

**REPLY COMMENTS OF THE CALIFORNIA FORWARD CAPACITY MARKET
ADVOCATES (CFCMA) REGARDING MARKET SURVEILLANCE COMMITTEE'S
DRAFT OPINION ON
"LONG-TERM RESOURCE ADEQUACY UNDER MRTU"**

This document presents the comments of the California Forward Capacity Market Advocates ("CFCMA") on the draft opinion on "Long-term Resource Adequacy Under MRTU" ("Draft Opinion") distributed by the Market Surveillance Committee of the California ISO ("MSC") on November 5, 2007. CFCMA is composed of five member companies: FPL Energy, NRG Energy, Reliant Energy, San Diego Gas & Electric Company ("SDG&E"), and Southern California Edison Company, which collectively serve approximately half of the CAISO's load and own approximately one-third of the interconnected generation. CFCMA has filed several substantial documents in this matter that present our positions at greater length:

- "Pre-Workshop Track 2 Resource Adequacy Comments of the California Forward Capacity Market Advocates", Rulemaking 05-12-013, May 18, 2007 ("CFCMA Comments")
- "Track 2 Centralized Capacity Market Proposal of the California Forward Capacity Market Advocates," Rulemaking 05-12-013, August 3, 2007 ("CFCMA Proposal")
- "Evaluation Criteria Matrix for the California Forward Capacity Market (CFCM) Proposal," Appendix C to CFCMA Proposal ("CFCMA Matrix")
- "Responses of CFCMA to CAISO additional questions for September 28 stakeholder comments," September 28, 2007.
- "Comments Of CFCMA Regarding California ISO Straw Proposal On Alternative Central Capacity Market Designs," October 31, 2007.

RESPONSE OF CFCMA

In its draft opinion, the MSC concludes that the CPUC should defer taking decisive action to meet California's long-term resource adequacy ("LT RA") needs. Instead, the MSC calls for the CPUC to rely solely on the new MRTU energy market, tweaks to the existing RA structure, and an expanded supply of renewable technologies and demand response, backstopped by procurement by the investor-owned utilities ("IOUs"). CFCMA is disappointed in the lack of responsiveness to the concerns and direction of the CPUC shown in this Draft Opinion, which is essentially a call for *inaction*. The CPUC has sought proposals for change in the RA program for the purpose of adopting an LT RA structure based on a clear factual record; the Draft Opinion now dismisses this call on grounds that, as we discuss below, are flawed, misdirected, and outside of the scope of this proceeding. While some of the recommendations may have merit under a theoretical construct, regrettably, rather than providing constructive and

actionable guidance for the CAISO and CPUC, the Draft Opinion presumes an inaccurate hypothetical foundation, and then proceeds to build largely unattainable constructs on top of this nonexistent groundwork.

The State, the CAISO, and the CPUC have already—wisely, in our view—reached conclusions that the MSC implicitly denies:

- **A Planning Reserve Margin is required.** The MSC calls for discarding this fundamental forward planning concept, and in its place would have California secure targeted “replacement reserves” in advance of real-time operations to provide additional reserve units. While the MSC may recall the problems created by Replacement Reserves in California during the summer of 2000, the MSC has not, apparently, undertaken a study of the problems created by use of a replacement reserve product in ERCOT, and there certainly has been no study of such a concept within the MRTU framework.
- **The existing RA structure is significantly flawed.** Although, as the Draft Opinion points out, there has not been a major reliability event under the current structure, that is a very weak standard of success. The current patchwork system relies on short-term mandatory hedging requirements, stop-gap utility-procured build initiatives, and contentious net cost allocation mechanisms and suffers for the lack of forward RA commitment on a transmission planning horizon and the absence of meaningful market power mitigation in load pockets.
- **Efficient system planning requires a full forward view of resources.** In its Straw Proposal, the CAISO makes clear that “a multi-year forward assessment of the capacity that is actually committed to serve the needs of the CAISO control area ... is necessary for making optimal RA procurement and investment decisions, particularly to facilitate effective coordination with the transmission planning process.”¹ Yet the Draft Opinion does not lay out a plan to meet this need, instead tepidly endorsing a showing “somewhat further in advance of delivery” but ultimately providing no plan for how this could be achieved other than through voluntary forward contracting by load-serving entities (“LSEs”). Such constructs have been vehemently opposed by energy service providers. Does the MSC intend to praise retail choice or to bury it?
- **A commitment to competitive wholesale markets.** The Draft Opinion states, “If retailers sign fixed-price forward contracts for energy to hedge short-term locational price risks far enough in advance of delivery to allow new generation units to compete to supply this energy, MRTU can also provide strong incentives for suppliers to locate and operate their generation units....” (p. 4). There is no

