POSTED 8/28/25

**Edited Q & A Transcript for Integrated Resource Planning Modeling Advisory Group Webinar-**
**Proposed Updates to the Busbar Mapping Methodology**
**CPUC and CEC Staff**
**9 AM – Noon on 8/19/2025**
**Answers or edits made post-webinar are found in green.**

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QUESTION: A general question... Could the staff please give an update on the status of the RESOLVE model with the Path15/26 split? Do you have an expected ETA for its availability? And if not, are you still confident that it will be used for LSE planning and for the portfolio development?

RESPONSE: We are planning to release an updated RESOLVE package for Filing Requirements in the next 2-3 weeks. This model will include the zonal disaggregations that were presented in the February I&A MAG Webinar

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QUESTION: An increasing number of projects in the queue are interconnecting by adding a new switching station between substations rather than routing a gen-tie to an existing substation. Is there a way to capture the opportunity and cost for these types of projects?

RESPONSE: Thanks Ryan. There could be - pls share a bit more about this in written feedback and we'll dig into it.

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QUESTION: Are hybrid projects now treated as a single resource or are the battery and solar components treated as separate resources that are both mapped to a busbar with the battery assigned FCDS and solar EODS?

RESPONSE: Hi Ed. Thank you for your question. Hybrid projects are not treated as single resources. The hybrid components are treated as separate resources that are both mapped to a busbar and assigned FCDS for storage and EODS to solar.

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QUESTION: Can you explain how having other projects in the queue makes the confidence low?

RESPONSE: Projects with executed interconnection agreements are considered higher-confidence

RESPONSE: Recognizing that didn't fully answer the question. Believe you are referring to the final bullet on slide 54. The bullet is unclear.

RESPONSE: The intended text is: "All other projects in the interconnection queues that do not meet the above criteria for high-confidence commercial interest."

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QUESTION: Can you please share how many resources from C14 and earlier are not included as mapped? What about C15?

RESPONSE: Hi Soumya, we use interconnection queue data to inform our commercial interest criteria by busbar. This criteria informs the mapping of generic resources from our RESOLVE portfolios. We do not map individual projects from interconnection queues as part of the busbar mapping analysis.

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QUESTION: CEC slide 23 - Do you have a comparison for wind for 2025 and 2023 PAL, as you showed for solar? It is also critical to overlay the discretionary layers on commercially promising wind areas to show what is being taken off the table.

RESPONSE: Unfortunately, we do not have one ready-made to share in this presentation.

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QUESTION: CPUC Slide 20 - Can you share any detail on what the change in OSW ELCCs is and what error was corrected?

RESPONSE: Hi Jon, like I&A in general, that will be forthcoming as part of the TPP portfolio ruling materials and webinar in the Fall, as well as other modeling workstreams e.g., LSE plan filing requirements

RESPONSE: There was an error in the time zone that the OSW profile was reported in, that impacted how it was interpreted via the SERVM model for ELCC runs.

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QUESTION: Does having PTOs assess interconnection feasibility around substations interfere in any way with the TPP's role in justifying new transmission upgrades based on commercial interest?

RESPONSE: Hi Erik, the information requested from the PTOs, and resulting interconnection feasibility criteria, pertains only to upgrades at the POI. This is independent of transmission deliverability upgrades/needs.

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QUESTION: Does the update based on federal policy make any assumptions about projects that will be able to commence construction prior to July 4, 2026 and thus be eligible to come on line by Dec. 2030?

RESPONSE: Thanks Ed, out of scope for today but we'll pick this up around when we release the ruling on 26-27 TPP portfolios in the Fall

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QUESTION: How would horizontal drilling underneath a protected area be treated for geothermal development?

RESPONSE: We tried to account for that by not excluding any resource potential from the geothermal field areas unless the entire geothermal field was within a protected area.

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QUESTION: In your step 2 how do you determine the "key substations"?

RESPONSE: The list of substations/busbars is informed by the locations with mapped resources from previous TPPs, those with commercial interest, and those identified by CAISO in the Transmission Capability Estimates whitepaper. The substation list this year is largely unchanged from the 25-26 TPP.

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QUESTION: It might be helpful to apply the cost data for upgrades to the amount of megawatts that could be added at the busbar.

RESPONSE: Thanks, Ed. Please share your recommendations with us via informal written comments.

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QUESTION: On CEC slide 34: please clarify how these screens apply to OOS resources. For example, SCE Arizona show 544,229 acres available. Does that refer to all the acres in AZ that can directly connect to POIs in SCE's territory?

