BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

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Order Instituting Rulemaking to Consider Refinements to and Further Development of the Commission's Resource Adequacy Requirements Program.	Rulemaking 05-12-013 (Filed December 15, 2005)

Comments of the Alliance for Retail Energy Markets and Dynegy On PD on Phase 2 – Track 2 Issues: Adoption of a Preferred Policy for Resource Adequacy

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Order Instituting Rulemaking to Consider Refinements to and Further Development of the Commission's Resource Adequacy Requirements Program.	Rulemaking 05-12-013 (Filed December 15, 2005)

Comments of the Alliance for Retail Energy Markets and Dynegy On PD Phase 2 – Track 2 Issues: Adoption of a Preferred Policy for Resource Adequacy

These comments are filed jointly by the Alliance for Retail Energy Markets[1] and Dynegy,[2] together "Joint Parties".[3] The Joint Parties share a common vision for the future of resource adequacy (RA) for California's electricity markets. This vision is centered on robust, transparent, and competitive markets for energy, ancillary services, and capacity, in order to meet California's future electricity needs in an efficient and cost-effective manner. The Joint Parties believe that the policy vision of the Proposed Decision (PD) is fundamentally incompatible with the commitment of the state, recently renewed by statute, to retail choice for consumers, with equally undesirable implications for wholesale competition as well. We firmly believe that a market-based approach to RA that can simultaneously meet the state's reliability needs without imposing unreasonable, crippling costs on LSEs is needed to fully address all the criteria for the RA program.

I. INTRODUCTION AND SUMMARY

The PD in this rulemaking reaches many important conclusions about the weaknesses of the

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1 AReM is an alliance of Sempra Energy Solutions, Constellation Energy Commodities, Direct Energy LLC and RRI Energy, Inc.

2 "Dynegy" refers, collectively, to Dynegy Morro Bay, LLC, Dynegy Moss Landing, LLC, and Dynegy Oakland, LLC.

3 The Joint Parties have authorized Goodin, MacBride, Squeri, Day & Lamprey, LLC as counsel for the purpose of submission and execution of this pleading.

current Resource Adequacy (RA) program and the need for and the direction of fundamental reforms. Central to these conclusions is the need for modifications to the current RA program to provide for market-based investment in new resources, price transparency, and equitable allocation of the responsibility and costs of meeting RA requirements.

The Joint Parties strongly support these conclusions and urge the Commission to issue a Final Decision that establishes these findings as policy. Collectively, they point the state in the right direction, towards a comprehensive, equitable, and sustainable RA approach for California. The Joint Parties acknowledge that a multi-year forward commitment is an essential part of the RA program if implemented with a centralized capacity market and such a feature can resolve the existing RA program's deficiencies in encouraging investment in new capacity. But if implemented using only a bilateral market structure, the multi-year forward element will impose significant and untenable challenges to retail competition.

Consequently, the Joint Parties take issue with those findings of the PD that conclude that a centralized capacity market is not the best policy for California at this time. As the PD recognizes, a centralized mechanism has "certain distinct advantages over the bilateral capacity trading approach [that] would solve some of the more difficult issues associated with the bilateral approach, whether in its current form or in a form that includes a multi-year forward commitment."[4] A centralized capacity market is uniquely capable of allocating the costs of maintaining reliability equitably; committing scarce or limited resources; facilitating load migration and direct retail access; providing the greatest level of transparency and, consequently, economic efficiency; and supplanting the need for a backstop mechanism.[5] Unlike a bilateral-only approach, a centralized capacity market encourages competitive investment by providing a transparent index to the value of locational capacity, minimizing the risk of load forecast errors, providing

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4 PD at 68.

5 PD at 68–69.

a market reference for bilateral contracting and investment, and efficiently and equitably allocating capacity costs to all LSEs (and by extension, to all customers) while ensuring resource adequacy. The Joint Parties believe the PD errs in concluding that a centralized capacity market is less able to secure the resources needed for local reliability or renewables attainment, conclusions that are flatly contradicted by record evidence and subsequent outcomes in eastern markets that have adopted centralized capacity mechanisms.

A primary concern stated in the PD regarding the adoption of a centralized mechanism is the potential loss of jurisdictional control from the Commission to the Federal Energy Regulatory Commission. Although the Joint Parties believe that these concerns are over-broad, we recognize that the Commission desires to ensure that it retains its primary authority over resource adequacy for its jurisdictional LSEs, maintains its ability to refine its RA program, and is in a position to address specialized resource requirements, market failures, or other unforeseen circumstances. We do not believe, however, that the Commission's authority over any of these issues is impaired by creation of a centralized capacity market. Even with a centralized capacity market, the state's three investor-owned utilities (IOUs) are required to submit procurement plans that meet standards specified by statute, including the definition of products to be procured and achievement of minimum annual increases in renewable resource procurement until a 20% renewable resource portfolio is reached. The plans must also assure that needs are first met through available energy efficiency and demand reduction resources.[6] In overseeing these requirements, the Commission must assure that approved procurement plans moderate price risks and provide just and reasonable rates. A centralized capacity market would not supplant the utilities' obligation to submit procurement plans that the Commission must review and approve.

