To: Diablo Canyon Independent Safety Committee (DCISC):
Per F. Peterson (chair)
Najmedin Meshkati
Raluca Scarlat

From: DCISC Seismic Review Team (SRT):
Thomas H. Jordan (chair)
Michael E. Oskin
Scott T. Marshall

Re: SRT Comments on the Supplemental Response by Pacific Gas and Electric (PG&E) to Nine DCISC/SRT Recommendations

---

## 1. Summary

With the release of its 35th Annual Report at the end of 2025, the Diablo Canyon Independent Safety Committee (DCISC) officially transmitted to Pacific Gas and Electric Company (PG&E) a set of nine recommendations (R1-R9) put forward by the DCISC's Seismic Review Team (SRT) in its *Review of the Bird Critique*.[1] On February 12, 2026, PG&E submitted to DCISC an eleven-page Supplemental Response[2] describing its plans to address these recommendations as part of its long-term seismic program (LTSP) for the Diablo Canyon Power Plant (DCPP). At the DCISC's most recent public meeting (Feb 18-19, 2026), the PG&E presented its response in viewgraph form, and the SRT provided comments, also in viewgraph form, on the technical issues associated with the response. Following these presentations, the DCISC requested that the SRT produce a short written evaluation of the available PG&E documents. This letter report responds to that request. Our evaluation can be summarized as follows:

1. The SRT finds the information in the PG&E Supplemental Response to be adequate for a preliminary assessment of PG&E's plans to address the SRT recommendations.
2. PG&E agrees that further action is warranted on all nine recommendations and has thoughtfully responded to each recommendation with specific research plans and priorities.
    - R2-R4 are currently being addressed by on-going LTSP research; future research will be guided in part by these recommendations.
    - R1 and R5-R9 will be addressed by research initiatives or substantially expanded research projects.
3. We endorse most elements of PG&E's response plan but identify several areas where the plans should be broadened and refined.
    - PG&E assigns a medium priority to research on reverse faulting beneath the Irish Hills and gives higher priority to research on the uncertainty of the ground motion characterization (GMC), the

---

[1] Jordan, T. H., M. E. Oskin & S. T. Marshall (05/31/2025). *Review of the Bird critique*, Report to the Diablo Canyon Independent Safety Committee, 98 pp.

[2] PG&E (02/12/2026). *Supplemental Response by PG&E to Nine Recommendations by the Diablo Canyon Independent Safety Committee's Seismic Review Team*, PG&E Letter DCL-26-007, 11 pp.

Hosgri fault hazard, and the time dependence of earthquake probabilities in the seismic source characterization (SSC). The SRT agrees that this prioritization is consistent with the *declared* epistemic uncertainties in the SSC and GMC models, but it notes that these comparisons do not fully consider the *undeclared* epistemic uncertainties that could potentially produce surprises. PG&E's prioritization should consider the possibility that such ontological uncertainties are larger for the SSC than for the GMC.

- PG&E disagreed with R2. This recommendation was directed at testing the specific hypothesis that the difference between the long-term slip rate on the Southwest Boundary Zone (SWBZ) and the slip rate inferred from marine terrace uplift in the Irish Hills can be explained by an offshore subsidence rate unaccounted for in the current models. In discussions at the February public meeting, PG&E and the SRT agreed that this hypothesis could be tested (and probably rejected) through further analysis of existing offshore datasets. It is our understanding that PG&E now plans to conduct these tests.
- PG&E discounted the study of Morro Bay subsidence (a part of R4) as an imprecise method for assessing potential strike-slip faulting along the Los Osos trend. We note, however, that understanding the origin of subsidence of Morro Bay and the Los Osos valley also serves as an important constraint on the geometry of the SWBZ at depth. In our opinion, the study of Morro Bay subsidence and other indicators of vertical motion, such as the deformed Memorial Terrace, should be retained as components of the LTSP.

4. PG&E's Supplemental Response should be viewed as a preliminary assessment that will evolve as new projects are authorized and the technical details are refined. Additional information will be needed for a full review of a more mature PG&E response plan.
    - PG&E concurs with R5-R7 that further GPS data analysis is warranted and proposes to add a geodetic modeling project to the LTSP. This new project may involve collaboration with Dr. Marshall, who conducted the SRT geodetic modeling. To our knowledge, no programmatic details or milestones have yet been set. Aspects of this new project are discussed in §4.b.
    - PG&E is developing sensitivity source model (SSM) as computational platform for the sensitivity analyses needed to address R9 (see §4.c). We strongly endorse development of the SSM software and look forward to examining its implementation details and the results of the sensitivity tests performed on this platform.