¹ “Straw Proposal on Alternative Central Capacity Market Designs,” California ISO, October 11, 2007, p. 3.

evidence in the record, however, for a LSE entering into long-term, fixed-price arrangements to build new generation facilities in California or, for that matter, anywhere else in the United States. CFCMA is not aware of any such long-term contracting, including ERCOT, contrary to the statement in the Draft Opinion (“retailers and suppliers enter into long-term energy supply arrangements to fund new generation investments”; p.5), where one of our members (Reliant) is a major market participant. Under the MSC’s belief that you have to have long-term, fixed-price contracts between retailers and suppliers to fund new generation, it appears that California’s regulated utilities are **the only option** to underwrite the construction of new resources since they currently have practically all of the load — at best this is a path towards vertical re-integration, and more likely a route which ultimately becomes financially unsustainable. The MSC appears to take the view that LT RA could mean nothing more than “the utilities pay for everything.” Such a view is fundamentally antithetical to a competitive wholesale market. Moreover, it undermines the very flexibility that the Draft Opinion seeks by delaying any meaningful action on LT RA.

The Draft Opinion states that California should learn from the experience of eastern RTOs, yet fails to follow its own advice. The three eastern RTOs that have a substantial operating record, namely PJM, NYISO, and ISO New England, have been down the path the MSC recommended and found it to be inadequate. Were the CPUC to follow the advice of the Draft Opinion, it would simply retrace the long history of failed RA programs in these RTOs. CFCMA urges, instead, that we learn from the experience in these RTOs and move directly to a best-in-class market design.

- **MRTU markets are unlikely to be sufficient to attract needed investment in existing and new resources.** In New England, the shift from a one-price energy market to a fully nodal market, similar to MRTU, partially addressed issues of inefficient locational signals to invest, but even after the introduction of nodal pricing, every state commission publicly acknowledged that the energy markets alone were not attracting enough investment.² Likewise, both New York and PJM have sophisticated locational energy and reserves markets, including scarcity pricing and integrated demand response, but both RTOs have found it necessary to implement enhanced centralized capacity markets to maintain LT RA.
- **Experience with eastern RTO capacity markets is indicative of success.** It is inaccurate to assert, as the Draft Opinion does, that there is not enough experience with capacity markets in eastern RTOs:

² Statements before the Federal Energy Commission, September 20, 2005.

- The NYISO has operated capacity markets since its inception in 1999, and this month NYISO will conduct the auction for the fifth full year under the current market design. Under that design, capacity margins have increased in every locality, and there have been substantial amounts of entry by independent power producers in load pockets, supplementing direct procurement by utilities. Although stakeholders are working to improve this design, in particular by refining the market power mitigation in load pockets and by developing a set of forward auctions, there is broad consensus among stakeholders—including the NYPSC, the NYISO, and the Independent Market Advisor—that the basic elements of the capacity+energy construct are functioning well.
- PJM has now conducted auctions for three years under its Reliability Pricing Model (“RPM”). These auctions have added 1,348 MW of *new* demand response resources and 2,588 MW of new generation over the three years, in addition to delaying deactivation or retirement of units (especially in load pockets). No state commission has asked PJM or FERC to revise or cancel the market design.
- Although the New England Forward Capacity Market (“NE-FCM”) has yet to run its first auction, the early returns are very positive. ISO New England received expressions of interest from over 10,000 MW of planned generating resources, in addition to over 2,200 MW of new demand response and 5,000 MW of incremental imports. The interconnection queue has expanded from less than 1,000 MW to over 13,000 MW since the market design was announced, including nearly 4,000 MW of renewable energy projects. It seems clear that the NE-FCM has ensured that New England will meet its LT RA goals with abundant, diverse and competitive offers of new investment.
- **ERCOT experience is insufficient, and conditions are too different, for California to rely on it as a model for LT RA.** Earlier this month, the PUCT implemented a capacity payment system, the EILS, for certain classes of demand response resources, in response to calls from developers that the energy markets alone were not providing sufficiently stable revenues to attract customers to the program.³ TXU delivered a widely publicized letter to the PUCT announcing its intention to retire generation because revenues from the current market design were inadequate. Moreover, ERCOT currently has a fundamentally different retail energy market than California. As well, ERCOT is

