



U.S.NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

SSHAC Guidelines in NGA-East Project

Dr. Annie Kammerer, P.E.

(Most slides borrowed from Dr. Kevin Coppersmith)

NGA-East Sigma Workshop Organizational Meeting

US NRC Projects to Assess Seismic Hazard in CEUS

Source
Characterization →

Central and Eastern US Seismic
Source Characterization project for
Nuclear Facilities (CEUS SSC)

Ground motion →
prediction equations

Next Generation Attenuation
Relationships for the Central and
Eastern (NGA-East)

Framework for large
PSHA studies →

Recommendations for Application
of the SSHAC Guidelines

Background

- NUREG/CR-6372, “Recommendations for Probabilistic Seismic Hazard Analysis: Guidance on Uncertainty and Use of Experts”
- Framework for integration of expert assessments and treatment of uncertainties
- CEUS SSC Project SSHAC level 3
- Need to consider how NGA-East can incorporate the SSHAC guidelines

Goal

- To capture the center, body, and range of views of the informed technical community
 - Broadens ownership
 - Increases assurance that uncertainties have been captured
 - Can be peer reviewed by those with comparable knowledge of the community

Motivation

- Differences in results of EPRI and LLNL PSHA lead to understanding of approach to conduct of study
- Consideration of alternate interpretations creates a more stable regulatory process and increased acceptance of outcomes
- Range of opinion believed to provide more stable estimates

Two important activities

- Evaluation
 - Identification of important data
 - Interaction among experts
 - Consideration and weighting of proponent viewpoints
- Integration
 - Represent the informed technical community
 - Use expert assessments

Roles

- Expert roles
 - Evaluator expert
 - Resource expert
 - Proponent expert
 - Normative expert
- Technical integrator or Technical facilitator/integrator
- Participatory peer review panel