## 2. Background

Activities of the SRT during the past year relevant to this report are listed in **Box 1**. At its February 2025 public meeting (PM), the DCISC appointed the SRT to conduct a technical review of six filings by Dr. Bird to the DCISC, the California Public Utilities Commission (CPUC), and the U.S. Nuclear Regulatory Commission (NRC) regarding the seismic hazard from thrust faulting beneath the Diablo Canyon Power Plant (DCPP). These filings together constitute the "Bird Critique."

The SRT submitted a comprehensive written report, *Review of the Bird Critique*, to the DCISC at the end of May and presented its review at the June 2025 PM. The report contained nine recommendations to the DCISC and PG&E for future research that could further elucidate the hazards associated with reverse faulting beneath the Irish Hills. These recommendations were adopted by the DCISC at the June 2025 PM with the directive that they be included as appropriate in its 35th Annual Report.

The SRT met with the PG&E staff in Palm Springs on September 10, 2025, to answer technical questions about the recommendations. PG&E presented a preliminary response tothe SRT recommendations at the October 2025 PM. Further reviews of the SRT report, including those presented at the October 2025 PM, uncovered no evidence or arguments that required changes to the SRT's findings and recommendations. The nine DCISC/SRT recommendations were thus transmitted in their original form to PG&E in the release of the 35th Annual Report on November 7, 2025.

On December 18, 2025, PG&E addressed the nine recommendations in a one-paragraph written statement included as part of its response to the DCISC 35th Annual Report. On January 13, 2026, the DCISC requested supplemental information on the PG&E response to allow the SRT to evaluate the technical adequacy of the response. On February 12, 2026, PG&E submitted an 11-page Supplemental Response to the nine recommendations. Our evaluation is based on this document and viewgraphs from the oral presentation by PG&E Senior Geologist Dr. Chris Madugo at the February 2026 PM.

**Box 1. Timeline of DCISC/SRT Activities**

- February 19-20, 2025, DCISC public meeting
  - SRT constituted by DCISC to conduct a peer review of the Bird Critique
- March 28, 2025
  - SRT met with PG&E technical staff to discuss issues raised in the Bird Critique
- June 10-11, 2025, DCISC public meeting
  - SRT presented *Review of the Bird Critique*[1] containing nine recommendations to PG&E
- September 10, 2025
  - SRT met with PG&E technical staff to clarify the recommendations
- October 22-23, 2025, DCISC public meeting
  - SRT reported on Dr. Bird's response to *Review of the Bird Critique*
  - PG&E presented its preliminary response to the SRT recommendations
  - DCISC formally adopted the SRT recommendations for inclusion in its 35th Annual Report
- November 7, 2025
  - DCISC released its 35th Annual Report containing the SRT recommendations
- December 18, 2025
  - PG&E submitted a 1-paragraph preliminary response to the SRT recommendations
- January 14, 2026
  - DCISC requested supplemental information from PG&E regarding their response to SRT recommendations
- February 12, 2026
  - PG&E submitted to DCISC an 11-page supplemental report[2] detailing its plans to address the SRT recommendations.
- February 18-19, 2026, DCISC public meeting
  - PG&E presented its supplemental response to SRT recommendations
  - SRT commented on PG&E supplemental response

## 3. Overview

In its Jan 14th request, the DCISC asked PG&E to provide: (1) sufficient information for the SRT to evaluate the technical adequacy of the PG&E response to the SRT recommendations; (2) individual responses to each recommendation, stating whether PG&E agrees that further research is warranted and, if so, the plans, priorities, and time frames assigned to that research; and (3) identification of which recommendations have the potential to make a significant impact on the DCPP hazard assessments, i.e., are technically defensible and likely to yield meaningful results.

**Table 1. Summary Matrix of PG&E Response**

The information provided in the PG&E Supplemental Report includes the plans, priorities, and time frames for addressing all nine recommendations; these are summarized in **Table 1**.

- The SRT finds that the information in PG&E's Supplemental Response is adequate for assessing its preliminary response to the SRT recommendations.

