The development of renewable energy portfolios by the CPUC and Energy Commission for the California ISO's Transmission Planning Process is an evolving process. The development of the portfolios for the 2013/2014 Transmission Plan began in the CPUC's Long-Term Procurement Proceeding, continuing through the collaboration of the CPUC and Energy Commission. The portfolios were vetted with stakeholders earlier and more thoroughly than previous versions in 2011/2012 or 2012/2013. The earlier development of and release of the draft portfolios would have allowed for significant changes if warranted by stakeholder comments. Although, stakeholder comments on the 2012/2013 portfolios resulted in major changes between the draft and the final versions, stakeholder comments on these portfolios were much less extensive – consisting mostly of recommendations to improve the assumptions used in the RPS calculator and of requests for technical clarification – as such, they have not resulted in changes to the portfolios.

Fifteen different stakeholders filed comments on the draft scenarios:

- BAMx
- Cal Farm Bureau Federation
- City and County of San Francisco
- Clean Coalition
- Clean Line Energy Partners
- Large-scale Solar Association
- Sempra Us Gas and Power
- Nye County
- Pathfinder Renewable Wind Energy and Zephyr Power Transmission
- PG&E
- Princeton Energy Group
- SDG&E
- Sierra Club and Defenders of Wildlife
- Startans IO
- Valley Electric Association

Comment	CPUC and Energy Commission Response
Standard rating for farmland and military bases needs to be updated: a "50" rating for some farmland may not be appropriate; a "25" rating for some military lands may also not be appropriate because that land may include high quality habitat.	Ratings were not standardized where specific project locations were known. In conjunction with general regional scoring, Google Earth was used to rank all specific project sites on farmland and military sites for ground disturbance and current site usage. Appropriate Department of Conservation prime farmland overlays and habitat protection areas were also incorporated into the evaluation of project sites. There are currently 294 projects in the discounted core. The base case/environmental portfolio requires 518 projects to fill the 32,184 GWh net short, meaning that 224 non-discounted core projects (from the GenericProjData tab) get pulled in by the calculator. The GenericProjData tab consists of 1914 projects, of which 860 projects have an environmental score that is lower than "50". Increasing the environmental scores of some of the projects currently scored as 50 would therefore not change the outcome of this run, since there are over 600 additional projects that the calculator would currently pull in first before pulling in any project which may have a debatable environmental score of 50. The scores will be reevaluated for the next model update.
Environmental scoring outside the DRECP should be refined	Some lack of clarity exists as to the scoring of disturbed lands outside the DRECP due to some language in the scoring presentation. Disturbed lands outside the DRECP are also assigned an environmental score of 20. Specific scores can be checked in the RPS calculator, but this scoring of disturbed lands outside the DRECP is demonstrated by the environmental portfolio, which indicates 1,285 MW in the Westlands CREZ versus 148 MW in the commercial Interest portfolio. We will clarify the scoring presentation.
The calculator should incorporate latest DRECP information	Updating the environmental data is a major undertaking and will not be done for the 2013/2014 portfolios. The most recent interim report will be incorporated into the calculator in order to develop the portfolios for the 2014/2015 TPP. The Energy Commission and CPUC will work with CAISO to explore a schedule for future portfolio development that allows for the most updated information possible for the portfolios.
The RNS should be updated to reflect changes since the August 2012 Project Development Status Reports (PDSRs)	The specific project information in the RPS calculator is largely informed by each of the large investor owned utilities' August 2012 PDSRs, which are filed with the CPUC twice yearly. We acknowledge that the status of some projects may change during the course of the RPS portfolio development process; however, we do not find it appropriate to change the information related to individual projects on an ad hoc basis. If an update occurs, the status of all projects should be updated. Furthermore, the yearly schedule of the TPP ensures that new information regarding projects will be integrated into the next RPS portfolios within a year. Energy Commission and CPUC will work with the CAISO to explore a schedule for future portfolio development that allows for the most updated information possible for the portfolios.

