW heater & turbine moisture separator level controls
    - Stator water cooling pumps
    - Isophase bus duct cooling



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## Project Overview

- Licensing Topical Areas
  - ARTS/MELLLA
  - EPU
    - Core Thermal Power (3787 MWt)
    - Tech Spec Changes
    - Possible Containment Over Pressurization Credit
  - Revised Rx Pressure / Temperature Limits
  - GEXL Correlation
  - SLMCPR



## Project Overview

- Current Status
  - ARTS/MELLLA project in progress
    - Cycle specific evaluations included
  - EPU project in progress
  - GE14 fuel transition in progress



## **GE14 Fuel Transition**

- GE 14 Fuel Design
  - Present core Westinghouse and GE 9B (93% / 7%)
- Critical power calculations performed using GNF GEXL correlation
  - Same process as Dresden/Quad Cities
  - Cycle specific core limits from the reload process
  - SRLR analysis from the reload process

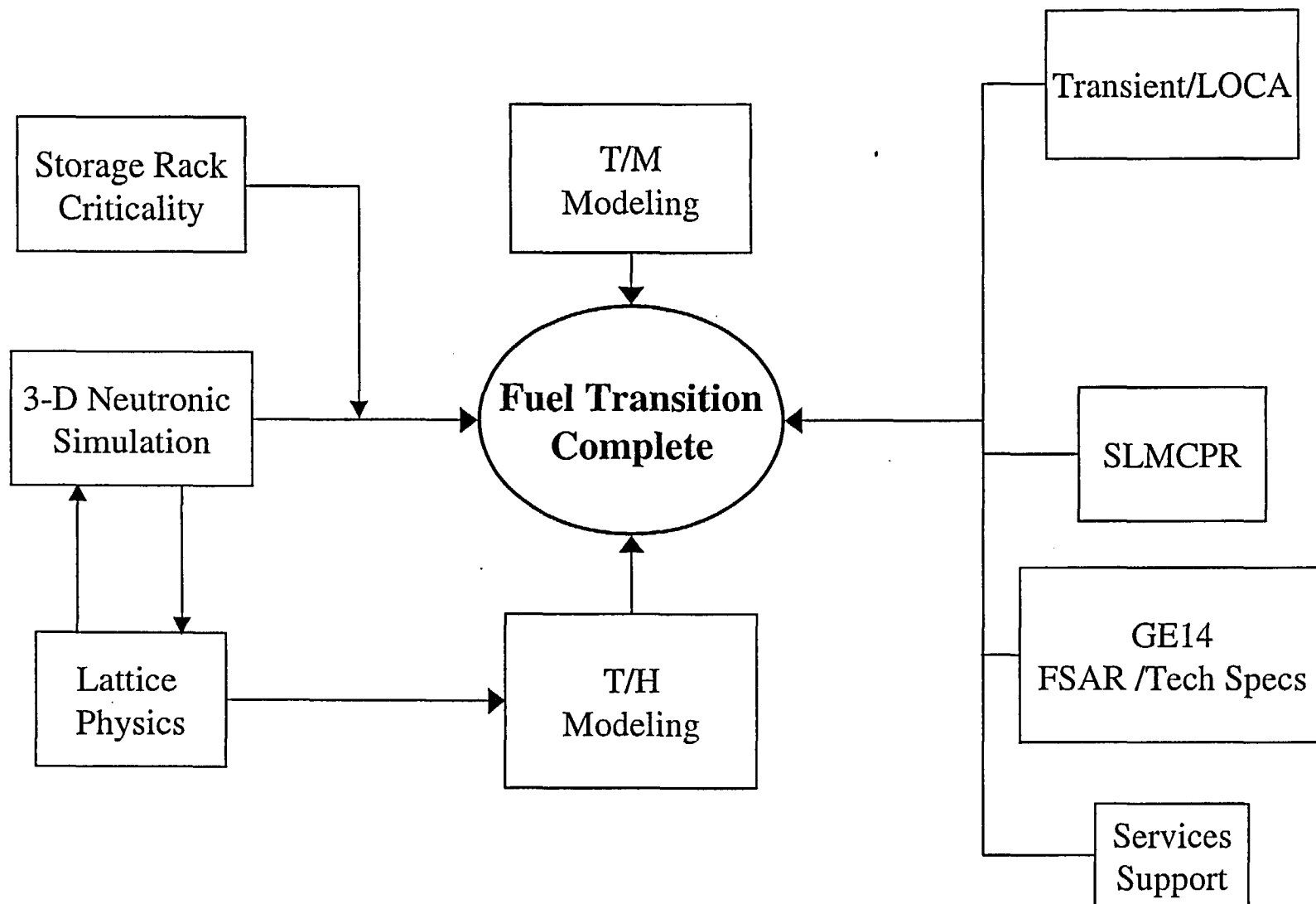


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## **GE14 Fuel Transition**

- Submittals
  - GEXL - August 2003
  - Cycle specific SLMCPR and associated Tech Spec changes – October 2003
  - SRLR report – February 2004

