



via electronic mail

October 22, 2012

Mr. Neil Millar
California Independent System Operator
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Dear Mr. Millar,

This letter contains Sierra Club's comments on the California Independent System Operator's (ISO's) 2011/2012 Conceptual Statewide Transmission Plan Update/2012/2013 Transmission Planning Cycle, dated September 28, 2012 (the "Conceptual Plan" or "Plan").

The Sierra Club is a national nonprofit organization of approximately 1.3 million members and supporters dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth's ecosystems and resources; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The Sierra Club's concerns encompass protecting our public lands, wildlife, air, and water, while at the same time rapidly increasing our use of energy conservation, efficiency improvements, and renewable energy.

Our engagement in the transmission planning process is based on an interest in ensuring that renewable energy development occurs thoughtfully and sustainably. The Sierra Club believes it is important for the ISO to incorporate California's full suite of relevant energy and climate policies and programs into transmission planning. In addition, Sierra Club would like to ensure that all state energy agencies use consistent, valid methodologies and assumptions for determining energy resource needs. This coordination is necessary if California is to meet its climate protection and energy policy goals, while avoiding unnecessary costs and protecting the natural environment that the climate and energy policies are intended to benefit.

A. The Net Short is improperly applied and results in gross over-estimation of the need for new transmission capacity for the RPS program.

Although we are pleased to see the ISO coordinating with other state agencies to use a consistent value for the Net Short for transmission planning purposes, there appears to be

a fundamental misunderstanding in terminology. Based on our reading of the Plan, the ISO seems to be conflating the amount of additional renewable energy necessary to meet California's RPS goals—which is what the CPUC value provides— with the amount of new transmission capacity that will be needed to deliver that renewable energy.

To this point state agencies have not created a clear and consistent terminology to differentiate these two values. We urge the ISO, both in this transmission planning cycle, and going forward, to clearly and explicitly distinguish between the concepts of the "Renewables Net Short"—the amount of renewable energy needed to meet the balance of the state's RPS policy goal, and the "Transmission Net Short"¹—the amount of the Renewables Net Short that requires new transmission. Failure to do so will result in a drastic overestimate of the amount of new transmission capacity that is necessary for meeting the RPS. This in turn undermines the policy objectives by making it appear that transmission is far larger a barrier than it actually is, by imposing excessive costs on California's customers for unnecessary transmission lines, and by impacts to sensitive animal and plant species through direct take and habitat loss.

In this instance, the ISO appears to have taken the CPUC's most recent 2012 LTPP calculation of 43.8 TWh (43,800 GWh) for the Renewables Net Short, and used this as a baseline assumption regarding transmission needs. However, this value is the Renewables Net Short, developed by the CPUC without analyzing transmission needs. The assumption that the Transmission Net Short equates with the Renewables Net Short is erroneous and is inconsistent with the methodology of other planning bodies—both RETI and the CPUC have assumed that a significant amount of the Renewables Net Short will be met with non-transmission alternatives. The ISO's "least regrets analysis" towards transmission planning as reflected in the Plan appears to conclude that all new renewables resources will require additional transmission capacity, either in the form of upgrades or new transmission lines. This assumption is not only erroneous, but ignores California's policy mandates, existing programs, and existing information regarding development and procurement patterns.

In three key instances the Plan fails to correctly analyze the effect of California state policies that reduce the need for transmission—and appears to consider California's 33% RPS goal as the only policy shaping California's transmission needs.

¹ The original net short calculation came from the RETI process, which used the term "RETI Renewable Net Short," to refer to the Transmission Net Short. RETI created a spreadsheet with line items that calculated the RETI Renewable Net Short, but designated it as "New Renewable Generation." The RETI calculation then subtracted "Misc. Other Generation" which included distributed generation and other renewables not requiring transmission. This calculation is omitted in the ISO analysis, despite substantive steps forward in developing and implementing state policies which provide MW valuations for these renewables not requiring transmission.

1. Renewable Energy Credits (RECs).

While the Plan uses the CPUC's LTPP calculation of the Renewables Net Short, it seems to ignore the CPUC's treatment of RECs or the real world market for RECS. California's RPS law explicitly allows up to 10% of renewable energy compliance to come from REC's—and the assumption that the IOUs (which pushed hard for a much higher ceiling on RECs, or no ceiling at all) would not utilize this ability to purchase RECs to meet their RPS targets is directly counter to both policy and real-world procurement patterns. Rather than relying on the statutory limit of 10% of RPS procurement, which would be about 4.3 TWh, the Plan gives a “zero valuation” to RECs.

RETI in its Net Short document noted that the CPUC had taken provisional action on RECs, but considered this to be “beyond the scope” of their net short analysis document.