Need to provide a better description of the RNS calculations and assumptions	The list of projects included as operational for the net-short calculation has been posted to the CEC website. (http://www.energy.ca.gov/2013_energypolicy/documents/index.html). RAM and PV Programs, that were operational as of 12/31/2012, are included in the Energy Commission's calculation of operational generation as listed by each projects name in the spreadsheet provided in the above link. Also, the CPUC 2012 LTPP calculation of RNS (that is the basis for the 2013/2014 TPP renewable portfolios) already included an additional 1,109.7 GWh of RAM/FIT resources in the calculation of operational generation – this figure was updated to 1,319 GWh in the TPP, which reflects the availability and incorporation of better data. The 32,796 GWh renewable net short that is used in the TPP derives from base case scenario of the 2012 LTPP. The 2012 LTPP base case scenario assumptions are based off the 2011 EIPER.
Is the POU renewable procurement information up to date?	The list of projects (http://www.energy.ca.gov/2013_energypolicy/documents/index.html) included as operational for the net-short calculation has been posted to the CEC website. POU projects operational as of 12/31/12 have been incorporated into the calculation of the renewable net-short.
Assumptions about out-of-state renewable are out of date and not consistent with assumptions about in-state renewables	We recognize that there are inconsistencies with in-state renewables assumptions and those for out-of-state resources. Updating the out-of-state assumptions is a major undertaking that will be done for the next set of portfolios.
Why does the VEA (El Dorado CREZ) have fewer MW for the 2013/2014 TPP than it did for the 2012/2013 TPP?	The MW available in the VEA have not been reduced significantly since the release of the 2012/2013 portfolios. The 2012/2013 "commercial interest" portfolio indicated 400 MW for the El Dorado CREZ, while the "environment" and "high DG" portfolios indicated zero MW. All three of the current portfolios for the 2013/2014 TPP indicate 407 MW for the El Dorado CREZ. (The 2012/2013 Portfolios are available by clicking on "5/16/12 Portfolio Transmittal Letter" link at http://www.cpuc.ca.gov/PUC/energy/Procurement/LTPP/2012+LTPP+Tools+and+Spreadsheets.htm)
The transmission assumptions are not clearly explained or documented	**Merced upgrade** includes the Bellota- Warnerville 230 kV line (reconductoring) and the Wilson – Le Grand 115 kV line (reconductoring). **Kramer upgrade** would be the SCE South of Kramer project which includes a new Coolwater - Lugo 230 kV Line or a similar project. **Los Banos upgrade** is the Los Banos- Westley line.

What is the origin of 1,500 MW of transmission capacity for Westlands?	Transmission capacity in the Westlands area has been largely committed to renewable and conventional generator interconnection requests. The renewable generators could clearly be part of the 1500 MW, and some of the conventional generators have been languishing in the California ISO Interconnection Queue for many years with little progress towards construction/operation. If these conventional projects are not interconnected then the transmission capacity is available for other resources.
A high load forecast should be analyzed	Looking at varying loads only affects the net-short as far as the construction of the portfolios goes. Given the limited number of renewables portfolios that the CAISO can analyze each year, analyzing small changes in loads would not create a significantly new scenario while significantly increasing the amount of DG can.
Baja renewables do not appear to be incorporated into the porfolios	The MW for the Baja CREZ may now be zero because one project located in Baja (Energia Sierra Juarez) interconnects directly to the CAISO via SDG&E's ECO substation, which is in the Imperial CREZ.
Some parties have argued that the cost-constrained case should be studied as the base case since the commercial interest case is "significantly" more expensive than the commercial interest case.	Although cost is a very important factor to both the Energy Commission and the CPUC, we believe that the "commercial interest" portfolio provides the best approximation of the renewable resource development future of California. The renewable market has matured considerably and a high commercial interest score is a strong indicator of potential project success. Additionally, California's three large investor owned utilities are essentially fully contracted for 33% RPS by 2020 on a risk-adjusted basis. Therefore, we find it reasonable to recommend the "commercial interest" portfolio as the base case. The environmental and high DG portfolios were selected for study as alternatives because they strongly reflect current policy mandates in California. The agencies prioritized three portfolios because of the resource intensive nature of the portfolio study process.
Cost assumptions should be updated	The CPUC and Energy Commission will review the cost assumptions of the varying renewable resources and may update the costs for the next generation of the calculator and portfolios. If such an update occurs, the agencies will ensure that stakeholder will have an opportunity for review and comment. The cost scores embedded in the RPS calculator, however, provide a good indication of the relative costs of renewable projects associated with these portfolios.
The portfolios for the 2013/2014 TPP should include findings from the 2012/2013 TPP	Unfortunately the timing of the two processes do not allow for integrating the results of the 2012/2013 TPP Portfolios. The CAISO will not issue the final 2012/2013 TPP until March 2013, while the TPP portfolios were developed starting in the Fall 2012 and will be delivered on February 7, 2013. The Energy Commission and CPUC will work with the CAISO to explore a schedule for future portfolio development that allows for the most updated information possible for the portfolios.