Additional information will be needed to conduct a full technical review of the PG&E response plan after the plan's elements have been fleshed out as components of the LTSP. PG&E proposes a new geodetic modeling program to address R5-R7, for example, but no details are yet available. PG&E is also testing a new Sensitivity Source Model (SSM), which they intend to be the main computational platform for the sensitivity analyses needed to implement R9 and assess the other recommendations. PG&E indicates that the SSM validation is on a fast track and should be completed in the first half of this calendar year.

- The SRT endorses the development of the SSM as an efficient computational platform for SSC sensitivity testing and looks forward to understanding the implementation details and application results.

PG&E agrees that further action is warranted on eight of the nine recommendations (all but R2) and has responded to each recommendation with specific research plans and priorities. The SRT's comments on the individual responses are given in §4.

- The SRT endorses the overall structure of PG&E's preliminary response in terms of its plans, priorities, and time frames, but it notes several areas where the plans should be clarified and refined.

For example, PG&E disagreed with the SRT's priority on R2, which involves the dating of the offshore low-stand abrasion platforms; they cite the difficulties of making such measurements and the low probability of success. R2 was motivated by the need to test the hypothesis that the difference between the long-term slip rate on the SWBZ and the slip rate inferred from marine terrace uplift in the Irish Hills could be explained by an offshore subsidence rate of ~0.1 mm/yr. In discussions at the February public meeting, the PG&E geoscientists and the SRT agreed that this hypothesis can be tested (and probably rejected) through further analysis of existing offshore datasets. This issue is discussed in more detail in §4.b.

The PG&E Supplemental Report states (on p. 3), "In general, the relative priority of research tasks related to reverse faults beneath the Irish Hills is considered of *medium importance* based on current information and hazard model results, warranting ongoing LTSP research with the goal of reducing SSC uncertainties over a time frame of *multiple years*." (emphasis added)

- The SRT concurs with PG&E's overall priority of medium and its time frame of several years for the research tasks related to reverse faulting beneath the Irish Hills.

PG&E assigns a higher priority to research on the uncertainty of the ground motion characterization (GMC), the Hosgri fault hazard, and the time-dependence included in the seismic source characterization (SSC). It is common in PSHA practice to find that the model-based epistemic uncertainties are larger for GMC than for the SSC.

- The SRT agrees that this prioritization is consistent with the *declared* epistemic uncertainties in the SSC and GMC models, but we note that these comparisons do not fully consider the *undeclared* epistemic uncertainties, such as those due to "unknown unknowns," which can produce unmodeled, though potentially consequential, surprises (Black Swans).

An example would be a very large (≥ M7.5) thrust earthquake on the SWBZ. Such an event is given zero probability in the current SSC for DCPP. The SRT speculates that such ontological uncertainties may be larger for the SSC than for the GMC. PG&E's prioritization of SSC research should recognize this possibility. The conceptual issues regarding the testing for ontological errors in hazard estimation have been discussed by Marzocchi and Jordan (2014).

Key metrics for response prioritization are the potential hazard impacts of further research. The potential impacts include (a) changes to mean hazard values, (b) changes to the epistemic uncertainties of those values, and (c) validation or rejection of alternative models. There are differences between the PG&E and SRT assessments of the potential hazard impacts, as shown in the last two columns of Table 1. The PG&E assessments are cautious: the potential impacts for R2 and R3 are rated as low and those for the other seven are listed as unknown. In contrast, we assign the potential impacts as low (R2, R8), medium (R1, R4, R5, R9), and high (R3).

The high SRT ranking for the potential impact of R3 stems from the recent controversy about the Infrared Stimulated Luminescence (IRSL) dating of marine terraces along central California coastline. One side of this controversy argues that the lowest marine terraces fringing the Irish Hills correlate with the MIS 3 sea-level highstand rather than MIS 5, as assigned in the PG&E SSC. This change would increase the uplift rate of the Irish Hills by ~1 mm/yr, significantly increasing the DCPP thrust-faulting hazard. Citing a recently published study by Muhs et al. (2026), PG&E discounts the possible MIS 3 assignment and thus gives R3 a low hazard impact, whereas the SRT considers the hazard impact potential of R3 remains high, even in light of recent confirmation of the MIS 5 age assignments.