In fact, a centralized capacity market would complement such procurement rules by providing a transparent price for the capacity value of resources. Moreover, the state would retain its authority to regulate the energy portfolios of its jurisdictional load serving entities. For example, the Commission

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[6] California Public Utilities Code Section 454.5(b)

retains its authority to implement and assess compliance with RPS requirements, and the CARB will regulate GHG emissions reduction and compliance. So, contrary to the analysis of the PD, the jurisdictional authority of a state to develop new resources, directly or through its IOUs, and to enjoy the direct benefits of those resources, is not compromised.

Furthermore, the policy direction taken by the PD seriously impairs the competitive retail sector. As the record shows, imposing a multi-year forward obligation on LSEs in the absence of market mechanisms that allow for effective risk management is both costly and risky. Long-term contracts consume working capital, thereby raising costs and, ultimately, retail rates. Without a liquid, transparent market for capacity—which the PD would not create, substituting instead a "bulletin board" of uncertain practicality—the multi-year obligation imposes substantial risk as loads migrate among suppliers. Furthermore, requiring all LSEs to contract for 100% of their allocated RA requirements on a multi-year forward basis may create a significant barrier to entry, or cause existing ESPs to withdraw from the market. The PD recognizes that this issue is "problematic" but concludes that, because the metric of facilitating direct access has "less weight than other metrics," these problems can be ignored. [7]

The Joint Parties believe, therefore, that the PD errs in its fundamental policy finding in favor of a bilateral approach. The PD correctly recognizes that a centralized approach is superior in allocating costs equitably. The PD also correctly rejects the idea that price discrimination under a bilateral approach can lead to significant savings, eliminating any material benefit to the inevitably higher transaction costs associated with a bilateral approach. Further, as discussed below, the PD's arguments that a centralized approach may be inferior in securing system reliability, or may cause procurement of redundant capacity, are flawed and contradicted by empirical evidence of the performance of centralized mechanisms elsewhere. Thus, on the three most important metrics (i.e., reliability, least-cost, and achievement of environmental objectives), a centralized approach is equal or superior to a bilateral approach. But on the ability to facilitate retail competition, the question is not even close: closing the door on centralized

[7] PD at 75.

capacity markets in the context of a multi-year forward capacity obligation, in the absence of a centralized capacity market, creates barriers to retail market entry, will inevitably lead to the IOUs being required to fund backstop capacity investments (while also assuring a lack of diversity in capacity buyers), and will also require complex cost accounting to accommodate load migration,[8]

Although the PD suggests that the clear deficiencies of a bilateral approach with respect to transparency, efficiency, and surety of supply might be addressed through a bulletin board and a backstop mechanism, there is no record support sufficient to reach these conclusions. However, there are ample reasons to believe that these side-door solutions will be both problematic to implement and incomplete in their effectiveness. To begin with, a bulletin board will not commit required existing and new resources, whereas a centralized capacity market will make the necessary capacity commitments. As the PD acknowledges, "a comprehensive centralized auction approach could supplant, at least in significant part, the need for any other backstop procurement mechanism."[9], Without such a mechanism the default would necessarily be IOU-based procurement, which the PD rightly rejects as an inferior solution and potentially inconsistent with Section 380[10], or a CAISO-based backstop mechanism regulated by the FERC that may be inconsistent with the Commission's bilateral RA program. In short, the multi-year bilateral approach envisioned by the PD, is ultimately an unworkable approach that cannot achieve the reliable, efficient solutions that are urgently needed as the state face complex energy infrastructure decisions.

Therefore, Joint Parties respectfully urge the Commission to reverse the ultimate conclusion of the PD and conclude that a centralized, market-based RA approach is the preferred policy alternative, and

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8 Such accounting would be complicated by the need to comply with Public Utilities Code Section 380(b)(2), which requires the Commission to assure that costs are equitably allocated to "prevent shifting of costs between customer classes."

9 PD Page 69.

10 Under Public Utilities Code Section 380(e) the Commission must implement and enforce the same resource adequacy requirements on each load-serving entity.

is necessary for the implementation of the multi-year forward RA commitment. In doing so, AReM and Dynegy concur that the Joint Parties' design would be an appropriate starting point for initiating a centralized capacity market implementation proceeding.

II. AGREED FINDINGS OF FACT

The PD reviews the lengthy record developed in this rulemaking and reaches several important findings of fact:

(a) The current RA program is not facilitating significant investment in merchant generation, and it is not likely to do so going forward;[11]

(b) A multi-year forward capacity commitment enhances reliability and facilitates appropriate transmission investment;[12]

(c) The RA program will promote better investment, more cost-effectively, if the value of capacity is transparent and if information is broadly and symmetrically available to all participants;[13]

(d) Investment in new resources cannot be driven solely on IOU-based procurement or through an extension of the LTPP process to include all jurisdictional LSEs;[14]

(e) Price discrimination between new and existing supply resources is unsustainable, creates opportunity for third-party arbitrage, and is inconsistent with a policy of price transparency;[15] and

(f) A durable backstop mechanism is needed to achieve the state's reliability and cost-effectiveness objectives.[16]

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11 PD, Findings of Fact 1–3.