³ Proposed Order, Project No. 34706 – PUC Rulemaking to Amend ERCOT Emergency Interruptible Load Service, November 1, 2007.

primarily a thermal generation-based system without the vast hydroelectric resources and corresponding variability of supply as in California. Finally, ERCOT is effectively islanded from the rest of the power grid, while California relies heavily on imports to meet its energy demands. These and other material differences between ERCOT and California render comparisons of Resource Adequacy less meaningful than comparisons between Eastern markets and California.

- **Short-run bilateral markets fail.** All three eastern RTOs initially implemented short-run bilateral RA mechanisms, with a standardized capacity product. Each LSE was required to make periodic showings of adequacy or face a deficiency penalty. This is, substantially, the design implicit in the Draft Opinion. This design has failed in each of the three eastern RTOs, where it was demonstrated to create inadequate incentives for investment and to be highly susceptible to the exercise of market power. Locational resource adequacy in these markets was only maintained by costly and inefficient RMR contracts. Further, this approach provided no guidance to the transmission planning process in these areas, creating a potentially large gap between the transmission and generation available. The Draft Opinion does not address these questions or provide any rationale why the design that has failed everywhere else will succeed in California.

The Draft Opinion errs in implying that a capacity mechanism has no role because California has complex priorities for its future energy development and thus, the Draft Opinion asserts, needs little or no “generic MWs.” As evidenced by the experience in eastern RTO capacity markets, described above, this view misses a central role of a CCM: to develop transparent, competitive prices for the capacity value of a diverse set of resources, both existing and new. Every resource provides an array of value to the grid: injections of energy and VARs, real-time balancing of the system, contribution towards meeting the Planning Reserve Margin, and contribution towards meeting other state policy priorities. The MRTU will price energy and ancillary services. Renewable Energy Credits, emissions permits, and similar mechanisms reveal the value of contributions towards the state’s Renewable Portfolio Standards, GHG emissions reductions targets, and other policy goals. This leaves, however, an incomplete market, since there is no price for the underlying capacity value of a resource.⁴ Economics tells us that incomplete markets lead to inefficient investment, because investment follows payment. Locational capacity values from an efficient capacity market will provide valuable information to developers and LSEs when choosing among competing

⁴ The Draft Opinion also fails to note that CCM designs need not weight all installed MWs equally; for example, under the current CPUC guidelines, intermittent resources are derated to reflect their expected contribution of energy at peak. Under the CFCM design, capacity payments flow only to units that are available, reinforcing the effect of the counting rules.

technologies, which may differ in their capacity value, as well as their ability to earn money from ancillary services, RECs, GHG emissions reductions, and other sources. Centralized capacity markets also provide a liquid market for participants to trade capacity obligations, reducing the risk (and associated costs) of construction delays or extended outages that would otherwise be passed along to consumers in the form of higher total costs, and facilitating the efficient switching of retail load among energy service providers.