RESPONSE: This accounts for areas that have energy resource potential and are identified as lower-implication land in that RESOLVE zone

RESPONSE: In slide 33, the areas calculated are defined by the SCE EOP and SCE Arizona and SDGE Arizona regions shown in red in slide 49. The screens used are the proposed screening changes described in this presentation. So, updated Protected Area Layer, update wind resource quality data, and WECCRiskClass3

RESPONSE: It refers to areas with resource potential in lower-implication land in the RESOLVE Zone (SCE Arizona zone, shown on slide 33).

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QUESTION: On CEC slides 52 and 53 there is a light gray in the area images without a legend description. What does the light gray represent?

RESPONSE: The lighter grey areas are part of the basemap. Public or private lands that do not fall within the datasets being assessed.

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QUESTION: On slide 23 regarding potentials, what is it about the new data source that shows such a different potential for wind in PG&E Fresno?

RESPONSE: Hi Ellen, most of the land area in PG&E Fresno is screened with the update to the GWA 6.5 m/s layer. The remaining land is removed by the successive land use screens (TE, PAL, Core) that are applied. GWA was the primary driver, though.

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QUESTION: On step 3a (1) when will stakeholders learn of additional transmission capability info, and (2) what kind of info is collected from PTOs and how do parties learn of this info?

RESPONSE: On (1) CPUC staff largely rely on CAISO transmission constraint information. We will provide an overview on how this is factored in. On (2) we are proposing using additional information from PTOs. This is a proposal we will go over later in the presentation.

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QUESTION: Re CEC slide 14...Some the BLM protected areas allow certain exceptions or have embedded allowable pockets. Are these factored in, or are the protected areas precluded as Protected Areas in their entirety for IRP mapping processes?

RESPONSE: We try to understand the specific regulation regarding each land designation as to whether they allow or prohibit renewable energy development. Based on previous conversations with stakeholders, we settled on the list of land types shared as being excluded.

RESPONSE: If you have more information on more specific land uses within designations, we would appreciate learning about that.

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QUESTION: Re CEC slide 16, Saffia said that one difference is that "we won't be filling gaps". Can you please explain further what that means?

RESPONSE: When we bring together (union) all the different data components, we have the geoprocessing option to fill gaps between the different datasets. Previously we allowed that with the intent that small areas surrounded by protected areas should be screened out from landscape level resource potential

RESPONSE: However, that method actually filled a lot more area than intended, and we quickly realized and removed that geoprocessing option in early 2024.

RESPONSE: Are you saying that the previous approach over excluded areas and that by revising this approach some areas will be freed up for potential resources? Thanks.

RESPONSE: Yes, some areas became available for resource potential

RESPONSE: Yes, that is correct Ellen. However, we fixed the most egregious gap related errors prior to any usage of the 2023 screening data in busbar mapping.

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QUESTION: Re PTO process per on Slides 35 - 36, were all PTOs consulted? (There a lot of different kinds of PTOs in the CAISO). If not, which ones were consulted? How can parties learn of the information that will be used from this process in the busbar mapping in advance of seeing the new mapping workbook?

RESPONSE: Hi Ellen. At this time, the PTOs have been contacted for feedback. The information gathered will include insight on existing headroom, available POIs, upgrade condition, and expansion availability and is synthesized based on slide 37.

RESPONSE: Hi Ellen, the IOUs were consulted. This information will be made available at the time of the Ruling release with the dashboard, and can then be commented on in the record. Please submit informal feedback on this process in these comments if you have it.

RESPONSE: Hi Ellen. At this time, the IOUs have been contacted for feedback. The information gathered will include insight on existing headroom, available POIs, upgrade condition, and expansion availability and is synthesized based on slide 37.

FOLLOWUP: Thanks Sierra. For other POIs will the generic criteria be applied in lieu of PTO-specific collected data? (I think this was the message in presentation.)

RESPONSE: Essentially, yes. The new criteria will be used initially only for a subset of busbars that have high demonstrated commercial interest, and/or have had large mapped totals from previous TPPs.

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QUESTION: Re slide 20, would like to hear more about the availability of wind and geo based on "procurement challenges"? What does this mean? How do procurement challenges impact "availability"/potential?

RESPONSE: Thanks Ellen. Right, not strictly a matter of resource potential - we've used 'build limits' in the past to help ensure portfolios be feasible/realistic. Out of scope for today and we'll pick this up with the 26-27 TPP portfolios ruling in the Fall.

RESPONSE: Should I take this to mean that you do not intend to reduce build limits in this cycle based on some new information or methods? If I'm wrong please clarify changes being considered. Thx.

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QUESTION: Re slide 39 with new interconnection costs, where can we see values that are intended to be used, in advance of busbar mapping process? Are these published? Or will these be published, and if so when?