12 PD, Findings of Fact 4.

13 PD, Findings of Fact 5.

14 PD, Findings of Fact 11 and 15.

15 PD, Findings of Fact 7–9.

16 PD, Findings of Fact 10.

Joint Parties strongly concur that these findings are well-supported by the record evidence and consistent with a sound policy direction for the state's resource adequacy.

A. Deficiencies of the Current RA Structure and Need for a Multi-Year Forward Commitment

This rulemaking was instituted in 2005 because of widespread concern that the existing RA structure would not be successful in attracting market-based investment to meet the state's reliability needs. Furthermore, and contrary to Section 380, the existing structure relies excessively on IOU investment and contracting to meet reliability deficiencies. These concerns were well-documented throughout the proceeding by CFCMA and others.[17] We strongly support, therefore, the Findings of Fact that confirm that these flaws in the existing RA program exist and need to be remedied by material changes going forward.

The keystone finding in this decision is that "a required multi-year forward capacity commitment to the RA program would provide reliability benefits of advance knowledge of impending reliability problems and stimulation of merchant generator investment. It would also promote competition between new and existing resources as well as competition between transmission upgrades and supply additions and help to ensure that all market participants shoulder the burden of promoting investment."[18] The Joint Parties strongly concur. A three- to five-year horizon is consistent with the construction time for a wide range of generation resources, including both fossil-fueled and renewable assets. A multi-year forward framework is necessary to provide the requisite lead time to meet resource needs.

Historically, the IOUs have been required to engage in a multi-year forward assessment of resource needs and to develop matching procurement plans. Although the IOUs still serve a large majority of the customers in the CAISO control area, they are by no means the only LSEs. The

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17 *See, e.g.*, CFCMA Comments on Staff Report at 44 (February 2008); CFCMA Reply Comments on Staff Report at 5-6 (March 2008).

18 PD at 85.

responsibility for maintaining system-wide and local reliability, therefore, must be proportionately borne by all LSEs as is done under the current mechanism, and establishing a multi-year resource commitment requirement is the most transparent and practical means to ensure that all LSEs contribute equitably to the future costs of maintaining resource adequacy – so long as a practical means of implementing and managing that commitment is available.

B. Locational Price Transparency and Efficient Markets

The PD also reaches important findings concerning the fundamental economics of the desired RA structure. Several parties had argued throughout the proceeding that a bilateral approach was significantly less costly for consumers than a market approach, allegedly to the tune of billions of dollars annually. The PD rightly rejects these arguments as at odds with fundamental economics and rational business behavior. Eliminating a transparent price signal does not logically lead all sellers to offer their product at cost; instead, it forces buyers and sellers to make guesses of the fair market value of capacity based on incomplete and asymmetric information. The resulting contracts may favor buyer or seller; but it is likely in either case that there will be higher transaction costs, inefficient contracts, at least at the margin, and therefore inefficient investment (or retirement) decisions. These, in turn, result in higher total costs for the system, and these higher costs will, ultimately, be borne by customers.

There is an important connection between price transparency and merchant investment. Investors in new generation need a signal that they should devote resources to develop capabilities in a given market; these investments are a necessary prerequisite for responding to a need for new capacity, either through a Request for Quote or through merchant development. The Joint Parties believe, therefore, that in order for an RA mechanism to successfully attract *merchant* entry, that it must produce capacity prices that provide accurate signals for investment or retirement. Because fundamental supply and demand will differ across the California grid, these prices must have a locational component to attract and retain resources in the specific regions where they are needed for reliability, similar to the locational pricing mechanism contained in the CFCM proposal or the capacity markets of New England, New York, and PJM.

C. Universal Participation

Every customer benefits from a reliable electric system. Every LSE should, therefore, contribute towards the cost of maintaining that reliability *pro rata.* The PD correctly finds that the forward capacity commitment should apply equally to all LSEs, which we believe is the most reasonable means of complying with Section 380 requirements. This universal requirement should achieve the goal of reducing reliance on "IOU-based procurement to ensure that investment in non-renewable resources needed for long-term reliability."[19]

While an LSE should be provided an opportunity to meet its *pro rata* share of a system reliability requirement through resources it specifies, if it fails to provide such resources and consequently another LSE's procurement meets that need, or if there are available resources that have not been bilaterally contracted, then a mechanism is required to assure that costs to secure these resources are equitably allocated based on which LSE is serving the benefitting load. And to the extent that an LSE (or its customers) are allocated costs of a resource, the LSE should also be allocated a comparable share of the RA capacity of the resource. A centralized capacity market most efficiently accomplishes these functions, and would eliminate the need for any Cost Allocation Mechanism (CAM).

D. Durable Backstop

The PD finds that "[t]he absence of a durable backstop mechanism is a shortcoming of the current RA program that jeopardizes the reliability and cost-effectiveness objectives."[20] The CAISO's former RCST and existing ICPM processes were not designed as durable backstops, inasmuch as they do not provide an investment signal for new development, nor do they provide a sufficiently reliable revenue stream to forestall potential retirements of resources with high reliability value.

Notwithstanding the importance of a durable backstop mechanism for ensuring both LSE compliance and system reliability, the PD offers little guidance as to what such a backstop mechanism

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19 PD at 86.

