

Clinton Power Station Extended Power Uprate Licensing Plan

May 9, 2001

Clinton Power Station EPU

Agenda

- ◆ Opening Comments Rod Krich
- ◆ Project Overview Dale Spencer
- ◆ Engineering Summary Bob Kerestes
- ◆ Summary and Conclusions Dale Spencer
- ◆ Wrap Up Rod Krich

Clinton Power Station EPU

Opening Comments

- ◆ Kick-off Meeting
- ◆ Provides Licensing Approach and Schedule
- ◆ Key Technical Issues

Clinton Power Station EPU

Project Overview

- ◆ Objective to obtain Operating License for 120%
 - NSSS analyses support increase of 120% of Original Licensed Thermal Power (OLTP)
 - BOP Modifications required
- ◆ No Reactor Pressure Increase
- ◆ Implementation over 2 Operating Cycles
 - 7% increase post C1R08 (4/02)
 - Remainder post C1R09 (11/03)

Exelon Power Uprate Experience

- ◆ Completed - LaSalle, Limerick, Peach Bottom
- ◆ Implementation in Progress - Byron, Braidwood
- ◆ Awaiting License Approval - Dresden, Quad Cities
- ◆ Broad Range of Experience
 - Engineering
 - Modifications
 - Startup Testing
- ◆ Application of Lessons Learned

Clinton Power Station EPU

Project Overview

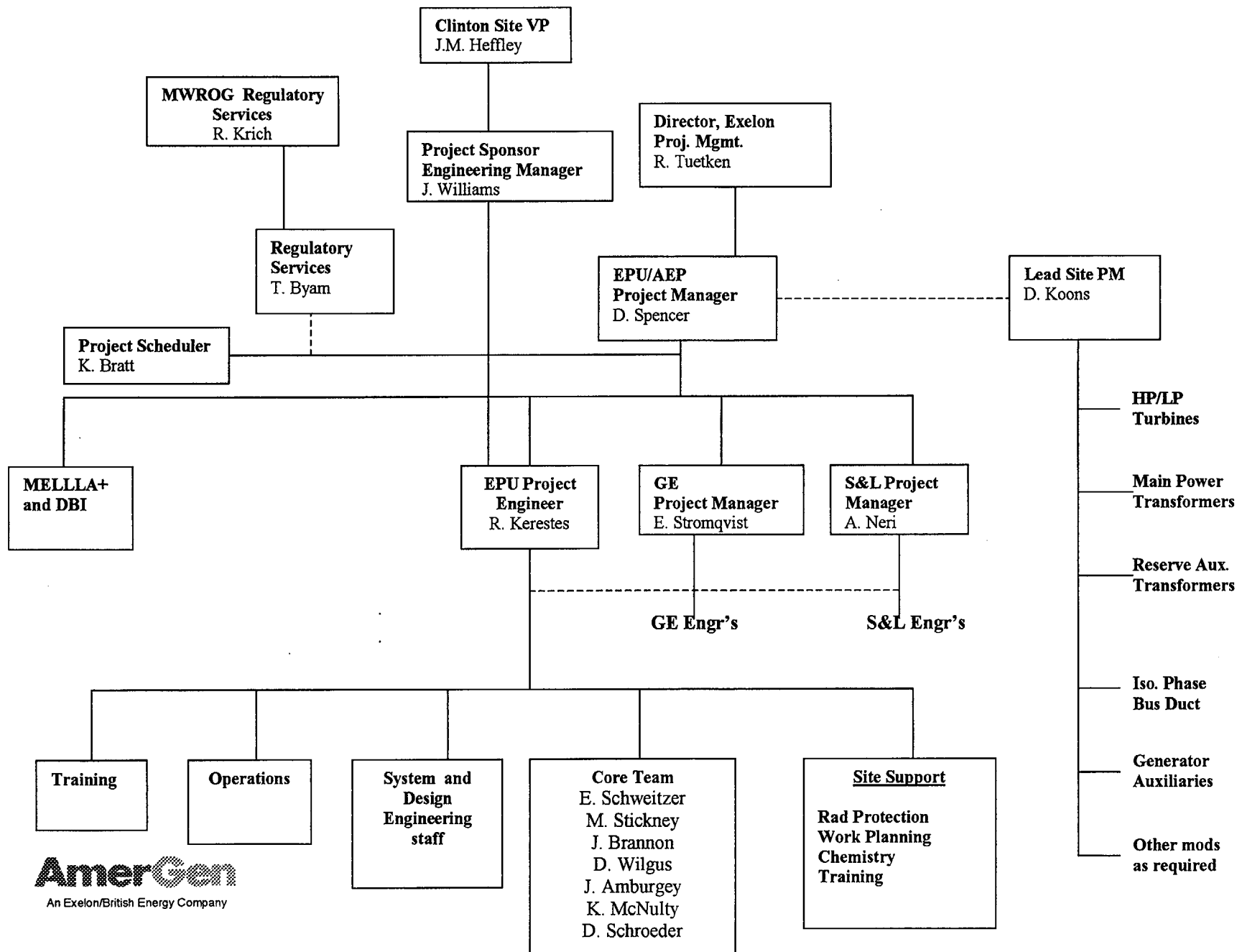
- ◆ Project Team formed September 2000
 - EPU - cost effective means of increasing generating capacity
- ◆ Goal - to produce additional MW for summer 2002 and beyond
 - License/Technical Specification Change Request Submittal in June 2001
 - Request approval in March 2002

