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ELECTRIC POWER
RESEARCH INSTITUTE

EPRI New Plant Seismic Program

**Main Comments on Draft Reg. Guide
DG-1146**

December 14, 2006

Main comments on DG-1146

- Industry is in general agreement with the guidance in DG-1146
 - Use of the CAV-based lower magnitude cutoff
 - Definition of SSE spectra at either free ground surface or outcrop of competent material
 - Transferring the SSE spectrum to the foundation level using the appropriate site response functions
 - Use of ASCE 43-05 Performance Goal-based approach

General Comments

- Acceptance of coherency function essential prerequisite to COL applications; timeline for plant siting decisions is critical.
- DG-1146 should be confined to determination of free-field ground surface (or first competent layer) site-specific, performance-based SSE ground motion; guidance for incorporation of incoherency should be covered in SRP revisions.
- DG-1146 should clearly accept post-EPRI(2004) attenuation variabilities (i.e., Sigma estimate) developed in Task G1.3. Generic resolution is necessary.

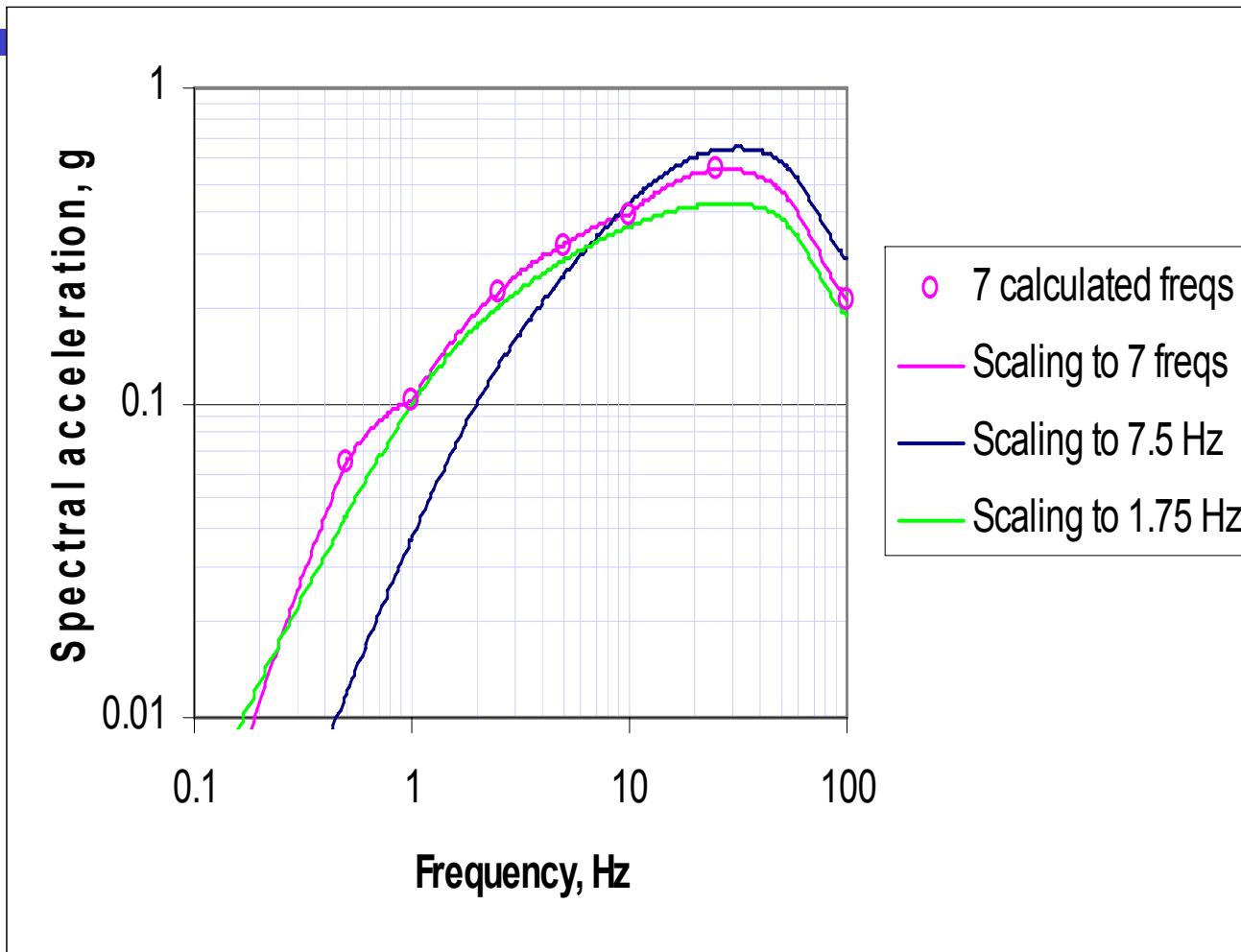
General Comments

- DG-1146 should address dynamic site response analysis approaches to 1) develop site response fns and 2) obtain UH response spectra at surface/control location. In particular, it should accept approaches 2A, 2B, 3 and 4 (Nureg/CR-6728 and -6769). Generic resolution is necessary.
- DG-1146 should provide guidance for ground motion modeling for WUS sites.