In a short response to R5-R7, PG&E concurs that further GPS data analysis and comparison with kinematic and mechanical models provide valuable confirmation of the geologic slip rates and fault kinematics used in their model. PG&E expresses interest in collaborating directly with Dr. Scott Marshall, who conducted the SRT geodetic analysis. Suggestions for how this project might be structured are given in §4.b.

## 4. Comments on PG&E plans to address individual recommendations

The PG&E Supplemental Report outlined its preliminary plans for addressing each of the nine DCISC/SRT recommendations. In this section, we comment briefly on those individual plans.

### a. Fault system modeling

The first four SRT recommendations concern modeling of the kinematics of faults participating in the deformation and uplift of the Irish Hills.

R1. *The SRT recommends the development of a set of kinematically constrained structural models for reverse faults underlying the Irish Hills that can explain the folding observed since 5 Ma.*

In response to R1, PG&E concurs with the need to develop kinematically constrained structural models for reverse faults underlying the Irish Hills in support of their existing fault geometry models (FGMs). They also state that the existing FGMs within the SSC model are generally consistent with the geologic structure and uplift pattern of marine terraces around the Irish Hills. The SRT agrees that the existing FGMs for the Southwest Boundary Zone (SWBZ) produce block-like uplift consistent with marine terrace uplift constraints. We do not agree that existing FGMs are consistent with the geologic structure of the Irish Hills as recorded in folding and uplift of Miocene and Pliocene strata. The Obispo, Monterey, and lower Pismo formations, deposited prior to the onset of contractional deformation of the Irish Hills, were folded into the Pismo syncline as a response to slip on the underlying SWBZ fault system. Geologically consistent and technically defensible FGMs should directly account for this folding alongside the uplift constraints from younger geologic markers formed while contraction was underway, such as marine terraces and the overlap of Upper Pismo formation across the south limb of the Pismo syncline. The SRT produced one such candidate model and found that a 40° fault dip is required to produce these folding relationships, which is less than the 45°-70° dip range of FGMs used in the SSC.

PG&E proposes to develop kinematically constrained FGMs through incorporation of surficial and subsurface geological information east of San Luis Obispo Creek, where strata deposited during contraction are better preserved, and abundant subsurface data exists from petroleum exploration. The SRT agrees that information from this area provides valuable added insight into the geometry of the SWBZ. We encourage PG&E to consider this information as part of a holistic review of uplift and folding data used to constrain SWBZ FGMs. In addition, we continue to advocate for further attention to the pattern of deformation along the Los Osos trend and its relationship to marine terrace uplift north of Irish Hills, because this information is critically important for constraining the deeper geometry of the SWBZ, which affects the potential magnitude of thrusting events.

R2. *The SRT recommends dating of low-stand abrasion platforms offshore, south of the Irish Hills, to further constrain the rate of footwall subsidence and its contribution to the SWBZ slip rate.*

In its written response, PG&E rejected R2 with the justification that sampling and direct dating of low-stand abrasion platforms offshore was infeasible and that the results of such effort were unlikely to substantially change the hazard. PG&E further argued that the slip rate of the San Luis Bay fault is well constrained from marine-terrace offset, and that the lack of a sediment-filled basin offshore precludes a significant missing subsidence component to slip rate of the SWBZ. PG&E instead proposes to evaluate subsidence from existing marine surveys undertaken as part of the Coastal Imaging Project and later high-resolution CHIRP surveys presently under analysis by the U.S. Geological Survey.

The subsidence component of SWBZ slip may indeed be negligible, but it is not yet fully constrained. A missing subsidence component may be indicated by the difference between the SRT's 0.50 ± 0.10 mm/yr long-term slip rate and the 0.29 ± 0.07 mm/yr slip rate from marine terrace uplift. In addition to the San Luis Bay fault, where slip produces hangingwall uplift, there are other active strands of the SWBZ offshore such as the Oceano fault and Los Berros fault, where slip may produce footwall subsidence. The SRT did not specify an approach to dating the low-stand abrasion platforms, and we agree that sampling and direct dating may be difficult as well as expensive. PG&E's proposed approach to evaluate the position and stratigraphic architecture of low-stand terraces from existing seismic and CHIRP surveys has been successful elsewhere offshore California (e.g., Castillo et al., 2019). If PG&E can show from stratigraphic arguments that the low-stand abrasion platform has remained stable, this will adequately address the SRT recommendation. Further surveys and sampling may be warranted if they find evidence for progressive subsidence of older low-stand platforms and of stratigraphic features related to low-stand shorelines.