RESPONSE: Hi Ellen, staff will utilize the CAISO's participating transmission owners (PTOs) per unit cost guides for upgrade cost estimates. https://www.caiso.com/library/current-cost-guides

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QUESTION: Regarding CPUC slide 57, can parties provide intelligence/input that would make use of the data sources workable?

RESPONSE: Absolutely! Please expand in written comments. We look forward to digging in.

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QUESTION: To confirm for CEC slides 54 and 55, golden colored lands that are also gray have a higher priority for siting than golden colored lands not colored gray, correct? Please clarify if not.

RESPONSE: Areas in gold are identified as solar resource and the grey represents WECC risk class 3 that are identified as areas of exclusion. The overlap of gold and grey translates to an area of exclusion for solar since it is not an area of lower-implication lands.

RESPONSE: The WECC RC 3 essentially represents areas of higher importance for biodiversity. So areas remaining outside of WECC RC 3 can be considered for possible energy development (or prioritized for energy development rather than other land uses, if you will).

RESPONSE: And so golden areas outside of the grey are lower implication lands, which are relatively better suited for energy development according to our landscape level data.

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QUESTION: Under the CAISO's IPE process, projects will be funneled to where TPD exists now. How does the process capture potential commercial interest in merchant areas or where no TPD currently exists?

RESPONSE: We appreciate if you can put your thoughts on this in your written feedback

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QUESTION: What is the confirmed date for power delivery of California offshore wind? Kelly Boyd, Senior Policy Director at Equinor stated at the December 11, 2024 Power Association of Northern California meeting that California offshore wind projects are not expected to deliver power till June 2037.

RESPONSE: We are monitoring offshore wind availability and will make additional updates to the modeling assumptions as needed. Please provide this feedback in your written comments.

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QUESTION: Will  you please remind us how you intend to incorporate the impacts of federal policy/DOI memos?

RESPONSE: Hi Hillary, pls could you share a bit more on this? Seems you're referring to material we've shared in the past but I'm not sure.

FOLLOWUP: I am referring to recent guidance from DOI that restricts solar and wind development in areas with a nexus to federal land.  Sorry if I missed earlier discussion on this.  I am assuming this is very recent data that you are still trying to figure out how to incorporate?  Thanks.

RESPONSE: Please provide any specific DOI guidance in written comment. Additionally, the CEC Protected Area Layer does include information from the Bureau of Land Management, so the CEC slide deck provides some context.

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QUESTION: Will fire threat be considered as a factor when selecting potential transmission upgrades, not just siting of renewable projects? If not, could this be done for consistency?

RESPONSE: For this busbar mapping process, we factor in fire threat as a part of land-use feasibility criteria which impacts priority areas for mapping and could lead to transmission upgrades. The final transmission plan with transmission upgrades is put together by the CAISO utilizing busbar mapping and its seven criteria as a key input.

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QUESTION: Will the scoring of busbars based on PTO feedback be made public?

RESPONSE: Once finalized, the interconnection feasibility criteria will be incorporated into the next Methodology document. The final scores by busbar will be reported in the Busbar Mapping Dashboard.

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QUESTION: Will these updates to resource assumptions/potentials be reflected in an updated IRP I&A document?

RESPONSE: Yes, staff propose to include these in the final I&A document

FOLLOWUP: Neil, when do you expect that will be available? Assuming it's not before the 9/5 date for requested informal comments, will parties get another chance to comment on the I&A document?

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QUESTION: One of your slides showed an example analysis for one of the [PSH] regions. Can you share the spreadsheet that has all of the regions? Did you remove any of the NREL potential projects locations based on conflicts with the other mapping criteria?

RESPONSE: Response pending.

QUESTION: When will the updated land use screen maps be available so we can see the effect of the changes?

RESPONSE: Response pending.

QUESTION: Would anyone on your team provide a more complete explanation of how you are proposing to use EIA 860 data on major maintenance? Is there a specific field that captures major maintenance? Is major maintenance defined by a $ threshold? If a plant experiences a complete turbine wreck and replaces the turbine, is the replacement considered major maintenance or reflected in 860 some other way? Does your prioritization treat this sort of replacement similarly to major maintenance?

RESPONSE: EIA-860, File 3-1 provides generator data on the date in which an uprate or derate was completed ("Uprate or Derate Completed During Year", "Month Uprate or Derate Completed", "Year Uprate or Derate Completed"). Staff have reviewed the previous 10 years of EIA-860 data and noted all generators that have completed an uprate or derate and assumed that those events represent major maintenance events. The age of the generator for the Performance Factor is equal to the lesser of (2025 – COD) and (2025 – Maintenance Year). Please provide feedback in the informal written comments on additional data or recommendations for identifying and defining major maintenance events for gas generators.