

In the matter of:

*2013 Integrated Energy Policy  
Report*

*(2013 IEPR)*

Docket No. 13-IEP-IE

WORKSHOP

RE: Transmission Planning and  
Permitting Issues

**Joint Comments of the California Consumers Alliance and the Clean  
Coalition regarding the Workshop on California and Western States  
Transmission Planning and Permitting Issues**

**Introduction:**

California Consumers Alliance and Clean Coalition appreciate the opportunity to offer the following joint comments on issues addressed in the Energy Commission's workshop.

The California Consumers Alliance (CCA) is an organization established for the purpose of providing consumers with access to the technical and analytical expertise and tools needed to fully and effectively participate in transmission planning processes. CCA supporters are electricity consumers who reside and work in the service territories of the State's Investor Owned Utilities (IOUs): PG&E, SCE, and SDG&E. The IOU's transmission facilities comprise a major portion of California's integrated high voltage electrical grid. CCA advocates for efficient, cost effective and environmentally sensitive solutions to the identified needs of the State's electrical grid.

The Clean Coalition is a California-based nonprofit organization whose mission is to accelerate the transition to local energy systems through innovative policies and programs that deliver cost-effective renewable energy, strengthen local economies, foster environmental sustainability, and enhance energy security. To achieve this mission, the Clean Coalition promotes proven best practices, including the vigorous expansion of Wholesale Distributed Generation (WDG) connected to the distribution grid and serving local load. The Clean Coalition drives policy innovation to remove major barriers to the procurement,

interconnection, and financing of WDG projects and supports complementary Intelligent Grid (IG) market solutions such as demand response, energy storage, forecasting, and communications.

At the introduction of the workshop, Commissioner McAlister stated, "It's all about getting responsible, well vetted projects done and delivering energy to meet our long term goals in a responsible stakeholder process." To the extent that projects are well vetted, and held responsible, we fully agree with and support the Lead Commissioner's introductory statement.

The decade since the initial establishment of California's RPS has given witness to remarkable developments in renewable energy, including significant and ongoing reductions in the costs of the generation and supporting technologies. At the same time extraordinary efforts by our government, energy agencies, and involved stakeholders have resulted in the compilation of a vast amount of information. Refinements in policies, procurement and infrastructure planning are guiding the way towards responsible, efficient, and cost effective methods of implementing our renewable energy goals. As a result, the task of identifying cost effective resources, and where they should be ultimately sited is becoming clearer.

We find the bullet points on Slide 2 of Tony Braun's presentation on behalf of the California Municipal Utilities Association to be a succinct summary of recent progress and points to topics that should now be prioritized. We request that the Commission account for Mr. Braun's summary in development of recommendations for the 2013 IEPR.

The CAISO efforts to overcome the challenges involved in its oversubscribed interconnection queue, and integration of its GIP and TPP are also laudable. The improvements that CAISO has put in place are leading to more realistic and reasonable assumptions regarding network upgrades--highlighting the importance of transparent and refined assessment of projects in the procurement proceedings before the CPUC, and correspondingly, in CAISO management of its interconnection queue and the transmission planning process.

We recognize that the May 7 2013 workshop primarily intends to address the *Renewable Action Plan, Strategy 3: Minimize Interconnection and Integration Costs and Requirements*, with a focus on *Recommendations 10 and 11*. As described in the *2012 IEPR update*, we generally support both of these recommendations. The workshop brought insightful perspectives for the Commission and stakeholders to consider. It is clear to us that an update to the root causes of challenges associated with *Recommendations 10 and 11* is now advisable. We are concerned however that addressing the challenges in too isolated of a way will serve to inhibit further progress. Conversely, orchestrating

corrective actions with the implementation of other *Strategies* involved in the *Renewable Action Plan* would go a long way towards resolving the challenges and related uncertainties. For example, we believe that a coordinated implementation of recommendations contained in *Strategy 2: Maximizing Value Through Appropriate Assessment of Benefits and Costs* should be considered; these steps would provide a means to gain information needed to vet options in the promotion of cost effective projects and solutions to network constraints necessary to meeting renewable energy goals.

Actions to implement *Recommendations 10 & 11* should take into consideration greater integration of distribution level planning and demand side energy management, as described throughout other *Strategies* contained in the *Renewable Action Plan*. Investments in supply and demand side management systems at the distribution level are currently underway. For example, Advanced Metering Infrastructure installed across the IOU's service territories and the construction of distribution system control centers in Concord, Rocklin, and Fresno. These featured "smart-grid" resources will significantly aid the ability to maintain grid reliability and stability. The value of such resources should be maximized by incorporation into corrective actions whenever it is feasible and efficient to do so. Initiatives at the distribution level will decrease the need for remote generation and associated requirements for new transmission infrastructure.

