

Comments of the California Wind Energy Association on the Draft California ISO 2010-11 Transmission Plan Released March 24, 2011

April 20, 2011

The California Wind Energy Association (CalWEA) appreciates the opportunity to comment on the draft California ISO (CAISO) 2010-11 Transmission Plan (Version 1), released March 24, 2011. Before discussing the specifics of our comments and without regard to the merits of the approach used or the results of this transmission plan, we would like to acknowledge the herculean effort undertaken by the CAISO in preparing this plan. CAISO's work was further complicated by several major challenges including:

- This is the first CAISO transmission plan prepared under the recently FERC-approved CAISO Revised Transmission Planning Process (RTPP) tariff. The new methodology for planning policy-driven upgrades and coordination of the same with planning transmission for other needs (namely, reliability, economics, and long-term congestion revenue rights) makes the task especially difficult and complex.
- The CAISO had to develop this first RTPP-based transmission plan in the context of extensive transmission upgrades being developed as part of the Generation Interconnection Process (GIP) that is intended to interconnect large clusters of specific renewable resource projects, some of which are already under development to address California's RPS goals.
- The CAISO had to deal with processing numerous transmission proposals by Independent Transmission Companies (ITCs) without having clear tools or methods for coordinating and converging such proposals with the remaining components of its transmission plan.
- There is still a lack of clarity as to where CAISO's transmission planning authority stands vis-à-vis that of its Participating Transmission Owner (PTO) members. While these roles are becoming more and more clarified on paper, CAISO still essentially acts as the coordinator for the disparate transmission planning efforts of its member Participating Transmission Owners (PTOs).

Below, CalWEA presents its comments on the CAISO 2010-11 draft transmission plan in consideration of these challenges. Our comments are all high-level and are intended to address RTPP methodological issues going forward into the next cycle. All of our specific comments (attached) presented in response to an earlier version of the CAISO 2010-11 transmission plan, which express our disappointment that the RTPP's objectives will not be met in this cycle, still stands.

Comments on RTPP Methodological Issues

Our biggest concern with the draft CAISO 2010-11 transmission plan is with its approach. The plan is not a regional plan based on the principles of “Least Regrets Transmission Planning (LRTP)”, under which an efficient set of transmission upgrades would be developed to optimally address the various transmission needs in the CAISO’s footprint while improving transmission access under a number of potential renewable energy development scenarios. Instead, the transmission plan is an amalgamation of projects developed and proposed by the CAISO’s PTOs, and in one case by a neighboring Balancing Authority (BA). These plans were developed through a number of disconnected processes, mostly in separate GIP studies. The document then attempts to justify the assembled package as a planned effort. Effectively, CAISO attempts to demonstrate that the renewable energy resources potentially accessed by these piecemeal upgrade plans add up to sufficient capacity to meet the state’s 33% RPS objective in 2020. This essentially GIP-based approach turns the least-regrets approach – which should foster competition among a wide swath of potential renewable energy resources -- on its head.

Given the challenges noted in our introductory remarks, above, we hope that the situation will improve for the next round of the RTPP. Toward that end, we offer the following suggestions for more meaningfully implementing the RTPP next year:

- Rather than attempting to “coordinate” Phase 2 of GIP with the RTPP process, CAISO should literally merge Phase 2 of GIP into the RTPP process – a solution that we have long advocated. The upgrades needed for Phase 2 of GIP and the policy, economic, reliability and long-term CRR needs of the CAISO footprint should be optimally and centrally developed as part of a single FERC Order-890-compliant transmission planning process. Unless and until this merge is accomplished, CAISO will have to continue to slap together piecemeal transmission solutions developed as part of disjointed planning processes.
- Rather than relying on a single base case in developing a transmission solution, CAISO should focus on developing the processes and procedures for planning a least-regrets transmission plan based on reasonably viable resource development scenarios developed by a state agency such as the CPUC or based on the CAISO’s GIP queue. We will broadly offer one such approach below.
- The CAISO should be very cautious in using any environmental scoring. The state-federal, multi-agency Desert Renewable Energy Conservation Plan (DRECP) was launched in recognition of the need for a much more sophisticated scientific evaluation of the environmental sensitivities in California’s vast desert region (where the large majority of the state’s renewable resources exist) than was possible to accomplish in the

RETI process. Instead of using RETI's relatively crude environmental scoring or any similar short-cuts, the CAISO should await the final results of the DRECP, which will be completed by the end of 2012 (with a preliminary conservation strategy due out in August 2011) and discuss with stakeholders the best way to reflect the DRECP results in transmission planning efforts. Meanwhile, given that all of the CREZs that were identified in the RETI process and used for RETI's transmission studies passed a number of environmental screens, if the CAISO needs to add or adjust CREZs for its own analysis, it should do so based on economic criteria (as did, the CAISO noted, the CPUC).