20 PD at 86.

should look like. It acknowledges that "[s]ince IOU-based backstop procurement could run afoul of the Section 380(e) requirement for nondiscriminatory establishment of RA requirements for all LSEs, we recognize that CAISO backstop procurement is likely to be a component of the RA program."[21] We agree with this conclusion, but the conclusion should be clearer: a CAISO backstop procurement *must* be a component of the RA program. The CAISO is uniquely positioned to execute such procurement. The CAISO is able to assess charges to all its interconnected LSEs, even those that are not jurisdictional to the Commission, thereby assuring universal, equitable contribution towards resource adequacy costs. Finally, CAISO is uniquely able to impose market power mitigation to ensure just and reasonable procurement costs, although it is unclear how effective such mitigation will be in the context of a bilateral RA program as FERC has not demonstrated a willingness to actively regulate bilateral transactions conducted outside the framework of an organized market. As discussed in more detail below, we believe that a centralized capacity market would provide both the required robustness and the proper incentives for use of bilateral contracts.

III. FLAWED FINDINGS OF FACT

Although the PD sets the stage for a fundamental reform in the state's RA program, it fails to adopt a substantial, market-based RA mechanism as the preferred policy. This conclusion appears, to some degree, to be driven by flawed Findings of Fact that are premised on incomplete or inaccurate assessments. Moreover, much has been learned about market-based RA approaches from the eastern markets in the interim that has led to useful refinements to facilitate participation by demand response, reasonable price formation, and market stability. Many of the Findings of Facts can be shown to be incorrect, and therefore the economic and reliability rationales for preferring a bilateral approach would be overturned.

In particular, the Joint Parties takes issue with several of the findings in the PD:

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[21] Id.

(a) Selection of a centralized mechanism weakens the Commission's authorization or ability to ensure that state environmental policies are met;[22]

(b) "A bilateral trading regime is more conducive to development of specialized resources that meet California's environmental objectives, and avoidance of development of excess capacity."[23]

(c) Under a centralized mechanism, the Commission would be hindered from "responding to any market breakdown or other unforeseen consequences."[24]

(d) "A centralized auction would tend to promote investments in, and development of, generic RA capacity without regard to the locational, environmental, and operational aspects of the resource."[25]

As discussed below, these claims are unsupported by economic theory, experience in the eastern markets, or any record evidence.

The Findings of Fact also assert that "[d]evelopment of a capacity auction mechanism in California most likely would be accompanied by difficult challenges involving a complex balancing of several market design elements." The Joint Parties acknowledge that this is likely to be true, but the implication of this finding is that there is not an equal or greater difficulty associated with development of a complete regulatory regime supporting a multi-year-forward bilateral option with a robust backstop. Regardless of the policy the Commission elects, there is much work on implementation details to be done, building on the record in this proceeding and experience from the eastern markets. Indeed, the PD acknowledges that any distinction in the implementation challenges associated with a centralized capacity market as compared to a multi-year forward bilateral RA mechanism are unimportant, concluding that "we do not see ease and cost of initial implementation to be factors of overriding significance that would lead us to favor one approach over the other."[26]

The PD states that the "Commission has stated its end-state policy preference for a hybrid

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22 PD, Findings of Fact 12.

23 PD, Findings of Fact 20.

24 PD, Findings of Fact 16.

25 PD, Findings of Fact 18.

26 PD at 64.

wholesale generation market," a policy that was adopted by the Commission in Decision 03-12-059. However, the more recent D.07-12-052 specifically recognized the flaws of a hybrid market design and established a competitive market first policy that is intended to provide a transition away from the hybrid market.[27] By relying on the hybrid market structure policies, the PD abandons this commitment to competitive markets, essentially advocating a return to a succession of unit-specific, regulatory deals, rather than relying on market prices and merchant investment to meet future needs. The Joint Parties strongly disagree with this trajectory as being both inconsistent with state law, good public policy, and sound economics. The Commission has ample jurisdiction over the state's IOUs and its jurisdictional LSEs to implement state policies and address specialized requirements (e.g., renewable portfolio standard, emission performance standard). What is needed to supplement and inform the Commission's regulatory decisions are market prices for energy, ancillary services, environmental attributes, and capacity. Therefore, the Commission should take action and modify the PD by adopting a centralized capacity market to assure that transparent market-based prices for capacity are available to guide and direct future investment in the state's energy infrastructure. Indeed, California already relies on markets for the provision of energy, ancillary services, and certain environmental attributes. Adopting a centralized market mechanism that complements bilateral transactions is a necessary last step.

A. Centralized Markets Can Procure, and Have Produced, Needed Specialized Resources

The PD concludes that a market-based approach will result in "generic RA capacity" rather than the "specialized" resources needed to "facilitate environmental policies" or "for satisfying location reliability across multiple local capacity areas".[28] The decision points to no record evidence supporting this conclusion, and the Joint Parties submit that it is a flawed finding. Economic theory, record

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[27] he Commission emphasized that it believes in a "competitive market first" approach, and that "all long-term procurement should occur via competitive procurements, rather than through preemptive actions by the IOU, except in truly extraordinary circumstances." (D.07-12-052, page 209).

[28] PD at 66–67.

evidence, and empirical evidence contradict this finding.