As discussed above, we believe that enhanced analysis of transmission needs will aid in the resolution of remaining uncertainties. CCA sought to discuss the issue of refined analysis by asking clarifying questions of Neil Millar, CAISO Executive Director of Infrastructure Development. In advance of the May 7, 2013 workshop, the CCA sent CEC staff a set of questions pertaining to topics included in Mr. Millar's presentation titled *Transmission Planning to Support 33% Renewable Portfolio Standard*. We requested and were informed that an opportunity to seek answers would be provided at the conclusion of Mr. Millar's presentation. For reasons that are unclear, the opportunity to ask questions did not materialize. Fortunately, Suzanne Korosec, CEC IEPR Lead, provided CCA with assistance and forwarded our written questions to Mr. Millar. We are grateful to Ms. Korosec for facilitating a reply to our request for information. For the record and further discussion below, CCA's questions (in blue) and Mr. Millar's response via emails with Ms. Korosec are provided here:

*Good morning, Mr. Dickerson. Below are Mr. Millar's responses (in italics) to the questions you had regarding his presentation at the May 7 IEPR workshop on transmission issues. Hope this is helpful in preparing your written comments.*

*Best, Suzanne*

Slide 10 of Neil Millar's presentation indicates that the most costly transmission upgrades are for Resource Adequacy (RA) deliverability.

I. Does the CAISO conduct economic analysis of alternatives to avoid RA deliverability at any cost?

II. Where in the CAISO process can stakeholders find the economic analysis of transmission upgrades for RA deliverability as compared to other alternatives for meeting RA requirements?

*I assume in responding that Mr. Dickerson is referring to the RA deliverability sought through the transmission planning process for the forecasted renewables portfolios developed to meet the state's 33% renewables portfolio standard. Estimated costs of providing the necessary transmission for the resources set out in the portfolios are taken into account in the CPUC "calculator" that are used to develop the portfolios, with the CPUC working with the CEC and the ISO through a public process. Once those portfolios are landed upon and transmitted to the ISO, the ISO endeavors to find the overall most effective means to provide the necessary transmission service for those resources.*

*As the ISO's transmission plan, the ISO accepts that system-connected renewable resources have required RA deliverability (consistent with past experience and the requests of renewables generators for deliverability in the ISO interconnection process) in order to be viable.*

Slide 14 of Neil Millar's Transmission Planning to Support 33% RPS presentation indicates that the 230 kV Gregg-Gates line has policy or economic benefits.

III. What alternatives did the CAISO consider when it found the 230 kV Gregg-Gates line had policy or economic benefits?

IV. Specifically, did the CAISO consider alternatives such as; (a) tripping generation and/or pump load under contingency conditions; (b) supplying flexibility services from other Balancing Authorities through dynamic schedules; (c) Supplying flexibility services through new dispatchable generation that has to be added in the southern California Local Capacity Requirement (LCR) areas, etc?

V. How did the alternatives compare economically to the 230 kV Gregg-Gates project?

VI. Where can stakeholders find a description of the CAISO's economic analysis?

*The ISO's study of the Central California area followed the study plan presented for stakeholder input and found on our website at [http://www.caiso.com/Documents/CentralCalifornia\\_StudyScope.pdf](http://www.caiso.com/Documents/CentralCalifornia_StudyScope.pdf). The study tested all aspects of value investigated in the ISO planning process (reliability benefits, policy benefits and economic benefits) and tested against the cost and performance of the various alternatives. Alternatives are discussed in the study results, which are provided in section 3 of the 2012/2013 Transmission Plan found at: <http://www.caiso.com/Documents/BoardApproved2012-2013TransmissionPlan.pdf>.*

*The reference on Slide 14 to determining that the line had policy or economic benefits is specifically in the context of determining whether the project would be assigned to an incumbent participating transmission owner or be eligible for the ISO's competitive solicitation process. Reliability projects that do not provide other policy or economic benefits are currently assigned to incumbent participating transmission owners, and projects that do meet the FERC-approved tariff criteria are eligible for competitive solicitation.*