Clinton Power Station EPU

Project Overview

- ◆ EPU submittal scheduled for June 18, 2001
 - GE LTR 32424, Generic Guidelines for BWR EPU
 - PUSAR, Similar to LaSalle Dresden, Quad Cities, Duane Arnold
- ◆ Related licensing submittals
 - Transition to GE 14 fuel in progress, 1st load completed C1R07 (11/00) - no current licensing action
 - MELLLA+ implementation Cycle 10, expected submittal 4Q01/1Q02

Clinton Power Station Extended Power Uprate Project



Clinton Power Station EPU

Project Overview

Asset Enhancement Program includes:

◆ Extended Power Uprate

- 120% OLTP
- No increase in Reactor Dome Pressure

◆ MELLLA+

- Planned implementation, Cycle 10, license submittal 4th Q 2001

◆ Design Basis Initiative

- EPU Engineering Analyses support improvement of Design Basis Documentation

Clinton Power Station EPU

Engineering Summary

- ◆ All initial system analyses complete
- ◆ Final Submittal in preparation
 - License Amendment Request
 - PUSAR
- ◆ Target schedule for submittal is June 18, 2001
- ◆ Request approval, March 2002

Extended Power Uprate Engineering Summary

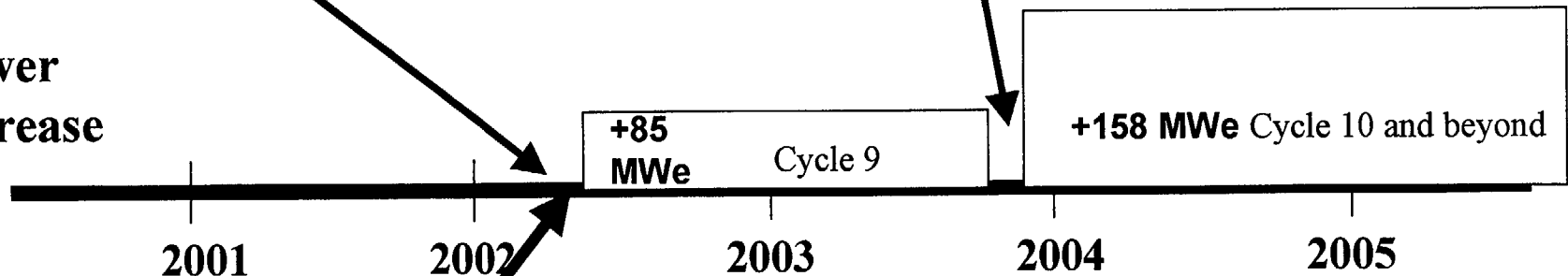
C1R08 Modifications

- Turbine Replacement
- Main Power Transformer replacement
- Iso Phase Bus Duct Cooling
- Moisture Separator Reheater Upgrade
- Continue GE 14 fuel load (started C1R07)
- Setpoints

