

California Energy Commission

Re: Docket No. 12-IEP-1D

Clean Coalition Comments on
May 14th, 2012 Workshop
Interconnection of Renewable Development in California

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The Clean Coalition would like to thank the Commission for the opportunity to participate on a panel at the IEPR workshop on interconnection and also for the chance to submit these written comments.

The IEPR is an opportunity to recommend paradigm shifts in California's energy policy. Primary areas to address in renewable interconnection are increasing efficiency, transparency, predictability and cost certainty, ensuring that data is made available to support the necessary ongoing improvement and reform process, proactively designing the future distribution grid and developing a plan to sustain renewable energy targets and market trajectory well beyond 2020.

Progress and Hurdles

The CPUC, CAISO, major utilities and numerous parties have been engaged in ongoing interconnection reform, most recently focused on the state jurisdictional Rule 21. The first phase of this process, focusing on updating the applicable tariff language and related agreements is currently before the CPUC Commissioners following a proposed settlement, which included identified subjects needing immediate further attention.

The Settlement incorporated significant positive proposals, including:

- Establishing access to a Pre-Application Report providing information specific to the proposed point of interconnection - this allows projects to be more successfully sited and scaled to viably match local constraints
- Adoption of 100% min load for Fast Track (where data is available, instead of 15% peak), combined with coincident measurement of minimum load relative to generation
- Establishment of clear timelines for application processing and studies
- Consensus that cost certainty and delays in reaching cost certainty are critical issues needing resolution

- Improved reporting to the CPUC and applicants regarding timeline compliance and reasons for Fast Track screen failures or timeline delays. (but still no enforcement)
- Defining the scope and urgency for the continued proceeding (Phase II)

Among the highest priority issues we think should get resolved in Phase 2 are:

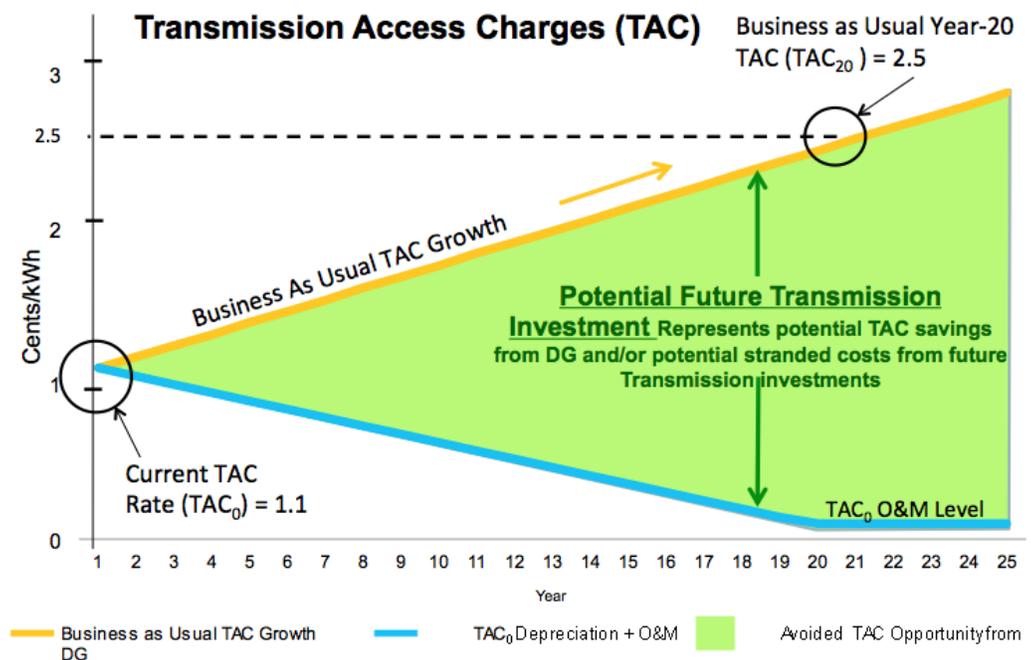
- Inclusion of reasonable Cost Responsibility limits
- Averaging/standardizing interconnection costs between applicants to allow early cost determination
- Improved data access, including published system info and study results
- Timelines for increased automation and improved processing, including integration of existing data sets and online automated processing of applications, reports, and studies (starting with the Pre-application Report)
- Improved screening criteria transparency and objectivity
- Telemetry review for cost effectiveness and integration with IG
- Review of default 15% screen for limited increase and/or applying expanded minimum load estimation
- Inclusion of planned upgrades pro-rated against applicant cost responsibility