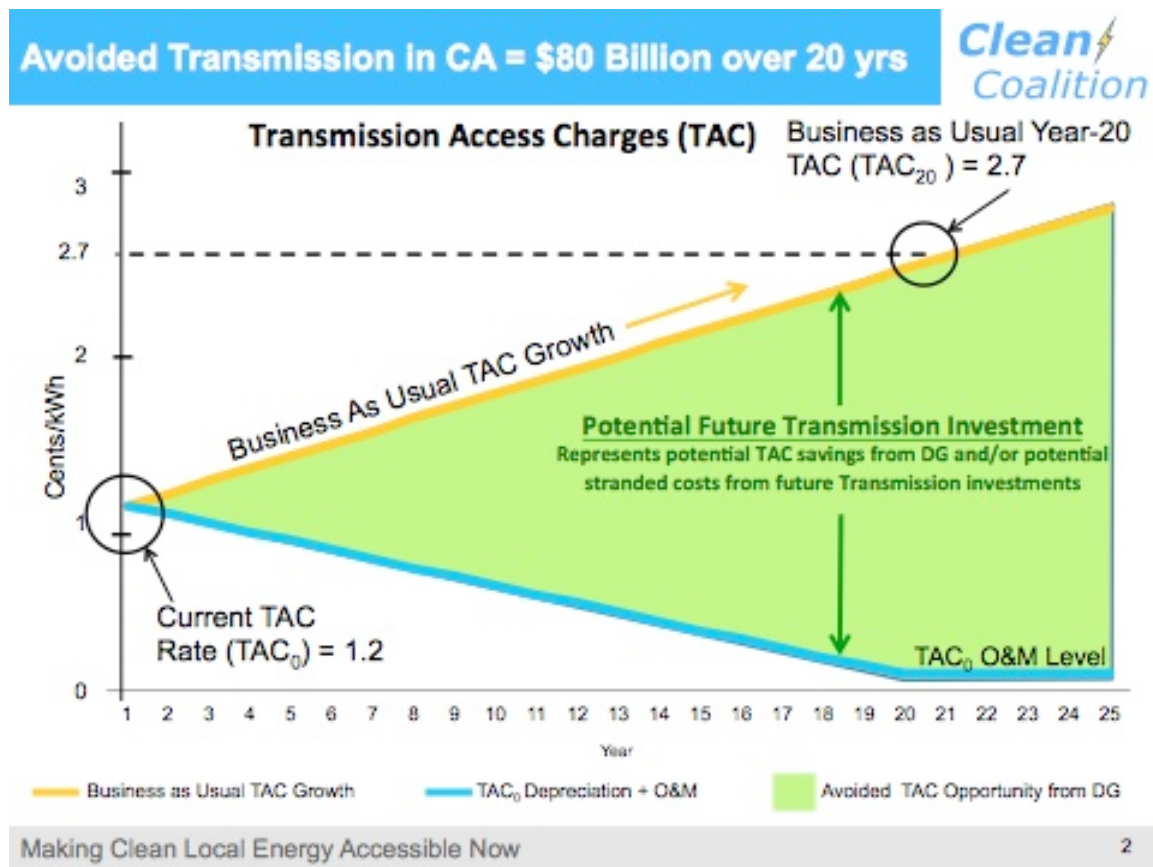
*I note that as set out on page 146, Section 3 of the ISO's 2012/2013 transmission plan, "the assessment utilizes similar water usage as historical operation of HELMS and does not reflect additional utilization that may be required for renewable integration and flexibility requirements." To summarize, the analysis considered preserving the value the HELMS presently provides through services provided today, and conservatively did not seek to attribute additional value to the role the resource may play in providing flexibility services in integrating renewable generation in the future.*

We find Mr. Millar's responses to the questions to be unresponsive in important ways, and to reveal shortcomings in the CAISO's transmission planning approach.

The costs for transmission underway to meet the 33% RPS is roughly estimated by CAISO to be 7 billion dollars. Added to the costs of new transmission for maintaining grid reliability, there will be an alarming increase in the CAISO's transmission access charge (which consumers pay). It is worth noting that these costs represent the "policy driven" category of transmission having revenue requirements and only the cost of the initial capital investment--the transmission owner is likely to also receive 11-12% ROE on a 40-50 year depreciation schedule, greatly increasing the total cost to ratepayers even under net present valuation. This is a major component of the TAC charges, and, while CAISO

gives some consideration to a projected total revenue requirement when comparing projects within the transmission planning process, we feel that the 7% discount rate applied by CAISO in the NPV excessively discounts these longer-term costs and the future benefits of alternatives, when alternatives are even considered.

