

xLPR Additional Applications

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xLPR Applications Beyond Leak-Before-Break (LBB) Collaboration

- **xLPR Loss-of-Coolant-Accident (LOCA) Frequency Estimation**
 - **Objective:** Perform Probabilistic Fracture Mechanics (PFM) evaluation using xLPR to calculate the probabilities of LOCA events as a function of line size
 - Benchmark NUREG-1829 LOCA frequencies and evaluate the time between detectable leakage and rupture to inform fuels licensing effort
- **Assessment of Small Diameter Dissimilar-Metal (DM) Weld Inspection Intervals Using xLPR (MRP-456)**
 - **Objective:** Assess the prospect of aligning all unmitigated DM butt welds at cold leg temperatures to the same inspection interval
 - <https://www.epri.com/research/products/000000003002020485>
- **xLPR Small Line LBB Extension**
 - **Objective:** Explore LBB applicability to line sizes smaller than what is currently possible within the approved analysis methodology described in NRC Standard Review Plan (SRP) 3.6.3

A blue-tinted photograph of four people, two men and two women, standing together. They are dressed in professional attire, including lab coats and a hard hat. The man on the far right is holding a tablet. The text "Together...Shaping the Future of Energy™" is overlaid in white on the image.

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