The 67% discounted core assumption for inclusion of transmission needs to be explained better and the number should be justified.	Our understanding is that this assumption has been discussed with stakeholders in workshops and other settings. As discussed in workshops in the 2012 LTPP, results are not sensitive to small or moderate changes to the 67% value. In order to impact the results in the proposed portfolios the value must be significantly reduced to affect portfolio results. The intent of the 67% test is to avoid assuming that a transmission project is a fully committed decision solely on the basis of a "small" portion of discounted core generation. Note that a transmission project that fails this 67% test may still be included in a portfolio if the weighted scores of the generation projects in that CREZ are competitive relative to other possible generation projects. The test operates as follows: i. Any discounted core generation projects that can "fit" on existing transmission are included in the portfolio. ii. All generation projects that require new transmission are grouped into "transmission bundles" by CREZ. iii. The 67% test is applied: 1. Transmission bundles that have at least 67% of their energy from discounted core generation projects are included in the portfolio. These have "passed the test". 2. Transmission bundles that have less than 67% of their energy from discounted core generation projects may compete against other individual generation projects and other transmission bundles. iv. The model proceeds to rank all remaining transmission bundles and individual generation projects. The best ranked bundles and projects are included, until the renewable net short has been reached. The 67% value has been used for this purpose since the original creation of the 33% RPS Calculator. The 67% value represents a judgment that if 2/3 of the deliverability capacity of a transmission line will be used by discounted core generation, then that transmission project should be viewed as committed. Note: decreasing this 67% threshold to as low as 0% would not change the outcome of new segments required under the commercial interest portfolio and the high DG portfolio. The 67% threshold would need to decreased to 32% before an additional transmission segment would be required under the environmental portfolio.

The portfolios should align better with the LTPP, especially the replicating TPP scenario in the LTPP	The renewable portfolios from LTPP do inform the TPP portfolios. The portfolios are essentially the same besides limited updates and minor variance to account for the different load profiles of each scenario. The Base and Replicating TPP scenarios use the "commercial interest" portfolio, while the High DG + High DSM scenario uses the "high DG" portfolio. (See Decision adopting Long Term Procurement Plans Track 2 Assumptions and Scenarios, D.12-12-020, p. 30-32). The limited updates include: (1) the updated environmental scores from the Energy Commission and (2) the impacts of SB 1122. The updated scoring was not available in time for inclusion in the portfolios used for the LTPP. SB 1122 was not signed into law in time for inclusion in the portfolios used for the LTPP scenarios, but was state law by the time the TPP portfolios were being developed. SB 1122 is state law, therefore it <u>must</u> be reflected in the portfolios. All three renewable resource portfolios use the same RNS, which is based on the LTPP's base case scenario. The TPP only studies the renewable resource portfolios based on one load forecast. The renewable resource portfolios developed for the TPP are based on the load forecast in the LTPP's Base scenario, which represents the most accurate approximation of the renewable resource stack that will be necessary to achieve 33% RPS under each portfolio. The yearly TPP process allows for a frequent update to the renewable resource stack. It should be noted that the portfolios are not based on a low load either, despite the inclusion of the High DG + High DSM scenario in D.12-12-020.
The Environmental case includes too many generic resources	The purpose of the environmental case is to examine the transmission impacts of environmental policies that push renewable resources into environmentally preferred areas. Named projects that aren't in preferred areas would not be included in the environmental portfolio and therefore we would expect an increase in generic projects.
Should include a stress case that identifies transmission needed for each CREZ	The CAISO is doing this as part the new Generator Interconnection and Deliverability Procedures. It may not align with the CREZ but is more based on interconnection cluster groups.