The Clean Coalition has projected the growth in TAC charges related to new transmission investment as shown in the following graph. The cost of this investment should be compared against those of non-transmission alternatives that address operational needs.



The CAISO's transmission access charge (TAC) is at the point where a tourniquet is needed--that now must come in the form of exploring and finding the most economical options to identified needs.

Despite the process improvements we observe above, there is glaring lack of alternatives being explored in the CAISO TPP. From what we can tell, there is an insufficient evaluation of options for meeting Resource Adequacy requirements established by the CPUC and CAISO. The net effect of inadequate vetting is not

only impacting consumers, it also creates obstacles for RPS eligible projects capable of efficiently connecting to the grid.

As the Commission moves on actions and implementation steps in development of the strategic transmission planning portion of the 2013 IEPR, we respectfully request consideration of the following observations regarding Mr. Millar's responses:

Questions I & II:

The answer Mr. Millar provided is non-responsive because it points to the CPUC's RPS Calculator Model. Nowhere in the RPS Calculator Model is there any analysis of alternative(s), potentially lower overall cost, sources of RA (such as RA provided from existing gas turbines or combined cycle units). The RPS Calculator Model selects a renewable resource portfolios assuming all renewable resources will have RA counting rights without considering whether there may be other lower cost sources of RA capacity. The CAISO, in turn, uses the results of the RPS Calculator Model to identify Network Upgrades that will make every generator in the portfolio deliverable. There may very well be more economical sources of RA capacity elsewhere in the system but neither the CPUC's RPS Calculator Model nor the CAISO's transmission planning process considers this possibility.

In some cases, consumers would be better off paying a lower "Energy Only" price, purchasing RA from other new or existing sources, and avoiding the cost of the Network Upgrades that would otherwise make facilities "Full Capacity."

Location is a key factor in determining the transmission costs and savings of various alternatives in addressing both operation of the State's electrical system and related policy goals. While this issue has been acknowledged by the CPUC in planning and procurement proceedings, little action has been taken to incorporate these cost factors in decisions that drive the assumptions used in transmission planning scenarios.

Locational benefits are the real, measurable and material advantages associated with siting facilities in one location compared to another. This relative value of where projects are sited needs to be factored into policy and procurement programs and coordinated across agencies. Failing to fully account for locational considerations results in uninformed decisions and missed opportunities, driven by the apparent "sticker price" rather than least net cost and best fit. The potential missed value ranges into hundreds of millions of dollars for current California procurement programs such as the RAM, and many billions in longer-term impacts.

In seeking the most truly cost effective approaches to meeting California's clean air and renewable energy targets full consideration must be given to lower cost alternatives to the construction of transmission additions or upgrades, such as acceleration or expansion of existing projects, Demand-side management, Remedial Action Schemes, appropriate Generation closer to loads, interruptible loads, storage facilities or reactive support...

Questions III, IV, V, & VI:

We understand the explanation that the benefits provided by the Gates-Gregg line is in contextual reference as to whether or not the line is eligible for competitive solicitation. We are aware of the fact that on April 1, 2013 CAISO opened its competitive solicitation bid window to receive proposals to build the Gates-Gregg 230 kV line. Our questions are specifically in reference to the transmission planning activities that proceeded Phase 3 activities, the evaluation of alternatives, if any.

In section 3 of its Board approved plan, the CAISO reported it had assessed a no upgrades alternative, and 6 "transmission alternative configurations".



### 3.3.4 Development of Mitigation Plans

In developing the mitigation plans for the identified reliability concerns identified in section 3.3.1 no one single development was sufficient. In other words, the development of only a new transmission line, reconductoring of existing transmission lines or addition of transformer at a station by itself failed to address the identified reliability concerns. With this, a comprehensive development plan was assessed by incrementally increasing the development components to build the mitigation plan to address the concerns.