One critical flaw in the PD's analysis of centralized capacity mechanism is a tacit assumption that the mechanism displaces all bilateral activity. It does not. As CFCMA explained during the workshops in this proceeding, a centralized market augments and supports the bilateral supply decisions of LSEs. In particular, IOUs would continue to be obligated to develop procurement plans as approved by the Commission to ensure availability of reliable and economic resources for their bundled retail customers. Thus, even were the Commission to use a centralized RA mechanism, it would retain substantial and direct authority over the resource procurement plans of most of its jurisdictional load.

The precept that a well-designed centralized mechanism augments bilateral transactions, rather than supplanting them, is borne out by the evidence from eastern markets. A careful review of the new generation resources that have cleared in the first six Base Residual Auctions of PJM's capacity market shows that *all* new generation falls into one of three categories: (a) under construction prior to the market implementation, (b) brought in under a long-term contract with an LSE, or (c) renewable generation eligible for federal incentives. This evidence from PJM is consistent with the evidence from the New England capacity market. Although New England has cleared a substantial amount of new generation, it is all either renewable capacity, or under contract to a utility. While this outcome was not expected when the markets were first implemented, it is not surprising in the current credit climate. The auctions have served a valuable purpose in bringing on one particular class of new supply resources: demand-side resources, including behind-the-meter generation, energy efficiency, and active demand reduction capability. These resources actively participated in the auctions, displacing a substantial amount of older, less cost-efficient generation resources. Thus, the centralized markets were highly effective in two regards: first, providing a strong incentive to LSEs to hedge potentially high future capacity costs by entering into bilateral supply arrangements, and second, allowing competition among existing and new resources at the margin.

B. Locational Resources in a Centralized Capacity Market

All centralized capacity markets in the United States are locational.[29] The CFCM design is also locational, and the PD must be corrected to reflect this fact. The capacity auctions in these markets are designed to clear sufficient capacity resources to meet all modeled local RA requirements, as well as the overall system RA requirement. The capacity clearing price in constrained local areas may be higher than the RTO-wide price if needed to retain costly, existing resources or to clear new resources offered in the capacity region.

This approach has been highly successful to date in securing sufficient resources to assure local reliability in the eastern RTOs with forward capacity markets:

- In New England, the risk of price separation led to a series of proactive measures by load-serving entities with potential resource deficiencies.
    - In the potentially constrained Boston area, the local IOU identified cost-effective transmission upgrades that eliminated a longstanding transmission bottleneck; the addition of these lines allowed the zone's RA requirements to be procured from low-cost external generation, eliminating the need to procure costly new generation resources located in a dense metropolitan area.
    - In its review of the success of the Forward Capacity Market, the ISO New England's Internal Market Monitoring Unit noted that nearly all new capacity resources offered were in potential load pockets. This pattern was a sharp change from siting requests in prior years, which were heavily weighted towards areas remote from load but with low land and labor costs.[30]
- In PJM, resources have been secured for six years so far under the Reliability Pricing Model (RPM). Various Locational Deliverability Areas (LDAs) have influenced auction outcomes

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[29] Note that the Midwest ISO mechanism is not locational because the Midwest ISO has not identified any material resource deliverability issues within its system that would merit use of a locational clearing mechanism.

[30] *Internal Market Monitoring Unit Review of the Forward Capacity Market Auction Results and Design Elements*, Figure 4-3., available at http://www.iso-ne.com/committees/comm_wkgrps/othr/fcmwg/mtrls/2009/aug72009/6-05-09_market_monitor_report_for_fcm.pdf

over these years, indicating the relative scarcity of capacity within the zones. Recent improvements in the market design have been made to better model zones, with the result that prices in the unconstrained regions of PJM have fallen dramatically. For example, the unconstrained clearing price in PJM in the most recent Base Residual Auction was $16/MW-day (about 50¢/kW-month), while the capacity price in the constrained eastern LDA was $140/MW-day (about $4.25/kW-month). This price differential shifted resource procurement strongly from the unconstrained to the constrained region, affecting both high-cost generation resources and incremental demand resources.

C. Environmental and Other Attributes

Capacity payments are a "top-up" compensation needed to keep sufficient resources available on the system to support system and local reliability. If, for example, a generator sees substantial opportunity to earn profits selling energy from its facility, it will need a smaller capacity payment to enter (and remain) in the market.

This same logic applies with equal force to environmental attributes of a capacity resource. With some emissions already priced (i.e., NO_x and SO_2) and with the possibility that Congress may still enact a carbon policy next year, new and existing resources will take these costs into account when forming their offers to sell capacity—be it bilaterally or in a centralized market. Likewise, Tradable Renewable Energy Credits monetize the value of renewable energy from qualifying facilities. These new costs and revenue stream can reshape the generation fleet towards more efficient generators using cleaner fuels—so long as investors are reasonably confident that regulators will not interfere and that such competitively valued products will continue to be available.

The evidence of the results from the eastern RTOs with forward capacity markets emphasizes how effective this shift towards environmentally friendly resources has been.

- Demand response participation (both active demand response and energy efficiency) has increased dramatically, displacing much of the need for new generation and allowing some existing resources to de-list. In New England, the first Forward Capacity Auction resulted in 7% of the net installed capacity requirement being met by DR; this figure rose to 9% in the subsequent auction. PJM has seen a four-fold increase in DR participation following recent changes to the market rules.