R3. *The SRT recommends monitoring of IRSL-dating efforts and reassessment, if necessary, of the MIS 5 age assignments for the Q1 and Q2 terraces surrounding the Irish Hills.*

PG&E agrees with R3 and describes two new developments that affect age assignments for the Q1 and Q2 terraces. First, a new publication (Muhs et al., 2026) confirms the MIS 5 age assignments for the Q1 and Q2 terraces fringing the Irish Hills. These new constraints will be incorporated into ongoing work. Second, a reevaluation of IRSL age-dating from marine terraces deposits at Cayucos confirms prior MIS 5 age assignments here (N. Onderdonk, personal communication). Together, these developments show that PG&E is meeting the SRT recommendation. The SRT differs with PG&E on the potential impact of these age refinements, because, if the Q1 terrace was shown to be MIS 3 rather MIS 5, this would lead to a substantial upward revision of slip rate of the SWBZ.

In their response, PG&E also describes a new effort to reevaluate age-dating constraints for the rate of activity of the Casmalia Hills thrust, located 25 km southeast of the Irish Hills. Though not directly addressed by the SRT, we concur that such re-evaluation is needed to test the high rate of activity proposed by McGregor and Onderdonk (2021).

R4. *The SRT recommends further investigation of potential strike-slip faulting along the Los Osos trend and its impacts on the pattern of marine-terrace uplift.*

PG&E agrees that R4 is aligned with the goals of its long-term seismic program. Their response focuses on the problem of deducing whether deformation along the Los Osos trend is a result of strike-slip rather than reverse faulting. A prior study of stream-channel deflections along the Los Osos trend did not show conclusive evidence for lateral slip; however, such evidence may not be present if the slip rate is low or if the faulting is mislocated or multi-stranded. PG&E also allude to ongoing work in the adjacent offshore region, in collaboration with the U.S. Geological Survey, that includes analysis of fault slip style (kinematics). These activities meet the SRT recommendation to assess the potential for strike-slip faulting.

PG&E rejected the analysis of Morro Bay subsidence as too speculative to yield a meaningful strike-slip rate for the Los Osos fault, and they also chose to down-weight the study of the deformed Memorial Terrace as a constraint on reverse slip across the Los Osos trend. These responses miss the second purpose of R4, which is to address uplift constraints on the deeper geometry of the SWBZ. In the SRT report, we found that, if subsidence of Morro Bay is a result of a dextral stepover of the Los Osos strike-slip fault, this could affect the pattern of marine-terrace uplift and change interpretation of the deeper geometry of the SWBZ. Documenting the uplift rate of the Memorial Terrace also serves to address the geometry and degree of dip change of the SWBZ across the Los Osos trend. Thus, we recommend continued attention to these problems as part of the response to R4 and R1.

### b. Geodetic modeling

Four SRT recommendations concern the development of geodetic models to constrain the overall deformation of the greater Irish Hills region and the use of these constraints to validate the current DCPP SSC. Three of these, R5-R7, have been tentatively accepted by PG&E as roadmap for a new geodetic modeling project. PG&E affirms this response in a short paragraph:

> "Based on the SRT's initial findings and subsequent discussions, PG&E agrees that additional evaluation of GPS data and comparison to kinematic and mechanical models for faults between the San Andreas fault and Hosgri fault is useful confirmatory work for the geologic rates and fault kinematics used in the PG&E model. PG&E would like to work directly with Scott Marshall starting in 2026 on the tasks listed in recommendations 5 through 7."

The details of this project have not yet been worked out. In absence of a more complete description, the SRT offers some additional information and suggestions for future work.

R5. *PG&E should follow up SRT's preliminary work with a more complete study of the available GPS data.*

While the SRT report provided a detailed analysis of the Zeng (2022) GPS velocities, we focused on thrust faulting in the Irish Hills. Therefore, some aspects of this rich dataset were not fully analyzed. A more complete study of the GPS data could involve creating an updated GPS dataset from existing products. The Zeng (2022) data were published nearly four years ago and many of the time series used in that study were already several years old when the Zeng dataset was compiled. A new dataset will likely have more tightly constrained velocities and may contain additional stations. Because many GPS products are continually processed and made publicly available for download, it may be feasible to construct an updated GPS dataset within the three-year timeframe suggested by PG&E. We also note that, while the SRT analysis showed clear strike-slip deformation to the northeast of DCPP, we did not attempt to estimate the slip rates along any of these fault structures.

