

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking Regarding Policies,
Procedures and Rules for Development of Distribution
Resources Plans Pursuant to Public Utilities Code
Section 769.

Rulemaking 14-08-013
(Filed August 14, 2014)

And Related Matters.

Application 15-07-002
Application 15-07-003
Application 15-07-005
Application 15-07-006
Application 15-07-007
Application 15-07-008

**COMMENTS OF THE INDEPENDENT ENERGY
PRODUCERS ASSOCIATION ON THE DISTRIBUTION
RESOURCES PLAN ROADMAP STRAW PROPOSAL**

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As authorized by Administrative Law Judge Julie Fitch in her email ruling of November 10, 2015, and affirmed in her ruling of November 16, 2015, the Independent Energy Producers Association (IEP) respectfully submits its comments on the “Distribution Resources Plan (DRP) Roadmap Straw Proposal” prepared by the Energy Division (ED) staff. The Straw Proposal was the subject of a workshop on November 9, 2015, and these comments also respond to the conversation that took place at that workshop.

The DRP Roadmap addresses the integration into the electric grid of distributed energy resources (DERs), defined as resources with a capacity of up to 20 MW and located on

the customer side of the substation.¹ As opportunities in this market segment become further available, IEP's member companies expect to provide the innovation and necessary capital to help achieve the DRPs' goals in a cost-effective and timely manner to lower overall costs to consumers. With regard to planning and procurement processes in general, and the new DER proceedings in particular, IEP urges the Commission to avoid complexity to the extent possible, ensure that those who benefit from distribution grid modernization also bear their fair share of the costs of modernization, and strive for an openness and transparency that informs and enables effective stakeholder participation.

I. INITIAL OBSERVATIONS

IEP has a few initial observations that guide IEP's reaction to the Straw Proposal.

First, the needs of the electric grid are dynamic, particularly at the distribution level. Grid conditions change every millisecond as demand (load) and supply (generation) shift constantly. As a result, utilities continually rebalance circuits, create new circuits, and add substations to respond to changing conditions. Moreover, changes in the power flows at the distribution level will become increasingly dynamic as DERs become more pervasive and “plug-and-play” devices become more available.

A planning process that takes too long to complete will almost certainly result in policy decisions based on input assumptions that no longer reflect the physical needs of the grid. When this occurs, the result is inefficient and ineffective investment that could undermine grid reliability. Thus, a critical goal for decision-makers must be to ensure that planning, which drives decision-making and investment, is aligned as closely as possible with actual grid needs when the investment in infrastructure is made.

¹ *Assigned Commissioner's Ruling on Guidance for Public Utilities Code Section 769—Distribution Resource Planning* (Guidance Ruling), Rulemaking (R.) 14-08-013, February 6, 2015, p. 9.

Second, distribution planning is not new; the utilities have performed distribution planning for decades. In the past, as the Commission conducted detailed system-wide studies in the Long-term Procurement Plan (LTPP) proceedings to determine the need for new resources, individual utilities in parallel performed complex studies of their distribution system. In recent years, the LTPP modeled a variety of future scenarios, including a “High Distributed Generation (DG)” scenario to better understand the effects of a high penetration of distributed resources on the electric grid. Thus, while Public Utilities Code section 769 imposes a new requirement on the utilities and the Commission to develop, review, and approve DRPs, the process of planning for distributed resources is not new.

A critical question to be addressed by the Commission is whether section 769 requires fundamental change in current planning and modeling or whether the current planning process is sufficient to ensure DER build-out in a timely and cost-effective manner and to maintain the overall integrity of the electric grid. Stated more simply, can future DER growth be integrated into a High DG Scenario or is it fundamentally different, requiring separate, distinct treatment?

Third, to the extent that behind-the-meter generation or plug-and-play devices, for example, stimulate distribution grid modernization, another critical question is the extent to which the beneficiaries of DER grid modernization will still be on the utility system and required to pay their fair share of the costs of the modernization. Converting the distribution system from a largely radial system to a networked system to better accommodate two-way power flow and a plug-and-play approach to DERs will be enormously expensive. It certainly makes sense to upgrade and modernize aging distribution circuits and other equipment as they reach the end of their useful lives and need to be replaced. Before the Commission approves an accelerated

program of investment in distribution grid modernization, however, the Commission needs to carefully consider (a) whether future grid needs (and consumer demand) are accurately forecasted based on up-to-date evidence; (b) whether the benefits of distribution grid modernization are clearly demonstrated to exceed the costs; and (c) whether the customers who receive the benefits from the grid modernization are also those who will help pay for the distribution infrastructure upgrade and expansion.

II. REDUCING COMPLEXITY

ED staff performed the important task of mapping the procedural steps to evaluate and pursue the integration of DERs into the larger electric grid. Despite this extraordinary effort, several parties at the workshop stated their lingering confusion about the relationship between the two DER proceedings (R.14-08-013 addressing the DRPs and R.14-10-003 related to “sourcing” of distributed resources) and ongoing planning proceedings like the LTPP, the Energy Commission’s Integrated Energy Policy Report (IEPR), and the California Independent System Operator’s Transmission Planning Process (TPP). The Roadmap should provide a more detailed description of the integration of the two DER proceedings into the existing planning and procurement proceedings.