In the following we present additional comments that we believe can help make the next round of the RTPP process more successful.

Least-Regrets Transmission Planning

CalWEA has previously proposed what would be the foundation of an effective least-regrets transmission planning process. Unlike CAISO's stated approach, a least-regrets process should not involve developing a single base case resource development scenario based on selected criteria however valid such criteria may be. Working from a single base case scenario will lead to a specific transmission solution favoring specific and pre-determined development areas, which is not least-regrets transmission planning. Testing such a specific transmission plan to see if it somehow helps the sensitivity cases that were developed alongside the base case scenario does not transform the identified transmission plan into a least-regrets transmission plan, it simply obscures its shortcomings. Any renewable resource development scenario, regardless of the criteria and the care used to develop it, is based on numerous assumptions; short of a perfect crystal ball, a single scenario will lead to stranded transmission investment.

Instead, the focus of least-regrets transmission planning should be on treating every viable renewable resource development scenario as an "independent base case" for which a transmission plan is independently developed. Common transmission upgrades among two or more of these transmission plans would comprise the candidate least-regrets transmission plan. These upgrades are likely to be regional/backbone transmission projects such as the Tehachapi, the Sunrise, or Colorado River-Devers-Valley projects that facilitate interconnection of many potential renewable resource development areas. Of course, it is critical that in developing transmission solutions for individual base cases, one focuses on developing regional rather local solutions when dealing with the transmission system needs. Only in this way will it be possible to develop common transmission upgrades across multiple development scenarios.

Dispatch Scenario

One of the most contentious issues with development of the snapshot study cases used for typical transmission planning studies is the mechanism for generation dispatch – how existing generation in the Western Electricity Coordinating Council (WECC) should be dispatched down as new renewable generation is added and dispatched. Much to its credit, the CAISO has developed a logical process for determining such a dispatch among generation resources. The CAISO process re-dispatches existing resources through the results of production simulation studies. However, it appears that, in running such models, the CAISO does not account for the fact that many of the system dispatch decisions will be heavily impacted by the long-term bilateral agreements that overwhelmingly dominate electric power transactions in the entire WECC footprint in general and in California in particular. Hence, we recommend that the CAISO at least account for known bilateral transactions when running its production simulation models to determine the generation dispatch used for snapshot study cases used for typical transmission planning studies.

Substitute Low-Cost Transmission Upgrades and Operational Remedies

The CAISO must be congratulated for its effort to find lower-cost and shorter-lead-time transmission solutions as well as operational measures, including congestion management and Special Protection Schemes (SPS), as a replacement or an interim step for more expansive and long-lead-time transmission upgrades that are initially proposed as part of any one of its transmission planning processes. There are numerous such examples as part of reliability and economic upgrades and at least one example in the GIP. We are, however, at a loss as to why such low-cost, yet effective, transmission and operational solutions are so seldom considered as part of the original GIP study. We believe such a practice will allow more renewable resources to interconnect sooner and the major transmission upgrades to be optimally developed as part the RTPP process with consideration of all transmission system needs.

Locationally Constrained Resource Interconnection Facility (LCRIF) Development by non-PTOs

Among many proposed transmission projects by non-PTOs, there are two LCRIF projects. Based on our understanding of the needs of the renewables industry, we believe that the CAISO should allow non-PTOs to propose and build LCRIF facilities in order to mitigate the cost and the environmental impacts of many projects building their own separate gen-tie lines into the same CAISO-controlled substation.

Documentation of the Cost of All Categories of Transmission Upgrades

CAISO has carefully compiled and presented the cost of individual reliability transmission projects and ITC-proposed projects in its draft 2010-11 transmission plan. While we clearly understand the CAISO's reasons for doing that, we are concerned that there is no mention of the costs of other transmission upgrades, GIP or policy-based upgrades, in this report. We believe this information will be very useful and educational for the stakeholders and can help steer the overall thinking towards the most efficient and cost-effective transmission solutions for the CAISO footprint.

Transmission Project Proposal Categories

In its draft 2010-11 transmission plan, the CAISO has limited the categories for the projects proposed in the request window to only reliability projects, merchant projects, LCRI projects and projects proposed to maintain the feasibility of long-term CRRs. Given that transmission project proposals are only of an advisory nature and will be used only to identify the potential need for transmission upgrades, CAISO should not limit the categories under which transmission projects can be proposed.

ATTACHMENT

**Comments of the California Wind Energy Association on the
California ISO Conceptual Statewide Transmission Plan**

February 17, 2011

The California ISO's (CAISO) 2010/2011 Conceptual Statewide Transmission Plan, Revised February 1, 2011, represents a disappointing effort that fails to meet the spirit or objectives of the Revised Transmission Planning Process (RTPP). The California Wind Energy Association (CalWEA), therefore, is submitting these comments to identify three key flaws in the draft plan, and to request that the CAISO take corrective steps to revise the draft with a renewed focus on meeting RTPP's objectives.