R6. *The fault slip models that underlie the DCPP SSC should be developed into kinematic and mechanical models that can predict the interseismic deformation and can thus be directly tested against the GPS data.*

The United States Geological Survey's latest 2023 National Seismic Hazard Model (NSHM) utilized GPS data and a suite of models to drive their earthquake rate model (e.g., Pollitz et al., 2022). The 2023 NSHM was not the first to incorporate GPS data and deformation models; these were previously included in the 2014 NSHM update (Powers and Field, 2014) and the 2013 Uniform California Earthquake Rupture Forecast version 3 (UCERF3, Parsons et al., 2013). Deformation modeling and comparisons to geodetic data (e.g., GPS) are recognized as necessary owing to limitations in geologic slip-rate estimates, which often include sparse spatial coverage and large uncertainties in timing of past earthquakes that may not reflect the current behavior of fault systems (Pollitz et al., 2022).

Known limitations of these deformation models are that no viable geodetic model can uniquely resolve fault slip rates in regions of closely spaced faults and that different physics-based formulations can yield different answers when applied to the same dataset. To address these problems, the 2023 NSHM developers selected five different deformation model types to constrain their earthquake rate model (Pollitz et al., 2022). This experience shows that more than one model type should be considered in testing the PG&E SSC model. The most straightforward approach is a "geologic model" where the slip rates from geologic studies are kinematically applied to the SSC faults and compared against GPS data. While other models capable of handling complex FGMs may be used, block models are likely unsuitable for this effort. Because block models require connected faults, they have previously failed to clearly differentiate fault geometry and slip rate details within this complex and unconnected regional structure (e.g., Murray-Moraleda et al., 2011). Throughout this modeling process, the PG&E fault models should be compared to other existing regional fault models including the NSHM23 fault sections database (Hatem et al., 2021), and the Statewide California Earthquake Center's Community fault model (Plesch et al., 2024).

R7. *PG&E should compute the relative contributions of strike-slip and reverse faulting to the regional deformation predicted by the SSC24 slip models and compare the values with the geodetic constraints.*

Once the updated GPS dataset is compiled, analyses similar to those in the SRT report, such as strain rate inversions and 1D profiles, can be performed. As we have previously established, it is critical to account for motion along major strike-slip faults to the northeast of the DCPP to isolate deformation local to the Irish Hills region. Specifically, removing the influence of the San Andreas fault is necessary for accurate characterization. New data constraining San Andreas creep may be leveraged to refine this correction.

R8. *Geologic slip-rate information should be acquired from the Rinconada and Huasna faults to permit better modeling of the shear component evident in the GPS data.*

The SRT analysis indicates that even after accounting for San Andreas fault deformation, several millimeters of primarily strike-slip motion is distributed over the greater Irish Hills region. Modeling this deformation requires accurate geologic slip rate estimates for the Rinconada and Huasna faults, which are currently lacking. SRT agrees with PG&E that these faults contribute little to the hazard, owing to their distance from the DCPP; however, their broad interseismic deformation signatures make them essential for a complete regional geodetic model. We agree that identifying high-quality study sites and conducting thorough slip rate analyses will likely require several years.

## c. SSC modeling

The last recommendation is an overarching recommendation to conduct full-model sensitivity analyses in evaluating the potential hazard impact of the other SRT recommendations.

R9. *PG&E should conduct modeling experiments to ascertain the sensitivity of DCPP hazard to the SSC modifications recommended by the SRT.*

PG&E accepts sensitivity analysis as a high LTSP priority. The DCPP SSC is an extremely complex model with hundreds of co-varying parameters, and the epistemic uncertainty of the model is represented by an intricate set of logic trees in which the alternative models are weighted by expert judgment. Investigating the hazard implications of the inferences from the SRT study therefore requires full-model sensitivity experiments to assess the hazard impact of imposing a new constraint.