DG Planning and Transparency

Mirroring the ISO's development of the TPP transmission plan, the IEPR should direct planning bodies to develop a Distribution Planning and Procurement (DPP) approach to coordinate interconnection with distribution grid modernization, procurement targets and siting information for market participants.

Each IOU should have a transparent, proactive, Distribution Planning Process (DPP) that will identify cost-effective paths towards high levels of renewable DG. Modernization of the distribution is essential not only to maintain current levels of reliability, but to leverage the

current and forthcoming opportunities for efficiencies and reliability achievable through Intelligent Grid (IG) coordination of local distribution level capacities, including Distributed Generation (DG) and Demand Response (DR), along with electric vehicle (EV) and energy storage integration (ES). Coordinated management of these resources can greatly reduce the tens of billions of dollars currently anticipated in stranded costs for major new transmission and conventional generation projects, including peaker plants with very low effective capacity factors.



Rate Impact of Maximum Avoidable Transmission Investment

California must move beyond the old paradigm that new transmission is needed to meet our energy needs. Rather, successfully integrating large amounts of generation at the distribution level is crucial to a successful energy future. This will avoid the chicken-and-egg planning problem associated with transmission-dependent projects. The transmission process will also become more efficient by identifying early-on, and avoiding, unnecessary transmission projects or those that would become stranded in a high-DG scenario.

NREL will soon complete a major study demonstrating the very high efficacy of fast acting automated DR on the distribution system for enhancing grid stability and integrating DG the while reducing reserve requirements and associated costs. The results of this study (to be published in August/September) should be incorporated in IEPR.

As with the TPP, investments aligned with an approved distribution level DPP should be incorporated in the rate base and reimbursed to any utility or other private entity making such infrastructure improvements. Reimbursement for conforming distribution grid upgrades will allow upgrades to occur in close alignment with citing and development opportunities and optimize investment timing while reducing barriers to appropriate interconnection.

All participants in the workshop were in agreement that more data is needed. To achieve higher percentages of renewable energy, and allay legitimate IOU concerns, advanced modeling is needed and real data must be collected and broadly shared. The last two years of interconnection reform have been data starved and there is a clear and urgent desire to correct this.

While many states clearly define information related to requests to interconnect to the public grid, the results of interconnection impact studies, and all associated costs, to be public information, this has not consistently been practiced in California. The failure to disclose the costs of interconnection grossly inhibit efforts to improve the process, identify cost drivers and effective alternatives, or provide investors predictable opportunities. Belated initial steps such as the interconnection maps required of the major IOUs under the RAM process are a small step in the right direction, however the accuracy and usability of this information is limited and the plans for improvement are ill defined.

What is needed is a core shift in thinking about confidentiality. All information should be assumed public, with exceptions made as needed for truly proprietary details such as names, financiers, and internal costs. Everything else, including study results, timelines, costs and staffing levels, should be readily available for analysis, which would allow policy to be designed based on complete and accurate data. Rule 21 reform has provided additional transparency,

but the improvements are minimal and do not cover interconnections that fall outside the scope of Rule 21.

Advanced modeling can greatly reduce the cost of studies and the time required to deliver results. In California, interconnection requests have predictably multiplied exponentially, while the tools employed and the number of experienced engineers have remained static, resulting in overwhelming backlogs and delays that frustrate investors, inhibit clean energy industry development, miss environmental targets and lose state employment and revenue opportunities. While the Clean Coalition does not seek to endorse specific providers or proprietary approaches, we actively seek to identify potential solutions and the availability of grid modeling and study support is important to consider in energy planning.