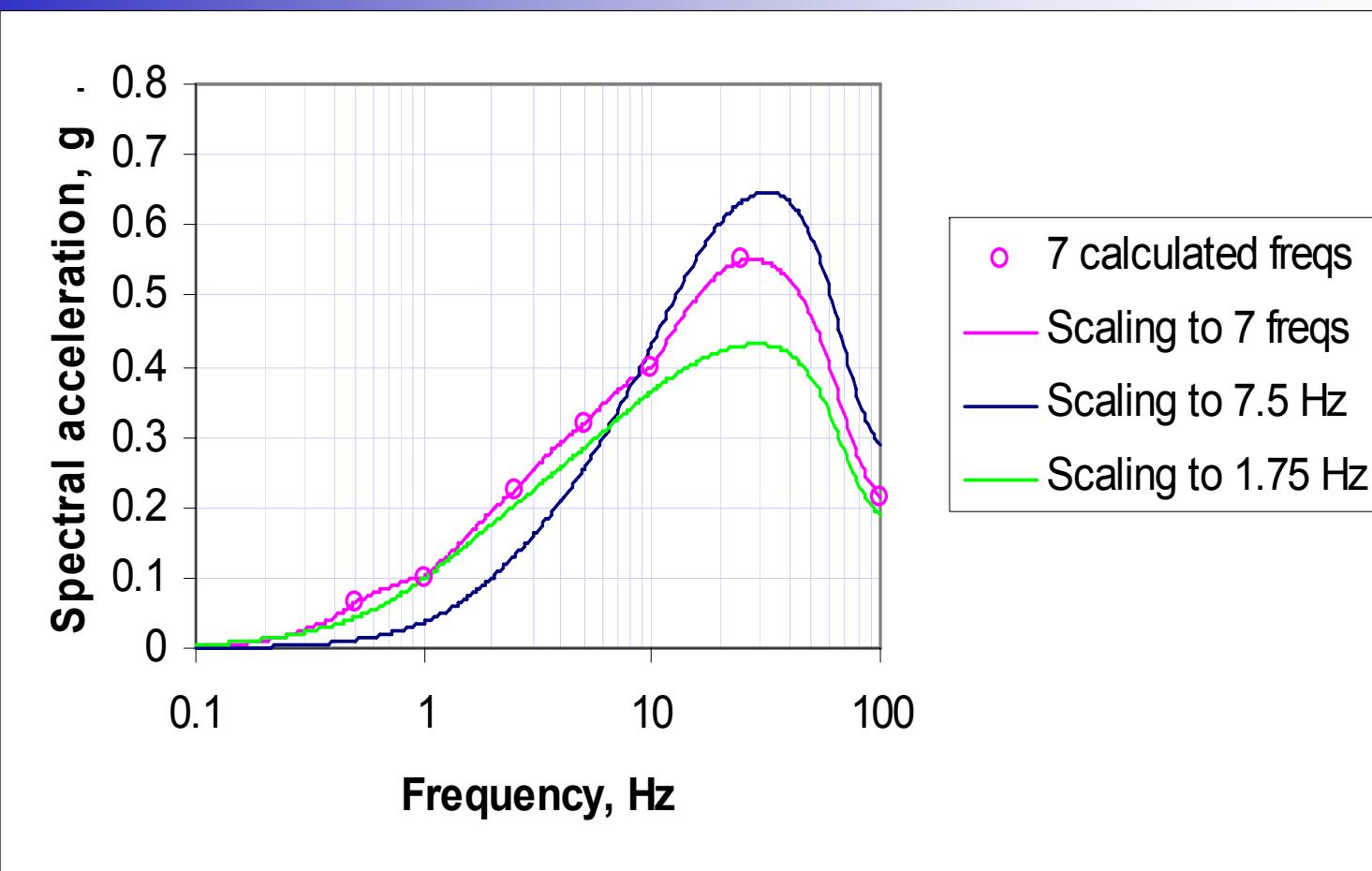
General Comments

- DG-1146 should clearly state that seismic source characterizations accepted by NRC generically or as part of an ESP or COL application are acceptable starting bases for subsequent site-specific PSHAs.
- Definition of the SSE spectrum needs to ensure that the exceedance frequencies of the UHRS are maintained at the surface over all structural frequencies of interest.

Example 1E-4 spectra



Example 1E-4 spectra (linear SA scale)



Specific comments

- Specific comments are provided in NEI letter dated Dec. 7, 2006.