III. IMPROVING ACCESS

The Straw Proposal addresses the implementation of two planning proceedings recently initiated at the Commission (R.14-08-013 and R.14-10-003), in addition to the existing planning proceedings, *e.g.*, the LTPP, IEPR, TPP, and to a lesser extent the Resource Adequacy (RA) proceeding.² The Straw Proposal also proposes 11 workshops and 11 additional joint workshops with R.14-10-003. Moreover, the Commission is planning on addressing the utility

² The Guidance Ruling listed 14 proceedings that “directly relate to areas that are potentially encompassed by the DRPs.”

role in implementing final DRPs in each utility's General Rate Case (GRC). Each of these proceedings entails a tremendous commitment of time and resources by staff and stakeholders.

As a practical matter, the sheer number of planning-related proceedings will strain the resources of the Commission and stakeholders already engaged in a multitude of planning process and regulatory proceedings. The Commission may find that its efforts to improve access and transparency of the planning process actually inhibit stakeholder participation.

The Commission should consider whether it can better improve stakeholder access to and transparency of the planning process by reducing and simplifying planning proceedings, rather than pursuing the alternative path of greater complexity and disaggregation of planning. The Straw Proposal should address more fully the interaction between the two DER proceedings and the existing planning and procurement proceedings employed by the Commission, such as the LTPP, IEPR, TPP, RA, and GRC.

IV. IEP'S RECOMMENDATIONS

IEP respectfully suggests that a more incremental approach to DER planning, integration, and investment will result in less complication, more satisfactory stakeholder participation, and more meaningful results at a lower cost to ratepayers. In this regard, IEP suggests a few concepts to guide the Roadmap.

Focus on a Manageable Scope. Public Utilities Code section 769 directs the Commission to develop a planning process to identify "optimal locations" for DER development. To achieve the goals of section 769, the Straw Proposal, following the lead of the Guidance Ruling,³ contemplates modeling at the nodal level, *i.e.*, performing very complex optimization modeling at a very granular level. IEP is concerned that the marginal decision-making benefits that derive from complex optimization modeling are questionable at best, and the nodal analysis

³ Guidance Ruling, Attachment pp. 3, 6; see Straw Proposal p. 12, n.7.

could create a false precision that leads to erroneous results. This could occur, for example, when planning assumptions are misaligned with actual grid needs. The time required to perform this detailed modeling may delay needed investment in the distribution grid that can be identified through less complicated means.

In its simplest form, section 769 requires two things: (1) by July 1, 2015, each utility must file a distribution resources plan proposal “to identify optimal locations for the deployment of distributed resources,” based on five specified considerations; and (2) the Commission must approve or modify and approve the distribution resources plans. Moreover, the language of section 769 seems to focus on the ability of DERs to displace or defer the need for utility investments in the distribution system, rather than the broader, more complex, and much more expensive issue of modernizing the distribution system to accommodate two-way power flows and the growth of plug and play DER devices and technologies.

Even this narrower focus on displacing and deferring utility investments will require a considerable effort by the Commission and other stakeholders, but the Commission could greatly simplify this proceeding and the procedural roadmap by concentrating initially on the narrow requirements of the statute. The “locational optimization,” which the Guidance Ruling acknowledged is “an especially difficult challenge,” could still be pursued,⁴ but the initial focus should be on near-term steps that can be taken to use DERs to defer or displace distribution infrastructure investments.

Employ Flexible Implementation. The Roadmap outlined in the Straw Proposal includes workshops and decisions extending to the end of 2017, assuming the proceeding stays on track. IEP is concerned that attempting to plan events so far in the future will result in wasted

⁴ Guidance Ruling, p. 4.

time and resources as actual conditions deviate from expectations, as they inevitably will. While it is important to have the ultimate goal in mind, it may make more sense to focus on the steps toward that goal that the Commission can take in the near term, under existing conditions, rather than trying to foresee the precise path to the eventual goal.

V. DER INTEGRATION MADE SIMPLE AND EFFECTIVE

IEP's concern about relying on excessively complicated and prescriptive planning processes is grounded in part on the Commission's previous experience with a procedurally complex planning exercise. In the 1990s, the Commission undertook the Biennial Resource Planning Update (BRPU), a complicated proceeding that ultimately consumed eight years and significant resources of the participants but resulted in no new generation additions. Complexity may not have been the only factor that doomed the BRPU, but the BRPU clearly demonstrated that complexity is no guarantee of success.

By contrast, over the last decade, the Commission has developed a somewhat simpler planning process that works relatively well and incorporates a model that has resulted in the addition of several thousand megawatts to California's supply resource base. This model has evolved primarily in the LTPP proceedings and has proved to be resilient and successful.

Although certain aspects of the recurring LTPP proceeding can be complicated, the basic model involves four steps:

1. Every two years, the Commission determines the need for various energy "products."
2. The Commission authorizes utility procurement based on any identified need.
3. The utilities conduct a competitive procurement to meet those needs.
4. The Commission evaluates the results of the competitive procurement and approves appropriate proposals.