Table 3.3-5 Alternative configurations assessed as mitigation plans

Configuration	Description of Configuration
0	Base Case (No Upgrades)
1a/1b/1c	a) 50.5 Ohm Series Reactor at Wilson on W-W 230 kV Line; b) Reconductor overloaded Bellota-Gregg lines (136 mi); or c) Warnerville loop and 2-25 ohm reactors at Wilson
2	Configuration 1 plus: - 1122 MVA Gates 500/230/13.8 kV Transformer Bank Addition
3x	Configuration 2 plus: - Northern Fresno Area Reinforcements including North Fresno Substation (plus 200 MVAR SVD) <sup>1</sup>
4	Configuration 3 plus: a) one Gates-Gregg 230 kV Line; b) one Panoche-Gregg 230 kV Line; or c) one Los Banos-Gregg 230 kV Line
5	Configuration 4 plus: - one Gates-North Fresno 230 kV Line
6	Configuration 4 plus: - Raisin City Junction Switching Station with looping of all existing and planned 230 kV transmission (6 circuits total) in the vicinity of RCJ and SVC (plus 200 MVAR SVD)

Note 1: The Northern Fresno Area Reinforcement project has been recommended for approval in Section 2.5.6.

At a glance Table 3.3 gives the appearance of an investigation of 5 transmission alternatives, and a status-quo base case--in reality, this is not accurate. Note that several "alternative configurations" (1, 2 & 3x) involve projects approved separately as policy driven or mitigating other reliability needs. Incidentally, the

last two alternative transmission configurations are potential future expansions facilitated by approving 4a. (Gates-Gregg 230 kV line) To elaborate further, the Board approved 2012-2013 transmission plan recommends that Gates to Gregg 230 kV project be built as a double conductor 230 kV tower line with one side strung, and that new tower line be routed in a manner that would facilitate potential future expansion of a new Raisin City Switching Station, and a new 230kV line from Gates into a new North Fresno Substation. Thus, from a planning perspective, configurations 4, 5, & 6 are essentially a single connected project.

The economic evaluation (section 5.7.3.2 of the CAISO board approved plan) of the project solely compares costs and benefits of the three 230 kV lines in configuration 4.

Whether the Gates-Gregg project is cost effective is not determinable. In order to determine that a facility is “cost effective,” it is necessary to show that the parties ultimately responsible for paying for the proposed project are economically better off with the proposed project than if any other feasible alternatives were pursued. When evaluating the merits of alternative transmission solutions, regional transmission processes must also consider non-transmission alternatives on a comparable basis. The CAISO's unwillingness--despite its tariff requirements to do so--to consider non-transmission alternatives when evaluating the need for upgrades in the Fresno area, is a fundamental deficiency in the CAISO's transmission planning process. Depending on the specific situation, it is often the case that non-transmission alternatives (such as pre-contingency thermal generation redispatch or post-contingency generator tripping) are far more economical than building new transmission. Here, it appears the CAISO simply assumed that some new transmission was needed and then tested alternative transmission configurations to see which new transmission configuration was best. The CAISO basically assumed the solution they wanted.

Despite the shortcomings in analysis, the California Consumers Alliance and Clean Coalition continue advocating for an evolving approach to the CAISO transmission planning process. It is not onerous evaluations we are seeking, but a process that is compliant with established tariff requirements and inspires confidence in the decisions the CAISO makes. We recognize that CAISO has expressed a willingness to address the issue of non-transmission alternatives, and has initiated a process. Likewise, recent activities to incorporate energy efficiency and demand response into its infrastructure planning and market operations are signs that the CAISO is showing nascent support for the state's loading order priorities. We continue to believe that justified enhancements and refinements in the analyses that flow into and out of the CAISO TPP is the right approach.

As the Commission continues to explore ways to streamline the permitting of projects, we circle back to Commissioner McAlister's emphasis on the significance of well-vetted projects, and how it fits within the existing regulatory process and obligations.

California consumers are expected to pay for massive transformations to the state's electrical grid. Like tomorrow's grid, however, expectations flow both ways. In return for paying the cost, consumers expect the benefits of legacy and new investments be maximized, and, include the ability to manage their electricity fate. Along with T&D network upgrades, the additions of new generation, advanced metering, telemetry and operational systems are sure to increase rates well beyond what ratepayers are accustomed to. Among the attributes of these additions is the ability to coordinate the use of generation and demand-side options, and to reliably integrate intermittent generation. The claim that one part of electricity system is invisible and or unavailable to another is quickly becoming an invalid excuse, particularly from a planning perspective that looks at a horizon that is at least a decade ahead.

In closing, we urge the Commission to recognize the need to continually evolve and merge infrastructure planning and procurement processes consistent with the transformations we expect to materialize, and recommend implementing appropriate enhancements that are already in place and required. We believe the Commission should avoid proposing fundamental or disruptive changes to permitting of transmission, particularly any actions that could steer the state off the track of achieving our state's goals with the most cost effective solutions.

Respectfully Submitted, May 21, 2013

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