- New England now has about 3,100 MW of renewable generation in the queue, about five times greater than before the forward capacity auction was implemented. Eleven of the fourteen qualified new generation projects in the most recent auction were renewable.

The challenge before the state is how best to accomplish the balance between resource types, energy costs, and reliability as the decision-making becomes much more complex than it ever was in the "good old days" of integrated resource planning. Formerly, IRPs needed only to balance a few variables: fixed capital costs, variable fuel costs, load growth, water scenarios, and resource builds and retirements. Even with that limited scope, the decisions were complex. The scope has expanded, however, with all the statutory and regulatory requirements, new technologies with differential reliability effects, and more active demand side participation. The policy question is whether any regulatory process can weigh these complex, risk-laden decisions as effectively as a market can. Markets allow many participants to, in effect, apply their expertise and risk preferences, resulting in transparent prices that reflect their collective foresights, leading to efficient, cost-effective solutions to complex economic resource allocation problems. Importantly, they do so without imposing undue risk on consumers; if a merchant project is unprofitable, it is the asset owner, not ratepayers, who shoulder the greatest share of the cost.

We accept that the answer the Commission prefers is to allow state regulators and the IOUs to proactively drive *some* of the resource decisions going forward. The state has the responsibility under Section 454.5 of the Public Utilities Code to oversee the procurement activities of the IOUs. Additionally, the Commission retains its authority to implement and assess compliance with RPS requirements, and the CARB will regulate GHG emissions reduction and compliance. At the margin, however, the Commission should neither want nor need to be mandating each new resource in the state. Consistent with state policy of opening the wholesale market to competition, competitive merchant generation needs to play a central role in the state's RA policy.

In order to facilitate competitive wholesale generation, it is important to have a capacity market that is capable of (a) providing meaningful prices to inform these decisions and (b) supplying, on the margin, incremental merchant resources. As the managing director of the International Monetary Fund

stated recently (in a different context), "If you have wrong prices, you make wrong decisions, especially concerning investment in the long run,"[31] Even when LSEs are using bilateral contracts to secure new resources, without realistic capacity prices, they may select the wrong mix of resources to support overall reliability by, for example, investing excessively in wind resources (with very low capacity value) rather than solar or thermal (with much higher capacity value). The PD, however, fails to provide a market framework to guide LSE's purchase decisions.

D. Centralized Markets Are Less Likely to Result in Over-Supply than Bilateral Mechanisms

The PD repeatedly subscribes to a notion that centralized markets will somehow result in duplicative supply. The logic appears to be that (a) centralized markets will only produce generic RA resources, so therefore (b) LSEs will have to procure additional resources after a capacity auction to meet specific goals not met in the auction. This reasoning is seriously flawed, however.

First, as noted above, centralized capacity mechanisms are fully capable of producing resources to meet locational and environmental requirements, if the requirements are clearly delineated. Those requirements do need to be embodied in some element of the market, of course. Locations with specialized capacity requirements need to be modeled in the auction. Environmental and renewable requirements need to be reflected in emissions credit costs or the value of Tradable Renewable Energy Credits.[32] But with these constraints recognized, the evidence from eastern markets is that centralized capacity mechanisms are well able to meet specialized resource needs.

Second, there appears to be a presumption that LSEs will have taken no bilateral actions prior to the primary capacity auction. Again, we have already discussed why this is a flawed assumption. Most LSEs, including the IOUs in conformance with their authorized procurement plans, will have hedged some or much of their supply risk in advance of a capacity auction. As a result, the centralized auction

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[31] Andrew Batson and Deborah Solomon, "Tensions Rise Over the Yuan," *The Wall Street Journal* November 18, 2009, A11.

will only be committing a subset of all needed resources.

The PD fails to recognize, however, that there is a substantial risk of over-procurement under the bilateral approach. There are at least two causes for concern:

1. Lacking an effective, liquid means for trading capacity, LSEs may tend to over-contract to a degree as a hedge against needing to buy potentially expensive "top up" capacity later on. This practice would have the effect of building a margin on top of the established resource planning margin, raising costs to consumers.

2. Resource plans of different LSEs may not fully align. With no central reliability review of the proposed mix of capacity resources, a bilateral-only market design may end up with nominated resources that are not collectively capable of supporting the full reliability requirements of the grid. In this case, the CAISO could need to invoke backstop measures to purchase yet more capacity—notwithstanding the fact that a sufficient quantity has already been bought and paid for by consumers, but it was just in the wrong places or incapable of providing needed reliability services.

The Joint Parties' view, therefore, is that a centralized market is *less* likely to result in over-procurement to meet specialized needs and less likely to require CAISO backstop procurement.

E. Centralized Approaches Reduce Complexity

The Joint Parties acknowledge that "[d]evelopment of a capacity auction mechanism in California most likely would be accompanied by difficult challenges involving a complex balancing of several market design elements."[33] There is no "off the shelf" capacity market design that would work well in California. Even once a design is adopted, it will need to be refined; each of the eastern RTOs continues to evolve its respective capacity market design. But the PD seems to imply by this critique of centralized markets that development of a multi-year forward bilateral mechanism will somehow *not* be "accompanied by difficult challenges." We disagree. The PD hints at some of these challenges; many more belong on that list. For example:

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[32] In the alternative, CFCMA has also discussed the possibility of adding an explicit "green" component to the CFCM, so that the central auction would be constrained to obtain sufficient renewable resources.