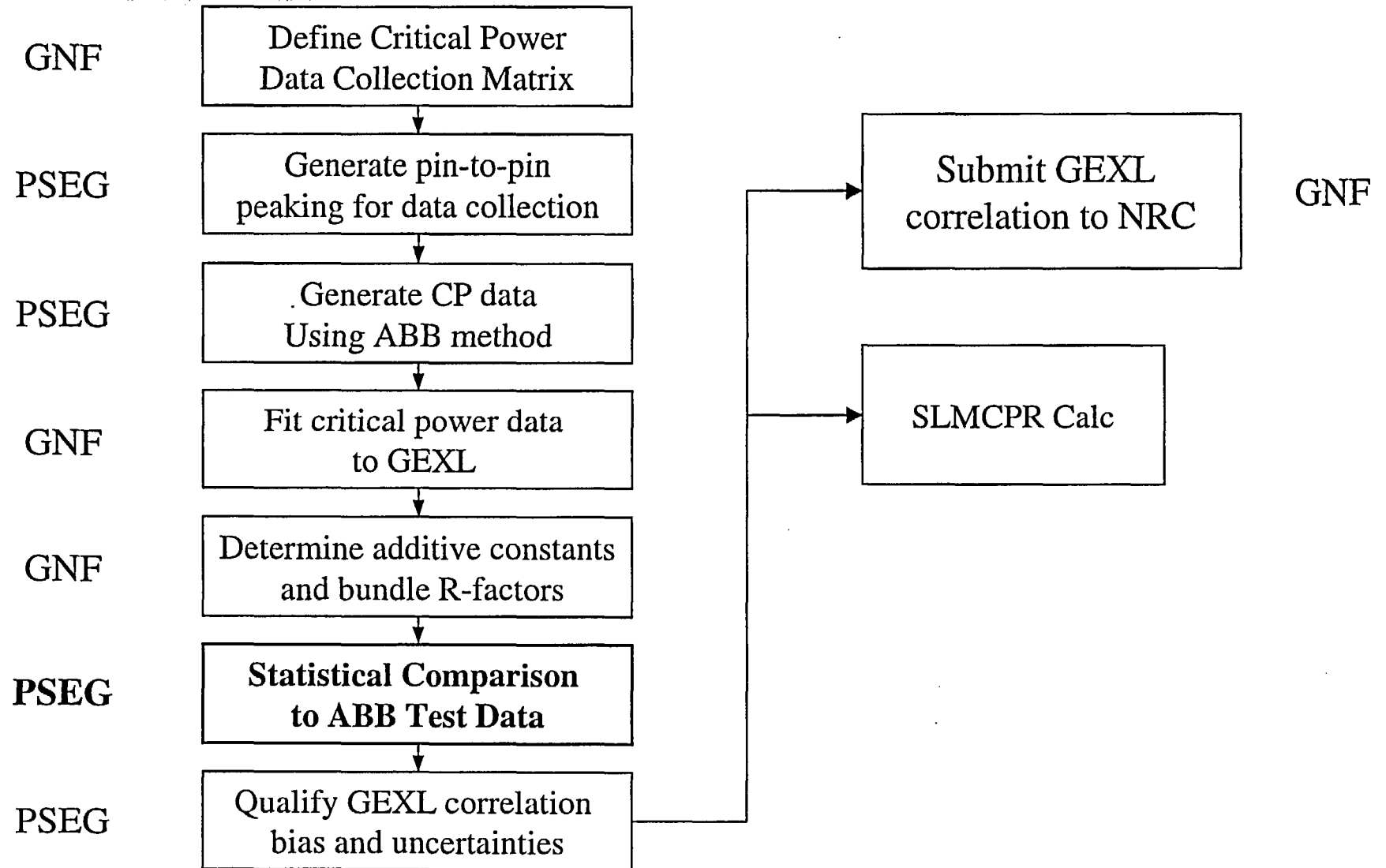
## GE14 Fuel Transition – GESTAR II





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## GEXL for SVEA-96+ fuel



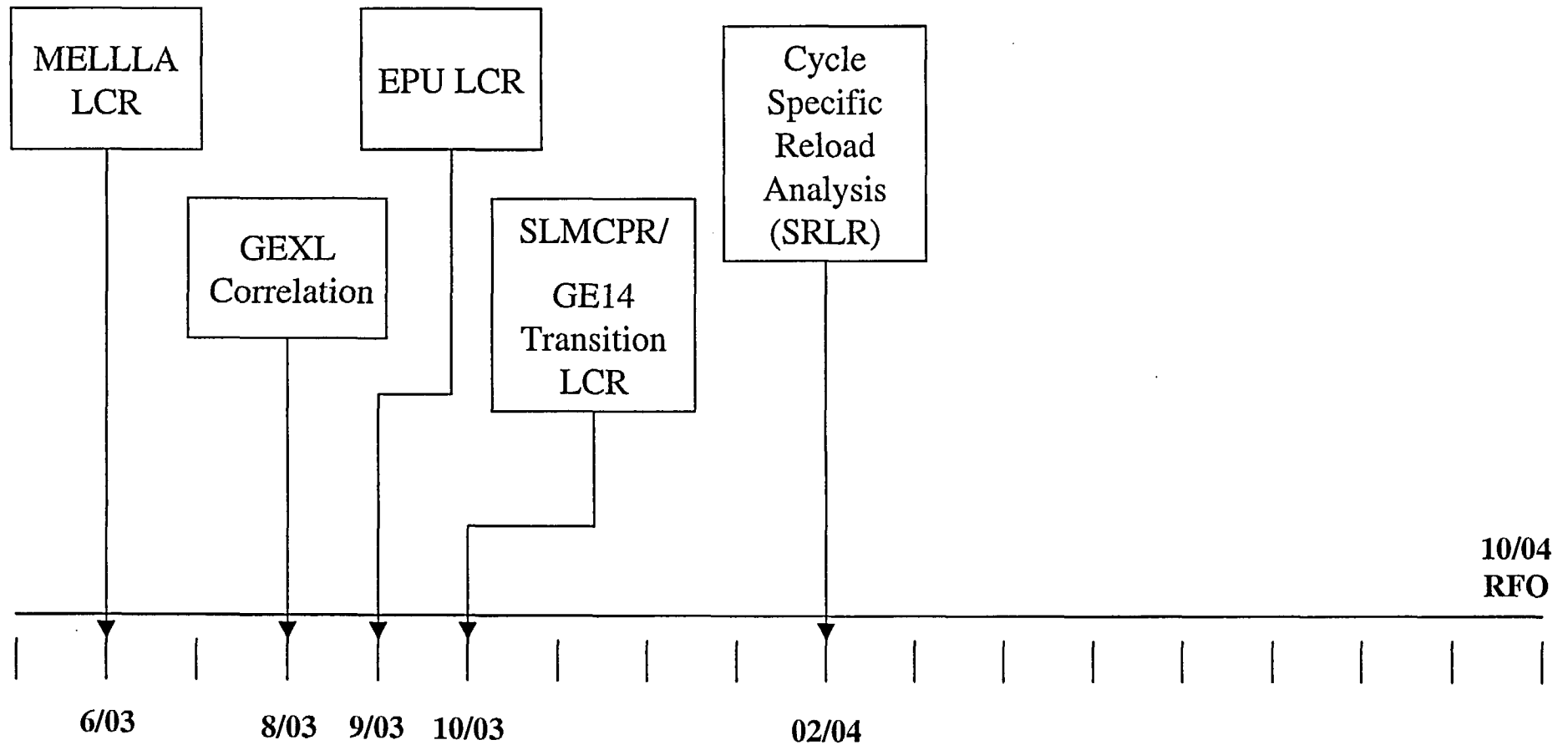


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## **GE14 Fuel Transition**

- Independent reviews/validations
  - Design review of GEXL test matrix (PSEG/GE )
  - FMEA for GEXL correlation/calculations (PSEG/GE)
  - Engineering design reviews planned (PSEG/GE)
    - Nuclear design
    - T/H model
    - T/M model
    - LOCA
    - SLMCPR
    - RLP
  - Independent validation using W computer codes

# Schedule





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## **Technical Quality Assurance**

- Industry proven project management approach
  - Integrated team
  - Work to the schedule
  - Regular communications
  - Expeditious RAI resolutions
  - Industry benchmarking/OE
- Independent verification
- Vendor quality assessments
- PSEG oversight



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## **Open Discussion**

- Comments
- Questions and Answers