

Analytical and Review Efficiencies for Power Update Submittals

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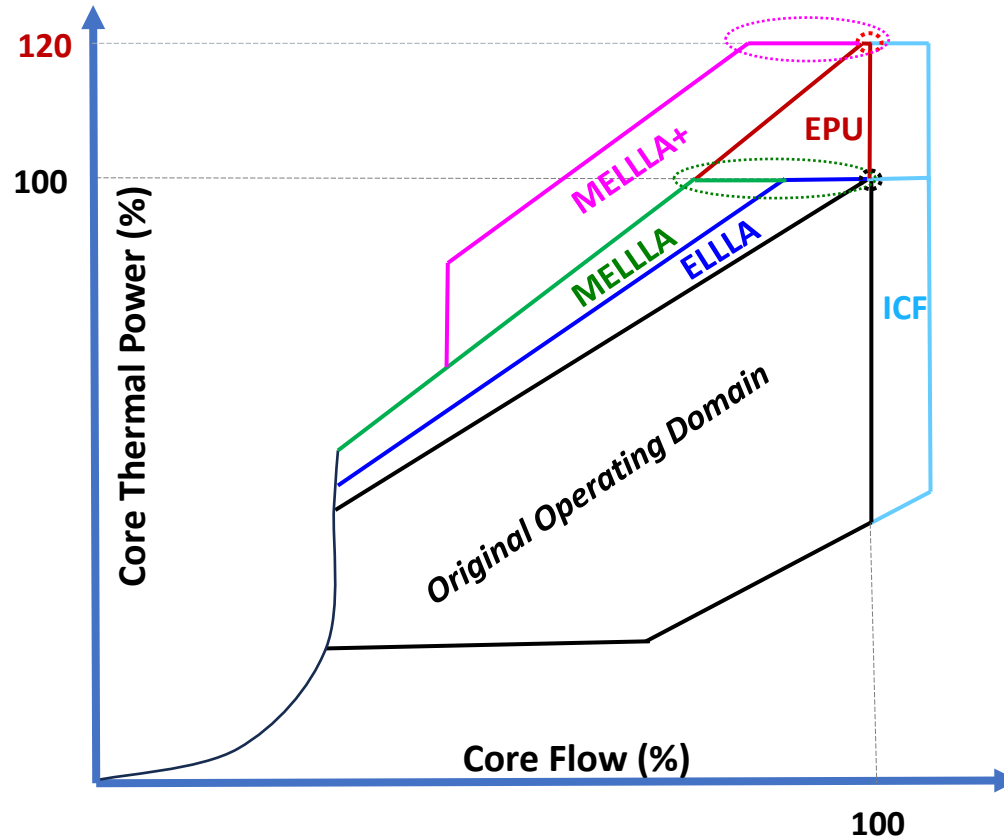


Combined License Applications

- EPU & MELLLA+ Case Study → Implementation Example

	Nine Mile Unit 2	Peach Bottom
EPU	31	23
MELLLA+	22	18
MUR		9
Review Time (months)	53	50
Implementation Time (months)	76	62

EPU and MELLLA+ Case Study



EPU and MELLLA+ Case Study

MELLLA+ supports operation at EPU power levels in a **safe**, effective, & efficient manner

Increased operational flexibility

- Improved flow window
- Improved capacity factor
- Less complicated
 - fuel and core design
 - cycle management
 - plant operation
- Reduced risk of HU error
- Less MCR resource requirement

Fewer Control Rod Maneuvers

- Improved reactivity management
 - **improved safety**
- Fewer fuel conditioning flow ramps
 - **improved fuel reliability**
- Reduced Operator Burden -> improved safety
- Fewer load drops
 - higher capacity factor
 - **improved equipment reliability**
- Reduced risk of FM to become dislodged
 - **Reduced risk of fuel failures**

Improved Fuel Cycle Economics

- Less complicated fuel & core design
- Less complicated cycle management
- **Improved fuel utilization**

Combined License Applications

EPU & MELLLA+ Case Study → Why EPU & MELLLA+

Combined Applications

- MELLLA+ supports operation at EPU power levels in the **safe**, effective, and efficient manner
- Lessons learned and operational experience gained with EPU / MELLLA+ plants
- Synergy in analytical scope
 - example: one analysis can cover all 3 conditions (EPU, MUR, MELLLA+)
- Review Efficiency
 - example: no need to review 3 very similar analyses.

Combined License Applications

EPU & MELLRA+ Case Study → **Why EPU & MELLRA+**

Combined Applications

- Previous example: **6** years for 3 submittals in series
- Could be reduced to **2** years with 3 submittals combined.

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	Combined Application Review
EPU	
MELLRA+	
MUR	
Total (m)	24

Power Upgrades: Summary

- Plans for over 3GWe new capacity
- Bridge to new and advanced reactors
- Increased market confidence:
 - Meeting costs and schedules
 - Meeting NRC review timeliness goals
- Promotes the nuclear workforce
- Cultivates the supply chain
- Responding to NRC uprate RIS
- NRC/NEI workshops making progress on uprate review improvements