[33] PD, Finding of Fact 21.

- Mitigation of market power. The current Commission policy provides a waiver of any penalties for RA non-compliance based on a threshold price of $40 per kilowatt-year – a value that perpetuates price discrimination between new and existing resources, since this value falls far short of the cost of new generation. Nor, if invoked, does the mechanism provide for any alternative means to competitively secure reliability needs for the load pocket. In a centralized approach, competitive market prices are determined with all supply offers subject to review by the CAISO's Department of Market Monitoring.

- Treatment of imports. The treatment and allocation of import rights among LSEs in a multi-year bilateral RA program will be more challenging, and raise potential equity issues, relative to the auction mechanism in a centralized clearing approach.

- Allocation of IOU-incurred costs. The decision about opt-out for LSEs has only been deferred, not resolved. In a centralized approach, cost responsibility is seamlessly placed on all load through the capacity charges, determined by actual system use.

- Achievement of environmental objectives. The responsibility for achieving environmental objectives needs to be allocated across all LSEs. In theory, the value of TRECs will provide a transparent mechanism for managing these responsibilities. To the extent that renewable resources also provide capacity value, the centralized capacity market approach will allocate those costs seamlessly.

- Bulletin board implementation. The Joint Parties remain very skeptical that an electronic bulletin board will be able to achieve the transparency ascribed to it. Bilateral contracts tend to include complex bundles of value, especially when they span multiple years. Designing a bulletin board that can reveal price for locational Standard Capacity Product transactions, separate and apart from other bundled value, and without revealing confidential business information, may be a serious challenge. There is also no evidence to suggest that a bulletin board would provide any opportunity to mitigate the credit requirement and risk associated with multi-year forward commitments by LSEs. Additionally, work remains to revise the terms of the current SCP, including the rules for outage accounting and substitution to assure that a fungible product is available, without which the effectiveness of any market mechanism is compromised. To the extent, against our expectations, that such a bulletin board can evolve and become a robust trading platform for SCP credits, there remains an interesting question of whether the bulletin board may fall under the jurisdiction of the U.S. Commodity Futures Trading Commission or the Federal Energy Regulatory Commission. Under a centralized approach, the transparent, annual reconfiguration auctions would

eliminate the need for an uncertain bulletin board, and would assign costs based on actual load in the delivery year.

- Load forecasting. Under the bilateral design, each LSE will need to develop a load forecast five years forward. These individual forecasts will somehow have to be reconciled with a CEC and Commission view of the aggregate forecast, and any variance "pushed down" to the LSE load forecasts. Further, a methodology for LSE load forecasts will need to be adopted that recognizes the strong possibility that, in the aggregate, ESP load under contract five years forward may be less than a pro rata forecast of ESP load (e.g., the product of a) the percentage of load served by ESPs in the current year, and b) the total forecast customer load in five years). Similarly, locational requirements will need to be forecast and allocated to LSEs. Under a centralized approach, only the CAISO-wide forecast is needed; LSEs are automatically allocated their *pro rata* share of reliability costs based on metered load share.

- Level of required showing. The PD states that the five-year showing will be for "at least 80 percent" of the forecast requirement. PG&E's original proposal set this standard at 100 percent. There are important policy and economics issues in selecting a reasonable level for this five-year showing, which must strike a balance between commercial reasonableness against the risk of under-procurement of long-lead-time assets. With less than a full showing five years forward, the Commission creates a serious risk that this initial showing will rely almost entirely on existing resources; but, when the full showing is required two years later, there will not be sufficient time to build the new resources that will eventually be needed. Under a centralized approach, there is no need to defer securing the full requirement and risk future reliability.

- Locational requirements. Because not all capacity is deliverable everywhere in the state, all bilateral procurements must be individually and collectively feasible. If the five-year showing can be for less than 100% of the forecast requirement, a consideration should be given to whether 100% of locational requirements should be required at that stage, recognizing that constructing new resources in these congested load pockets is typically more time-consuming and costly than new construction elsewhere in the state (or through imports).

- Credit. Inking multi-year-forward capacity contracts will consume a significant amount of working capital from all LSEs. As noted above, the associated costs and risks are substantial impediments to entry, or continued participation, for competitive retailers, contravening the legislative intent of SB 695, which provides for the expedited re-opening of direct access. The risk-adjusted costs of these capital requirements should be included in retail ratemaking

for regulated LSEs and will find their way into the pricing of ESPs. It is likely, moreover, that the financial cost and risks of entering in a multi-year-forward contract will create significant barriers to entry for new ESPs and competitive challenges for existing ESPs. Under a centralized capacity market, forward commitments under the CAISO Tariff are made without assigning obligations to LSEs based on forecast future load, eliminating the need for LSEs to secure letters of credit to support such forward commitments, thereby facilitating market entry by ESPs and load migration.