C1R09 Modifications - preliminary

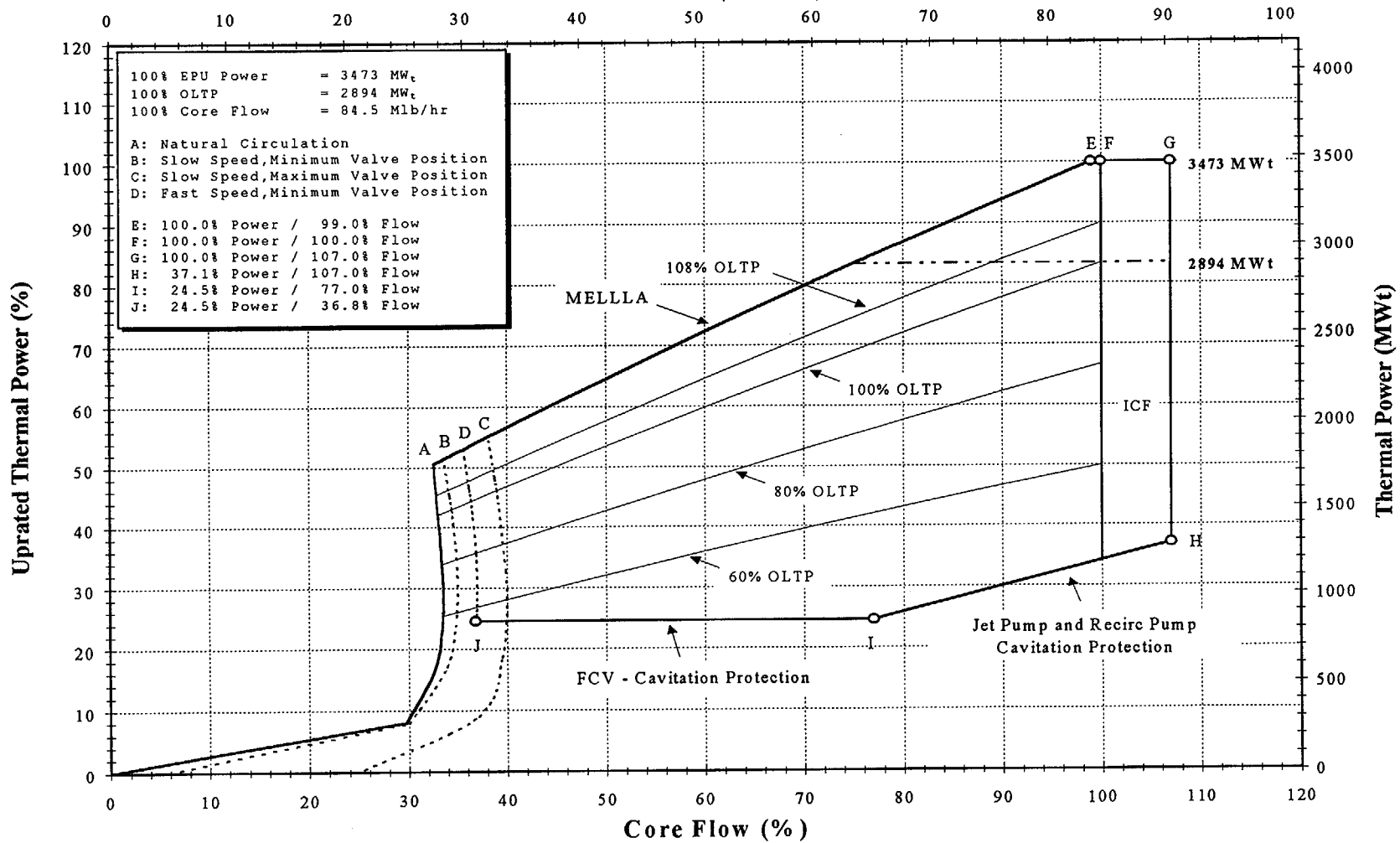
- Reserve Auxiliary Transformer replacement
- Bus Duct Configuration and Cooling Upgrades
- Generator Excitation/Relaying Modifications
- Condenser cooling upgrades
- Setpoints
- GE 14 fuel load complete
- MELLA+

