

# Operating Plant Initiatives

*Research and development providing strategic cross-discipline initiatives to improve operating reactor performance and optimize cost management through plant modernization, long-term operations (LTO), power uprates, and advanced data analytics techniques such as AI and machine learning.*

The Operating Plant Initiative (OPI) is a group of R&D programs and initiatives that cross multiple disciplines and are applicable to both operating reactors and newer nuclear technologies. OPI applies a holistic approach to identify and address gaps in the following areas:



**PLANT MODERNIZATION (PM)** Examining how advanced technologies and enhanced processes could improve safety, plant productivity, and efficiency.



**LONG TERM OPERATIONS (LTO)** Providing information and research findings on which to base objective assessments regarding extended operation.



**POWER UPRATES (PUR)** Helping to enable nuclear power plant owners/operators to maximize the value of existing plants with increased generation.



**DATA DRIVEN DECISION MAKING (3DM)** Developing the technical foundation for the application of artificial intelligence (AI) and other advanced data analytic techniques in the industry.

## Benefits of Membership

### Plant Modernization (PM)



Program members can access:

- Guidance and lessons learned from application at utilities worldwide.
- The Business Case Analysis Model (BCAM), available in both MS Excel and online.
- 20+ BCAM examples providing detailed costs and benefits for various of modernization technologies.

### Long Term Operations (LTO)



Coordinated across multiple EPRI nuclear programs to develop new and enhanced programs, processes, and inspection/surveillance techniques to improve the efficiency and effectiveness of aging management.

### Power Uprates (PUR)



Creating a feasibility study process and guidance for nuclear power plants seeking to assess and maximize potential uprate.

### Data Driven Decision Making (3DM)



Coordinated across multiple EPRI nuclear programs to help accelerate the development and application of AI tools in a variety of applications, including automated corrective action programs, NDE analysis, and others.

**COST:** These programs and initiatives are available only to full nuclear sector members and are not available for vendor or program-only membership. There are related supplemental offerings: "Plant Modernization Benchmarking & Assessment" – 3002024058 and "Facilitating Nuclear Power Uprates" – 3002025839. There are also opportunities with technical applications for LTO Assessment and Program Review, LTO Workshop and Training Support, and Modernization Strategy Development.

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