- Defaults. If an LSE or a supplier defaults on its multi-year-forward capacity contract, there are several consequences that will need to be managed by rule. Will the associated capacity be released from its supply obligation, or will some entity (or entities) step into the shoes of the defaulting LSE and pay the supplier? If the former, how will sufficient resources be maintained on the system? If the latter, how would such default costs be allocated? Similarly, if a supplier defaults on its contract, what rules would apply? Under a centralized approach, these issues do not arise, or they are covered by CAISO default cost allocation rules.

- Backstop procurement. Who will operate the backstop procurement? Who decides which resources to procure, and on what basis? Is there a procurement following each of the five-, three-, and one-year showings? Are deficient LSEs charged the replacement cost, or some penalty rate? When are these charges collected? Under a centralized approach, the annual reconfiguration auctions naturally serve as backstop procurement opportunities.

- Imposition of SCP Requirements. The CAISO Tariff specifies standards for all capacity resources. Under a bilateral market, however, these resources are not receiving capacity payments from the CAISO. How are charges and credits related to SCP performance assessed on bilaterally secured resources? Who has the collateral requirement for potential charges for these resources? Under a centralized approach, capacity resources' payments from the CAISO can be modified by appropriate charges or credits to ensure compliance with the SCP requirements

These issues collectively do not appear to be any easier or less controversial than the design challenges in developing a capacity auction. And, as noted above, each of these particular challenges is straightforwardly resolved under a centralized capacity market, such as the CFCM.

IV. CONCLUSION

The Joint Parties strongly believe that a centralized capacity market is the best solution for California's RA needs. It would augment the bilateral purchasing decisions of the state's LSEs with a robust, liquid, and transparent market, including structured remedies against the potential exercise of market power. The PD correctly finds that a centralized capacity market approach is preferable by treating all LSEs comparably in terms of resource adequacy, transparency, and efficiency. And although the PD concludes that there are numerous technical or economic aspects where a bilateral approach may be superior to a centralized capacity market approach, the analysis above shows that—on these grounds—the PD's finding for a multi-year-forward bilateral mechanism is flawed.

The PD makes a compelling case for the necessity of a multi-year forward approach – but fails to recognize that such a requirement is unworkable without a centralized capacity market. The CAISO has made it clear from its perspective as the reliability coordinator for most of the state's transmission grid that a multi-year forward approach is essential to ensuring that the supply resources needed for reliability are in place or under development. Moreover, the CAISO and the IOUs need a clear picture of the generation mix and location looking forward to ensure that the transmission infrastructure is adequate. A multi-year forward mechanism better aligns the time horizon of the showing to the construction schedules for new resources, thereby allowing efficient, preferred resources to displace uneconomic existing resources.

The simple fact exists that a bilateral-only approach is fundamentally incompatible with a multi-year forward required showing—that is, if expanded retail markets and the return of merchant investment are to become successful realities. In the record, there was no support from any competitive LSE for this approach, and the PD itself acknowledges the substantial commercial difficulties this proposal places on some LSEs. Not only would the PD place potentially untenable costs on some LSEs by requiring them to sign long-term contracts, it creates enormous risks for such LSEs if load assigned to them at the initial showing migrated to another supplier. Lacking any credible means to transact capacity through an organized market with its attendant market power mitigation protection, these LSEs could face material financial risk of having procured excess capacity for which there is no liquid market, or conversely, be

required to procure additional capacity while confronted with limited supplies and non-competitive pricing. The proposed bulletin board fails to mitigate this risk. Lacking any central market mechanism, retail suppliers would struggle to operate in a multi-year forward environment.

We recognize, however, that the question of jurisdiction weighs heavily in this decision. Our comments address these concerns, showing that the state generally, and the Commission in particular, has substantial ability to shape the supply resources in the state. Nothing about a centralized capacity mechanism, even one operated by CAISO under a FERC-jurisdictional tariff, changes the tools available to the Commission or its authority to use them in the public interest. The state's jurisdiction over wholesale generators is limited, however; the ability to combine the FERC's authority to enforce market mitigation on both in-state and external resources through a centralized capacity market option with the Commission's own authority is more powerful and comprehensive solution to the state's RA needs.

The Joint Parties therefore urge the Commission to modify the PD to correct or eliminate the flawed Findings of Fact identified in these comments and to adopt as the preferred policy of the state a centralized capacity mechanism. To the extent that the Commission is not prepared to adopt a specific centralized capacity market design at this time, the Commission should institute a subsequent proceeding to build a full and fresh record on how a centralized capacity market mechanism should be designed and implemented.

Respectfully submitted this December 2, 2009 at San Francisco, California.

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CERTIFICATE OF SERVICE

I, Lisa Vieland, certify that I have on this 3rd day of December 2009 caused a copy of the foregoing

Comments of the Alliance for Retail Energy Markets and Dynegy
On PD on Phase 2 – Track 2 Issues:
Adoption of a Preferred Policy for Resource Adequacy

to be served on all known parties to R.05-12-013 listed on the most recently updated service list available on the California Public Utilities Commission website, via email to those listed with email and via U.S. mail to those without email service. I also caused courtesy copies to be hand-delivered as follows:

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I declare under penalty of perjury that the foregoing is true and correct.

Executed this 3rd day of December 2009 at San Francisco, California.

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