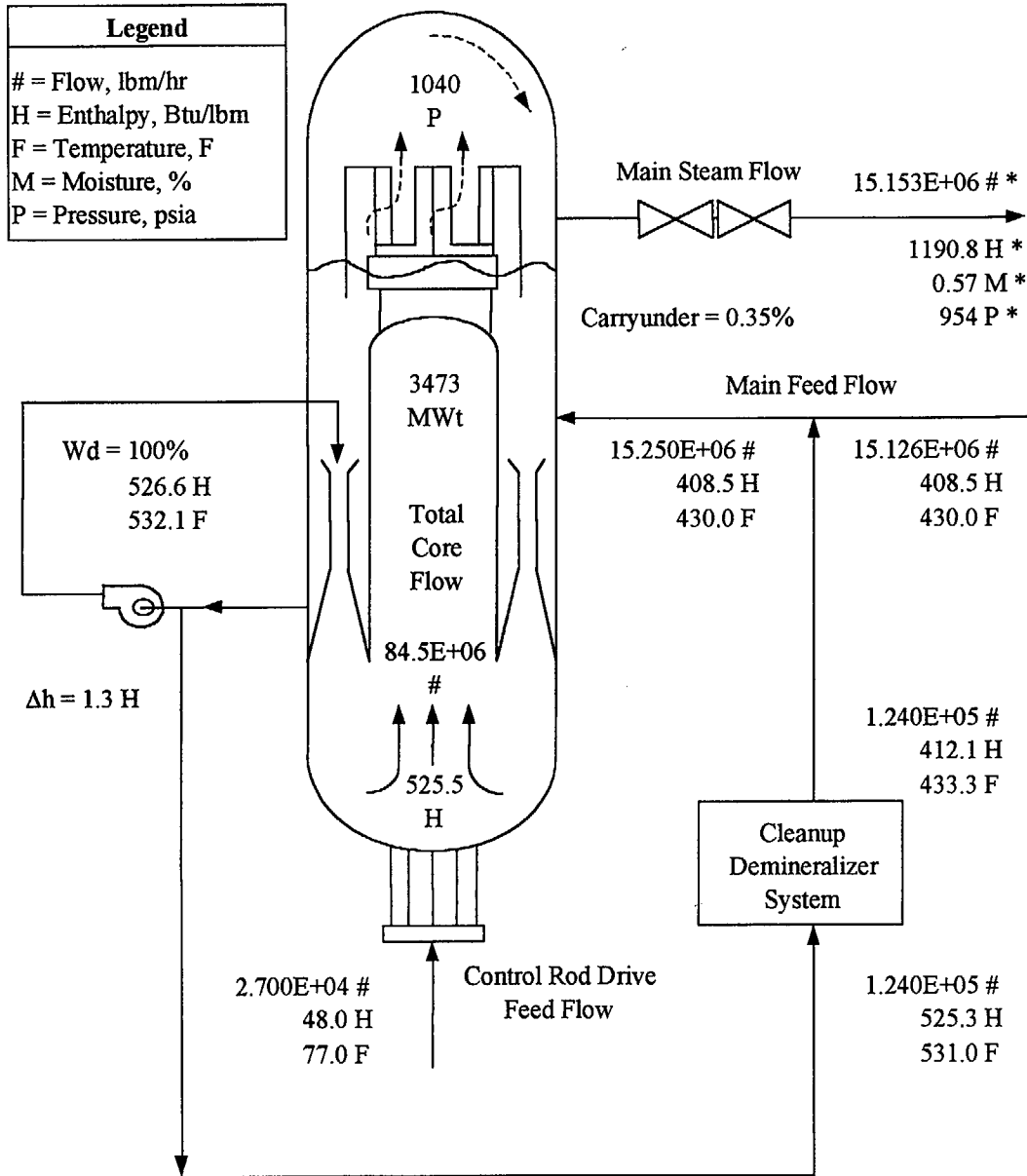
Power
Increase



License Amendment

Clinton Power Station EPU Power/Flow Map





* Conditions at upstream side of TSV

Core Thermal Power	3473.0
Pump Heating	9.1
Cleanup Losses	-4.1
<u>Other System Losses</u>	<u>-1.1</u>
Turbine Cycle Use	3476.9 MWt

Clinton Power Station EPU

Summary and Conclusions

- ◆ EPU is cost effective way to increase generating capability
- ◆ Analysis has indicated that NSSS systems are capable of supporting 20% increase in Licensed Thermal Power
- ◆ Modifications will be required to BOP components
- ◆ Turbine Generator expected to be limiting component
- ◆ Approval for MELLLA+ will be requested after submittal of GE LTR
- ◆ Use of GE methodology will result in consistent licensing approach
- ◆ Exelon experience/lessons learned being utilized to ensure success