“In December, 2009, the CPUC issued a proposed decision which, if adopted, would allow the use of tradable renewable energy credits (TRECs) for RPS compliance.²³ Discussion of TRECs, their use for RPS compliance, and implications for transmission planning is beyond the scope of this document. However, widespread use of TRECs could change estimates of needed new transmission capacity substantially. Entities involved in transmission planning should monitor the potential development and implementation of TREC policies and adjust plans accordingly in the future.”²

At this point, the state's policy on RECs is no longer provisional, and transmission planners should begin to take RETI's advice in earnest, and not continue to defer consideration of RECs. Sierra Club supported RECs because of the potential to avoid the cost, delay, and environmental impact of building new transmission. For the ISO to ignore this factor betrays all the fundamental reasons why this policy was adopted by the state. We urge the ISO to properly incorporate California's state policy on RECs when developing its Transmission Net Short—and, as RETI aptly stated—“adjust plans accordingly,” because the future RETI was referring to has arrived.

2. Renewable Distributed Generation (RDG).

Current Feed-in Tariff programs include SB 32 (750 MW), the Biomass FiT (250 MW), and the POU FiT programs of LADWP and SMUD that have at least 150 MW in excess of their SB 32 requirement. Additionally, the CPUC has implemented a 774 MW IOU PV program as well as the 1,199 MW RAM program. Combined, this amounts to over *3,100 MW* of programs that are likely to be implemented by 2016, and may be expanded by other RDG programs in subsequent years.³ These existing programs should generate about

² RETI Net Short Update, Discussion Draft, Jan 14, 2010, p. 10.

³ In part because of a need to focus on these programs to meet state energy objectives, overprocurement to date, and a recognition that large-scale remote renewables projects may face inherent risks not shared by smaller projects, Southern California Edison and San Diego Gas and Electric have each indicated they will not be holding a 2012 solicitation.

7 TWh per year. Moreover, the actual amount of RDG by 2020 could be significantly larger than this amount, given the Governor's policy of 12,000 MW.⁴

3. Offloading conventional generation will provide increased transmission capacity.

State policies regarding retirement of out-of-state coal contracts, and implementation of the RPS itself, will result in reduced claims on existing transmission by conventional power sources. This should free up transmission for physical delivery of RPS resources, even without constructing or upgrading transmission. This should increase over time as fossil fuel is offloaded from the transmission grid. For example, California plans to retire about 3,700 MW of existing out of state coal plants contracts, which should free up 3,700 MW of capacity for renewable energy either in the form of imports or on the in-state portion of these same lines.⁵

In 2010, RETI calculated that about 26 TWh of delivery capacity should be freed up by offloading conventional power from existing transmission lines.⁶ The ISO should provide analysis of the capacity that will be made available. In addition, there should be some estimate of the ability of existing transmission to carry renewables prior to offloading conventional power. It seems unlikely that this should, like ISO's other assumptions, also be zero, given explicit state policies with timelines, as well as the strong interest from renewables developers to access this transmission capacity. Furthermore, both RETI and CPUC have suggested that existing transmission already had capacity to deliver some renewables, even prior to the new upgrades. The ISO should quantify these values and show them as line item calculations for the Transmission Net Short.

The following table summarizes the net effect of existing state policies on the transmission net short:

⁴ The Sierra Club is actively advocating for 15,000 MW RDG at the CPUC.

⁵ A Preliminary Environmental Profile of California's Imported Electricity, Staff Report, California Energy Commission, June 2005, CEC-700-2005-017, p. 23. The table in the Energy Commission report shows a total of 4,973 MW of out of state coal plants under contract with California utilities, of which about 1,200 MW from the Mojave Generating Station have already been retired, leaving a balance of about 3,700 MW as of the beginning of 2012. SCE and LADWP have both announced planned divestiture of their shares of out of state coal plants between 2012 and 2015, and about 90% of the out-of-state coal capacity due to retire by 2020. The Sierra Club is actively working to ensure that these lines are filled with renewable generation.

⁶ RETI Net Short Update, Discussion Draft, Jan 14, 2010, p. 9.

Transmission Net Short Calculation			
		State Policy	CAISO Plan
		TWh	TWh
Renewables Net Short		43.8	43.8
Less Allowed RECs	10%	4.4	0.0
Less RPS Distributed Generation		7.0	0.0
Less Existing Transmission		4.2	0.0
Less Transmission Freed by 33% RPS		25.0	0.0
Transmission Net Short		3.2	43.8

In summary, whether the effect of existing state policies are accounted for—or not—leads to almost diametrically opposite conclusions regarding the state’s need for transmission in order to meet the 33% RPS. Thus, assuming that all of the RPS electricity requires new transmission capacity is very far from a “least regrets” approach, if the focus is moved toward the full range of effects of state policies.