PG&E assigned a high LTSP priority to R9, and they are actively developing a sensitivity source model (SSM) to be the computational platform for SSC sensitivity studies. According to their plan, a version of the SSM focused on faults closest to the plant will be operational by June 2026 and experiments for testing recommended changes to the fault geometry models for the Irish Hills will commence shortly thereafter.

- The SRT endorses the development of the SSM as a more efficient and transparent computational platform for SSC sensitivity testing and looks forward to understanding the implementation details and application results.

## 5. References


Castillo, C. M., Klemperer, S. L., Ingle, J. C., Powell, C. L., Legg, M. R., Francis, R. D. (2019). Late Quaternary subsidence of Santa Catalina Island, California Continental Borderland, demonstrated by seismic-reflection data and fossil assemblages from submerged marine terraces, *Geol. Soc. Am. Bull.*, **131**, 21-42, https://doi.org/10.1130/B31738.1.

Hatem, A. E., Collett, C. M., Briggs, R. W., Gold, R. D., Angster, S. J., Powers, P. M., Field, E. H., Anderson, M., Ben-Horin, J. Y., Dawson, T., DeLong, S., DuRoss, C., Thompson Jobe, J., Kleber, E., Knudsen, K.L., Koehler, R., Koning, D., Lifton, Z., Madin, I., Mauch, J., Morgan, M., Pearthree, P., Pollitz, F., Scharer, K., Sherrod, B., Stickney, M., Wittke, S., and Zachariasen, J. (2021). Earthquake geology inputs for the U.S. National Seismic Hazard Model (NSHM) 2023 (western US) (ver. 2.0, February 2022), U.S. Geological Survey data release, https://doi.org/10.5066/P9AU713N.

Marzocchi, W., Jordan, T. H.  (2014), Testing for ontological errors in probabilistic forecasts of natural systems, *Proc. Nat. Acad. Sci.*, **111**, 11973-11978, https://doi.org/10.1073/pnas.1410183111.

McGregor, I. S., Onderdonk, N. W., 2021. Late Pleistocene rates of rock uplift and faulting at the boundary between the southern Coast Ranges and the western Transverse Ranges in California from reconstruction and luminescence dating of the Orcutt Formation, *Geosphere*, **17**, 932–956. https://doi.org/10.1130/GES02274.1

Muhs, D. R., Groves, L. T., Schumann, R. R., and Bright, J. (2026), Reconciliation of geochronology and paleozoogeography for Quaternary marine terraces, San Luis Obispo Bay area, California, USA, *Palaeogeography, Palaeoclimatology, Palaeoecology*, **681**, https://doi.org/10.1016/j.palaeo.2025.113354.

Murray-Moraleda, J. R., Svarc, J. L., Onishi, T., Thatcher, W. (2011). An interseismic velocity field for the central California coast region derived from Global Positioning System measurements, Unpublished technical report, submitted to PG&E.

Parsons T., Johnson K. M., Bird P., Bormann J. M., Dawson T. E., Field E. H., Hammond W. C., Herring T. A., McCaffrey R., Shen Z.-K., Thatcher W. R., Weldon R. J. II, Zeng Y. 2013 Appendix C: Deformation models for UCERF3.3, *U.S. Geological Survey Open-File Report 2013-1165-C*, 66 pp.

Plesch, A., Marshall, S., Shaw, J. (2024). SCEC Community Fault Model (CFM) (7.0) [Data set]. Statewide California Earthquake Center, https://doi.org/10.5281/zenodo.13685611.

Pollitz, F. F., Evans, E. L., Field, E. H., Hatem, A. E., Hearn, E. H., Johnson, K., Murray, J. R., Powers, P. M., Shen, Z.-K., Wespestad, C., et al. (2022). Western U.S. Deformation Models for the 2023 Update to the U.S. National Seismic Hazard Model, *Seismol. Res. Lett.*, **93**, 3068–3086, https://doi.org/10.1785/0220220143.

Powers, P. M., Field, E. H.  (2014). Update to the National Seismic Hazard Model in California. Earthquake Spectra. 2015;31(1_suppl):S177-S200. https://doi.org/10.1193/110314EQS176M.

Zeng, Y. (2022). GPS velocity field of the western United States for the 2023 National Seismic Hazard Model update, *Seismol. Res. Lett.*, **93**, 3121–3134, doi: 10.1785/0220220180.