Moreover, in asserting that California will need no generic MWs, the Draft Opinion relies on assumptions about the availability of *existing* resources and imports. Much of the state's generation is very old; it is not reasonable to assume that all existing resources continue in service indefinitely. Likewise, California imports a sizeable fraction of its power from the Pacific Northwest and Arizona, but as those areas' own energy demands increase, California will have to increasingly compete for—and pay fully compensatory prices to—import sources from those areas. As we have learned from eastern RTOs' markets, revenues from MRTU alone are unlikely to be sufficient to maintain all existing resources or to attract resources from neighboring regions that are themselves nearing their capacity reserve margin requirements. The Draft Opinion does not discuss how it foresees compensating *all* resources sufficiently to ensure LT RA. The most straightforward way to ensure LT RA, however, is to institute a centralized capacity market.

The Draft Opinion discusses the interaction of the LT RA with retail choice, and concludes that uncertainty in retail access programs supports delaying a centralized capacity market. This conclusion does not follow from the discussion. Although the *expansion* of retail choice programs is still at issue, there is no reason to believe that existing DA customers will be forced to return to utilities. The MSC should be helping the CPUC design an LT RA program that provides the greatest flexibility for its future decisions on retail access. A continuation of the current RA program would, as the record in the Track 2 docket shows, require complex cost allocation that would have to track individual end-use customers for the duration of the life of generation assets purchased on their behalf. These allocations can become a significant administrative burden to market participants and the CPUC, and if done incorrectly, can create inequitable and substantial cost shifting. These complexities would undermine the effectiveness of future retail choice programs the CPUC may decide to implement, whereas a centralized capacity market, with its ease of managing customer migration, would impose no such legacy constraints on customer choice.

It is further puzzling to CFCMA how, on the one hand, the Draft Opinion supports changes to the current RA program—particularly, and the development of a standardized capacity product—that would effectively create a market for capacity, but then concludes that centralizing that market would be premature. Industrial organization theory on this issue is clear: central markets are superior to bilateral

markets when there are high contracting costs and high search costs. Requiring every LSE to bilaterally contract to meet its ever-shifting load obligation has these characteristics, especially if these contracts must be executed well in advance of each delivery year, as the CAISO has identified it prefers. Centralizing the market reduces many costs and eliminates others (such as the credit cost of the buyer). A centralized capacity market eliminates the need for individual LSE load forecasts, and it would ensure equitable allocation of costs and ensure the CAISO has satisfied all of its capacity needs. Further, it eliminates the need for verification that each LSE has met its RA requirement, reducing the burden on the CPUC, and allows for review and mitigation of market power. The Draft Opinion ignores these costs of the current RA system and the corresponding benefits of shifting to a centralized design, such as the CFCM.

The Draft Opinion seems to work from the premise that California will be able to switch on a well-designed capacity market at will in the future—either that, or simply rely on utility procurement of all capacity in the state. As CFCMA has stated on the record, it would take at least one year to develop the market tariffs, rules, and software; combined with a four-year forward procurement timetable, the earliest that CFCM could be put in place is five years following a decision to implement it, that is, for Summer 2013 were the CPUC to vote to adopt the CAISO’s recommended market design. Further delay in adopting a comprehensive solution to the LT RA needs of the state will postpone to an even later date the implementation of such a market that can take over for the current RA design— which will, we hope, have been incrementally improved in the interim, but which cannot ever evolve into the well-functioning RA mechanism that a good market can provide.

CONCLUSION

Regrettably, the Draft Opinion fails to provide the CPUC, the CAISO and stakeholders the guidance sought in this phase of these proceedings. The MSC’s recommendation to “do nothing” simply hinders California from proactively addressing Resource Adequacy concerns via a comprehensive, transparent, equitable and sustainable mechanism. Rather than work within the framework provided by the CPUC and current State law, the Draft Opinion offers no comprehensive economic framework to move the State forward. Moreover, many of the criticisms that the Draft Opinion renders are not applicable to the centralized capacity market design advanced by CFCMA or apply equally to maintaining the status quo, as the Draft Opinion essentially advocates. CFCMA is very concerned that, if the State follows the recommendation to “do nothing”, we are simply forfeiting the opportunity to prevent problems before they develop. Instead the State will have to address these same issues again in the future, but at that time, likely under “crisis mode” conditions.