



# Seismic Probabilistic Risk Assessment

**EPM and our partners have the experience and qualifications to support a variety of seismic risk analyses for the nuclear industry. Our engineers have a significant level of experience supporting both seismic and PRA analyses. Our seismic analysis team also offers complete support to clients for response to NRC seismic re-evaluation for recommendation 2.1 of the near-term task force review of insights from the Fukushima Dai-Ichi accident, including the following analyses:**

## RISK SERVICES

- + Probabilistic Risk Assessment Services
- + Fire PRA/Seismic PRA
  - *Cafta*
- + Fire Modeling
  - *FDS*
  - *CFAST*
- + Human Reliability Analysis
  - *EPRI HRA Calculator*
- + Training

- Seismic Equipment List Development
- Seismic Walk-down Support
- Structure and Component Seismic Fragility Analysis
- Seismic Plant Response Analysis, including:
  - Seismically-induced initiating events evaluation
  - Seismically-induced accident sequence evaluation
  - Structures, Systems and Components (SSG) failure evaluation (seismically-induced and non-seismically-induced)
  - Seismic correlation/dependency evaluation
- + Screening of high capacity SSCs
  - Relay chatter evaluation
  - Seismic Human Reliability Analysis (HRA) evaluation
- Seismic PRA Quantification
- Seismic Margins Analysis (EPRI or NRC method), including:
  - + Review Level Earthquake (RLE) selection
  - Systems analysis and/or success path selection (methodology-specific)
  - Screening of high capacity SSCs
  - + High-Confidence, Low Probability of Failure (HCLPF) evaluation for unscreened SSCs
  - Treatment of non-seismic failures and human actions
  - Evaluation of containment and containment systems (methodology-specific)
  - Relay chatter evaluation
- Development of Alternatives for Reducing Seismic Risk
- Peer Certification Review Support
- NRC Request for Additional Information (RAI) Support

EPM can offer seismic analysis and risk assessment services to support and complement your facility's engineering team at whatever level of involvement you require. In addition to seismic response support, our services can be customized to address your unique engineering needs through the development of specific engineering solutions for your particular facilities and circumstances.