First, the draft plan fails to comply with either the spirit or fundamental objectives of the RTPP, which was envisioned as a major, forward-looking, overhaul of the CAISO's transmission planning process. The central element of that reform was least regrets planning to identify critical cost-effective backbone "policy" upgrades to the transmission network to facilitate the integration of renewable generation objectively, and without preference to favored zones. The CAISO enthusiastically endorsed the least regrets approach to address the need for "an unprecedented amount of additional transmission over the next decade" in order to meet the 33 percent RPS by the 2020 target and to "take a more comprehensive, holistic approach to transmission planning and approval, rather than the current project-by-project approach," while minimizing the risk of stranded transmission investment.¹

For these reasons, the CAISO repeatedly assured California stakeholders, regulators and the FERC that the least regrets model would form the cornerstone for all new transmission plans. Indeed, FERC accepted the CAISO's RTPP tariff on the basis of promises that the CAISO will use a "series of engineering sensitivity studies . . . to identify a common set of transmission elements that are needed under the renewable scenarios most likely to occur."² Moreover, the CAISO promised FERC that it "will share with stakeholders the complete scenarios examined, with an explanation as to the underlying assumptions for each one and the rationale for proposing particular transmission elements in Category 1 and Category 2."

The draft plan does neither. The draft offers no evidence that any of the transmission elements proposed in it emerged from a "series of engineering sensitivity studies" to identify new upgrades. The plan does not appear to identify a single new transmission project, but instead collected a number of previously identified projects proposed by the Participating Transmission Owners (PTOs) and Publicly Owned Utilities (POUs). The CAISO has not provided stakeholders with "the complete scenarios examined" to select these projects, nor has it "explain[ed] the underlying assumptions for each one." The CAISO has, therefore, neither met its commitments, nor produced a plan that achieves the regional, least regrets objectives of RTPP.

¹ California Independent System Operator Corporation, Revised Transmission Planning Process Proposal, Filed June 4, 2010 (FERC Docket No. ER10-1401-000).

² *California Independent System Operator Corp.*, 133 FERC ¶ 61,224, PP 191-92 (2010).

Second, the failure to follow the least regrets approach is most clearly revealed by the failure of the draft plan to address one of the most obvious and pressing needs for backbone transmission in the state—transmission to eliminate north-south constraints and facilitate the delivery of new renewable generation mostly located in the south to consumers in the north. Since the CAISO has failed to share the details of the scenarios that it examined in developing its draft plan as it promised to do, there is no way to tell why the CAISO ignored these glaring needs.

The CAISO appears to have proceeded down this erroneous path because it focused on a series of single predetermined base cases studied separately to develop the individual projects in its conceptual plan. The CAISO explains at page 2 of the Draft Conceptual Plan that:

This conceptual statewide plan reflects the ISO’s conceptual vision regarding the transmission upgrades and additions that may be needed within the ISO footprint based on, among other things, the ISO’s base case assumptions, studies of several sensitivity scenarios, other studies and analyses that the ISO has previously discussed with stakeholders at the December 2, 2010 public meeting and with its Board of Governors at their December meeting, as well as input from the CTPG process.

This approach is contrary to the principles of least regrets and regional transmission planning, which require developing several well-conceived sensitivity scenarios to be developed and treated as "independent base cases" with transmission plans separately developed for each. The development of a transmission solution for each independent base case would also be based on a framework that is different from the traditional transmission planning framework where transmission solutions to deal with system needs are mainly based on local upgrades. Following a traditional approach of developing local upgrades, it will be very difficult to develop common transmission components that form a “least regrets transmission plan.” Instead, in a least-regrets planning framework, every individual base case is addressed using, to the extent practicable, a regional transmission plan that may appear to be more costly than a local solution. Once the regional solution for each of the “separate base cases” is reached in this fashion, the cross section of regional transmission solutions will constitute the regional least regrets conceptual transmission plan.

Third, the CAISO’s draft plan, summarized in its table reproduced on the following page, fails to identify a single new “policy” upgrade, which was a major goal of RTPP. The transmission elements in the CAISO’s plan for the most part consist of previously considered transmission projects to transmit power from renewable or other generation, some located in peripheral portions of the grid. And while the plan does include a few major backbone projects, not one of those is a new policy upgrade. Instead, each of them is a line that has been in development by PTOs for some time –several years in some cases. As a result, the draft plan offers no opportunity for new PTOs to contribute potentially more economic solutions to California’s long-range transmission needs, which was another important goal of the RTPP. While this approach may provide a boost for the existing transmission plans of current PTOs and POUs, it forecloses new entry for true policy upgrades that lie at the heart of least regrets planning.