This same basic approach could be used to incrementally integrate DERs into the grid.

The Commission's recent experience with a relatively novel technology that can also serve as a DER—energy storage—provides a good example of how this approach can work. When the Commission opened its first storage proceeding (R.10-12-007) at the end of 2010, it was under a legislative mandate to promote viable and cost-effective energy storage resources. Like many DER technologies, energy storage was viewed as a novel resource, and the Commission first studied storage technologies as an emerging technology and appropriately adopted procurement frameworks for analyzing energy storage needs and capabilities. The Commission then set storage procurement targets for the large electric utilities—the utilities are directed to procure at least 1,325 MW of storage through 2020. As these projects enter commercial operation, they can serve as demonstration projects to demonstrate the feasibility and viability of storage resources located at various levels of the electric grid, including the distribution level. The results of the first competitive solicitations are due shortly.

Meanwhile, the Commission authorized parallel market tests to determine the technical and commercial viability of storage resources. In Decision (D.) 13-02-015 and D.14-03-004, the Commission authorized Southern California Edison Company (SCE) and San Diego Gas & Electric Company to procure different energy “products” in an all-source solicitation. The authorization included the procurement of preferred resources, which were defined to include energy storage. Note that the Commission did not designate the specific storage technologies or specific preferred resources that should be procured; instead, the Commission allowed providers of various storage technologies to compete to meet the defined need, and permitted the utilities to evaluate the various proposals in light of their needs. As a result, SCE selected 23 storage projects totaling over 263 MW, and on November 19, 2015, the Commission approved those contracts.

A similar approach to the one used for assisting the emergence of storage resources ought to be employed for DER resources. This approach will authorize the demonstration projects contemplated in the Straw Proposal, while also allowing for market tests of the ability of DERs to avoid or defer utility projects when the utility identifies a specific distribution system need or infrastructure upgrade. Following the approach used to stimulate the market for energy storage will also provide a clearer and potentially more accessible procedural path for stakeholders by building on the existing planning and procurement processes developed over the past 10-15 years.

VI. DEVELOPING A DISTRIBUTION SERVICE OPERATOR CODE OF CONDUCT

One element from the “More Than Smart” paper that was attached to the order instituting this proceeding that is not included in the Straw Proposal is the development and adoption of a Code of Conduct for the Distribution Service Operator. A Code of Conduct is essential to ensure that the integration of DERs is performed on a technology-neutral basis and that the interests of the Distribution Service Operator (which might be the incumbent utility) do not affect the operation of the distribution system or the ability of DERs to integrate into the distribution system.

IEP recommends that the Roadmap should include a workshop on the Distribution Service Operator Code of Conduct in the 4th Quarter of 2015 or, if that is not feasible, in the 1st Quarter of 2016. In addition, the Roadmap should include issuance of a decision on a Distribution Operator Code of Conduct in 2016.

VII. CONCLUSION

The Commission has embarked on the development, review, and approval of utility distribution resource plans as directed by section 769. As part of this process, the

Commission is to assess the optimal locations for the development of distribution resources. However, section 769 does not require the Commission to embark initially on the path outlined by the Straw Proposal, *i.e.*, a highly detailed and time-consuming planning process characterized by complex modeling to optimize nodal DER development. As noted by ED staff, the Roadmap contemplates a planning approach involving complex modeling of the physical flows on an increasingly dynamic distribution system, *i.e.*, two-way power flows that will become increasingly unpredictable and less susceptible to accurate prediction through modeling. In addition, the proposed approach involves difficult, controversial, and ultimately time-consuming determinations of the avoided cost at specific locations, the identification of deferrable resources at each node, and controversial cost-benefit assessments.

The Commission has had experience with this type of complex, avoided cost-based planning and procurement to determine the “identifiable deferrable utility resource,” *i.e.*, the BRPU. The Commission’s experience with this type of planning and procurement approach was not rewarding. Moreover, IEP is concerned that the approach described in the Straw Proposal risks reducing the openness and transparency of the planning process, precisely because of its reliance on complex modeling and multiple regulatory processes and workshops in parallel with the current planning process. IEP anticipates that the processes outlined in the Straw Proposal will severely strain staff and stakeholder time and resources. In addition, the Straw Proposal suggests an approach that, ultimately, will impose significant costs on ratepayers to modernize the distribution grid in anticipation of development at local nodes that may or may not occur, and it is not clear that these costs will be borne by the beneficiaries of that modernized grid.

On the other hand, consistent with section 769, it would be sufficient for the Commission to undertake a more incremental approach to distribution planning, *i.e.*, an approach that is more stakeholder-friendly, more transparent, and more likely to result in timely decision-making. In this context, similar to the approach undertaken for the development of storage resources, the goal of the distribution planning process would be for the Commission to simply identify optimal locations for the development and competitive procurement of distributed resources within the context of the existing, proven planning and procurement process. To aid in this development, the Commission would use information derived from the demonstration projects suggested by the Straw Proposal.

IEP respectfully asks the Commission to consider these comments as it deliberates on the DRPs and the integration of DERs into the grid.

Respectfully submitted November 20, 2015 at San Francisco, California.

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