The type of modeling and operative grid visibility needed and available is exemplified by companies such as GRIDiant, New Power Technologies, SolAspect, Qado Energy and others receiving CEC and DOE research grants and engaging in pilot projects with both transmission and distribution system operators. For example, as noted in our presentation slides, GRIDiant's feature-rich tools facilitate comprehensive DG planning and simulation efforts and allow real-time operation in this data-driven energy future. Such modeling provides the near term potential for "1-click" DG interconnection studies and accurate web based interconnection cost data for optimized pre-application site selection – approaches we have referred to as Interconnection 3.0.

Coupled system simultaneous modeling and forecasting go further in allowing more efficient grid operation and effective realtime pricing to both allow general ratepayer savings and individual customer use optimization. These tools are only as good as the information supplied to them however, making full transparency from system operators and developers a necessity.

In the interim, alternate approaches should be applied to achieve increased predictability for the renewable energy providers suppliers ready to harness California's native resources. This includes increased cost certainty for developers, including improved maps, cost

averaging, and a clear and consistent assessment of developers' future liability for grid related costs.

One powerful tool toward interconnection transparency is the coordinated use of Business Practice Manuals (BPM). The CAISO publishes a BPM that allows all potential interconnection applicants to see ahead of time what actually happens during implementation of the tariff. This transparency aids the developers in their planning and creates some accountability in tariff implementation. The IOUs do not currently publish a BPM for their interconnection processes. We recommend that they do so, and furthermore, that they standardize amongst themselves on best practices.

Transparency is also needed on cost estimates given to developers for the building of interconnection facilities so that policymakers and stakeholders can verify that those estimates are legitimately in the best interest of the ratepayers. Anecdotal evidence from developers shows that estimates provided to developers by an IOU are often significantly higher than that developers would get if quoted directly by an engineering firm.

And finally, California policy needs to hold IOUs accountable for equal treatment of Independent Power Producers (IPP) and Utility Owned Generation (UOG). No explanation has been given for why UOG projects have been able to get through the interconnection process and come online where IPP projects have not. Only when interconnection process are clearly explained, cost estimates are consistent, and independent producers enter a level playing field, will California enjoy the full potential of its local energy economy.

Scenarios and Targets

The CEC's previous workshop, on calculating regional targets, recognized the increased value of distributed generation in certain places. When near loads, DG can optimize the use of existing capacity of the distribution system, reduce the need for transmission and distribution upgrades to deliver power from more distant sources, and avoid significant system losses associated with distance. Citing within the built environment captures these advantages while reducing land impacts and in addition providing ancillary shading benefits and associated

energy savings. In those areas, DG should therefore receive preference in interconnection loading order. Any DG project, or group of projects, that stay below 100% of the minimum load should not be saddled with “transmission impacts” or penalized for “taking away” the load assigned to a transmission-interconnected resource. Such treatment would encourage developers to locate in places requiring fewer upgrades and addressing policy goals as proactively laid out by the state and utilities. The current, reactive, method of grid planning is a strain on everyone and inefficient.

In developing the resource scenarios that guide these targeted plans, key factors should include the Governor’s 12,000 MW DG goal and other new policies that the IEPR would recommend. Calculations based only on current policies ignore the potential impact of likely improvements, such as a greatly expanded feed-in tariff along the lines of the proposed implementation of SB 32. The Commercial Interest scenario, which was much discussed, ignores the increased commercial activity a well-designed feed-in tariff would generate in previously underserved market segments.

As California looks beyond the current 33% RPS goals, the 15% penetration cap must also be reassessed. In response to this challenge, the Clean Coalition will be launching its Distributed Generation + Intelligent Grid (DG+IG) Initiative this year. The Clean Coalition is working with five different utilities to plan deployments such that distributed generation supplies at least 25% of the total annual demand for one substation per demonstration. Energy storage, demand response, and curtailment will be deployed to a level that allows grid reliability to be at least as strong as it was without any DG. To support the Governor’s 12,000 MW DG goal and the state’s rapidly growing solar industry, California needs to maintain its forward-looking strategy. The Clean Coalition therefore strongly urges the creation of a higher RPS goal and raising the penetration cap.



Thank you for your hard work. We look forward to working closely with the Commission through future workshops and as the 2012 IEPR update takes shape.

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