Balancing Authority	Area	Transmission
ISO	San Diego	Sunrise Powerlink
ISO	S. Nevada-East of Lugo area	Coolwater - Lugo 230 kV line
ISO	S. Nevada-East of Lugo area	EITP (Eldorado - Ivanpah 115 to 230 kV conversion)
ISO	S. Nevada-East of Lugo area	Eldorado - Lugo 500 kV line loop-in to the new Pisgah 500 kV substation and Pisgah - Lugo 230 kV to 500 kV conversion
ISO	East of Palm Springs area	New Colorado River and RedBluff 500 kV substation, PVD 1 loop-in to Colorado River and RedBluff, and second Colorado River- RedBluff - Devers -Valley 500 kV line
ISO	East of Palm Springs area	West of Devers 230 kV reconductoring
ISO	Tehachapi area	Tehachapi Renewable Transmission Project
ISO	Path 26 area	Carrizo - Midway sections of Morro Bay - Midway 230 kV lines reconductoring
ISO	San Francisco Bay area	South of Contra Costa reconductoring
ISO	Path 15 area	Borden - Gregg 230 kV line reconductoring
ISO	Imperial County	Upgrades west of Mirage substation to increase transfer capacity on Path 42 and west of the Miguel 500 kV substation
ISO	San Joaquin Valley Area	Upgrades to increase utilization of Helms pump storage facilities for integrating renewable energy resources
LADWP	Tehachapi area	Barren Ridge-Haskell 230kV Lines
LADWP	Tehachapi area	Barren Ridge-Rinaldi 230kV Line (upgrade)
LADWP	Out of state	Southern Transmission System (IPP DC line) Upgrade
IID	Imperial County	Upgrades east of Mirage substation to increase transfer capacity on Path 42
IID	Imperial County	Midway to Bannister Transmission Project
IID	Imperial County	Dixieland-Imperial Valley Substation Transmission Project
IID	Imperial County	Highline Substation to El Centro Switching Station (ECSS) Transmission Project
IID	Imperial County	Imperial Valley Substation (IV Sub) to El Centro Switching Station (ECSS) Transmission Project.

Moreover, the draft plan fails to show how it will provide access to new renewable resources in a competitively neutral way that minimizes the risk of over-building and stranded investment. Indeed, several of the elements in the plan have obtained assurances from FERC for abandoned plant cost recovery in the event the renewable projects behind them fail to materialize. While the abandoned plant incentive serves important policy goals in appropriate circumstances, the point of least regrets planning is to identify new high-priority backbone transmission lines that are

likely to be used and useful for utility service under a variety of development scenarios. Adhering to this principle in the RTPP study process would, therefore, greatly reduce (if not eliminate) the need for an abandoned plant backstop for important elements of the plan.

Beyond these key conceptual flaws with the draft plan, it appears to suffer from several technical flaws. For example, CAISO has not verified whether the transmission projects identified in the table above can even fit together in a coherent “plan,” or comply with NERC and WECC planning and operating standards. For example, we are concerned that the “S. Nevada-East of Lugo area” project described as “Eldorado - Lugo 500 kV line loop-in to the new Pisgah 500 kV substation and Pisgah - Lugo 230 kV to 500 kV conversion,” may not satisfy reliability criteria without upgrading the existing 230 kV lines from Eldorado to Pisgah to 500 kV lines.

Finally, the CAISO’s rationale for the plan it has presented appears to be misguided. The CAISO explains that (page 1):

The ISO’s own analyses indicate that this ISO conceptual statewide plan includes enough new transmission additions, both within the ISO footprint and in the footprints of certain other California BAAs as discussed below, to accommodate the addition of 53.7 TWh of renewable energy to serve California load by the year 2020. (Draft Conceptual Plan, p. 1, footnote omitted.)

This position indicates that a set of transmission projects that mainly serve a limited set of renewable development projects (and areas) should dictate where renewable generation should be developed in and around the state. This is a case of “letting the tail wag the dog” and flies in the face of Least Regrets principles. Such an approach to the development of “policy-driven” transmission projects will lead to: (a) development of more costly and potentially more environmentally harmful renewable resources in the limited development areas served by these “pre-ordained” transmission projects, and (b) transfer market power to renewable developers in these limited development areas. Both these outcomes can be expected to potentially and significantly raise the cost of meeting the state’s RPS goals, rather than identifying a transmission plan that is common to many potential renewable energy scenarios that would open the market to multiple possible outcomes.

Given its failure to meet FERC’s expectations of the RTPP, we strongly recommend that the CAISO return to the drawing board to re-conceive its conceptual transmission planning process and develop a new plan.