B. Transmission Planning should properly incorporate information from the Desert Renewable Energy Conservation Plan.

We strongly support incorporating the land use assumptions and natural resource data developed in the Desert Renewable Energy Conservation Plan (DRECP) process into transmission planning, and hope that the ISO will include DRECP data into the 2012/13 TPP. This data will represent much more current ecological information and incorporates a more accurate environmental rating system than the RETI process, which, although never completed, appears to still inform the 2012/13 TPP through reference to CREZs.

However, we should also note that the DRECP is still very much a work-in-process, and the determination of which areas will be suitable for renewable energy is still in development. At this point, the Sierra Club would advocate that the ISO incorporate DRECP Alternative 1-Disturbed Lands/Low Resource Conflict, or Alternative 2—Geographically Balanced/Transmission Aligned development focus areas.⁷ These two development focus areas were identified by the DRECP agencies in July of 2012, and although neither alternative has been fully vetted biologically, they best represent the precautionary principle and a “least regrets” approach towards conservation of sensitive plant and animal species.

C. Comments on specific ISO transmission projects.

Sierra Club is concerned that over-building transmission projects could result in unnecessary direct costs to California’s customers as well as high indirect costs by guiding generation projects to sensitive and fragile locations through new transmission capacity. We support the ISO’s focus on upgrading transmission facilities rather than

⁷ Alternatives 1 and 2 can be found here: http://www.drecp.org/meetings/2012-07-25-26_workshop/background/Stakeholders_Briefing_Materials_08-07-2012.pdf

constructing new facilities as a properly applying the Garamendi Principles of transmission siting⁸:

- “(A) The utilization of rights-of-way by upgrading existing transmission facilities instead of building new transmission facilities, where technically and economically justifiable.*
- (B) The expansion of existing rights-of-way, if technically and economically feasible, when construction of new transmission lines is required.*
- (C) The creation of new rights-of-way when justified by environmental, technical, and economic reasons.*
- (D) The availability of cost-effective alternatives to transmission, such as energy efficiency measures and distributed generation.”*

However, we have concerns that a number of the ISO’s transmission projects identified in Table 2 of the Plan will guide generation projects to locations within the California desert with high ecological resource value, and do not adequately encourage development in other, less sensitive areas. Given the number of generation projects planned or under construction in the California desert, and the cumulative impacts these projects will have through loss of unique and irreplaceable vegetative and topographical features which provide necessary habitat to sensitive animal species, we encourage the ISO to proceed with caution, and determine which projects are truly necessary, before planning costly upgrades to such areas.⁹

- Preliminarily, we may have concerns with the Coolwater-Jasper-Lugo 230 kV line due to potential desert tortoise critical habitat.
- We also have potential concerns with the Eldorado-Lugo 500 kV line loop into the new Pisgah 500 kV substation, as the Pisgah substation is planned for a highly sensitive location.
- We have repeatedly stated our opposition to any development in the Pisgah Valley area in many forums (including state and federal litigation of the Calico project). Development in this highly sensitive location will have direct and serious impacts to the recovery of the Desert Tortoise and impact many other sensitive plant and animal species, including, but not limited to: Desert Bighorn Sheep, Golden Eagle and Burrowing Owl. We find it unlikely that additional generation projects will be located in this area due to high environmental conflicts, and request that the ISO remove this upgrade from its planning process entirely, rather than perpetuating uncertainty regarding generation capacity in this area.

⁸ Section 1005.1 of the Public Utilities Code requires the CPUC to consider these factors when approving new transmission.

⁹ We limited our analysis to those ISO transmission projects identified in Table 2 which have not yet obtained a Certificate of Public Convenience and Necessity.

- We are encouraged to see the ISO focus on the Central Valley, an area of lower habitat value that historically has been overlooked in transmission planning, and look forward to the Central California 2012/13 planning cycle study.
- We support the Borden-Gregg reconducturing, but ask the ISO to consider upgrades which would add more than 800 MW and to more fully utilize the generation capacity of the Westlands site—a project for which we have repeatedly stated our support due to high ecological benefits and insolation.
- We are supportive of actions to better utilize the renewable resources in the Imperial Valley and support the West of Mirage (Path 42 upgrades) but would like the ISO to consider upgrades which would allow more generation capacity to be transferred from this area.

Thank you for your consideration of these comments.

Sincerely,

A handwritten signature in cursive script that reads "Sarah K. Friedman".

Sarah K. Friedman
Senior Campaign Representative
Sierra Club

With copies to:

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