

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

Order Instituting Rulemaking to Promote Policy and
Program Coordination and Integration in Electric Utility
Resource Planning.

R.04-04-003
(Filed April 1, 2004)

**COMMENTS OF DUKE ENERGY NORTH AMERICA
ON CAPACITY MARKETS WHITE PAPER**

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Pursuant to ALJ Minkin’s August 25, 2005 Ruling, Duke Energy North America, LLC (“Duke Energy” or “DENA”) provides these comments on the Energy Division’s August 25, 2005 *Capacity Markets White Paper* (“Whitepaper”). Below DENA describes its perspective on the state of current market failure. The comments then address those portions of the Whitepaper where the ALJ’s Ruling specifically requested comments.

I. Background and the Continuing State of Flawed Market Design.

Duke Energy owns and or operates a number of existing plants formerly owned by PG&E and SDG&E. DENA has participated extensively throughout the various proceedings at the California Public Utilities Commission (“CPUC” or “Commission”) in an effort to advance generation infrastructure development and market stability. DENA has participated throughout the Commission’s Resource Adequacy Requirement (“RAR”) phase of this proceeding as well, advocating for clear and stable procurement rules that will support the continued operation of

existing resources that remain critical to California's current supply portfolio, as well as the development of new generation resources with long-term capacity commitments.¹

The Commission's Energy Division is to be applauded for preparing a comprehensive Whitepaper that is focused on the development of a market structure that would seek to support existing generation as well as the development of new capacity. The continuing absence of such a structure after the Energy Crisis has severely limited California's ability to develop a robust infrastructure. Instead, there is serious and ongoing consternation over the ability to secure long-term reliable generation supplies. The Whitepaper indicates a promising path that builds from the experiences of other markets and the additional refinements that are underway.

Given the broad-based concerns about capacity sufficiency over the next two plus years and the insufficient time to fully implement RAR policies for Summer 2006, DENA continues to believe that the Commission must take the most prudent course of action and adopt an "interim contracting" approach. This approach would both ensure the continued availability of existing generation in the near-term while capacity sufficiency is a concern, and promote longer-term commitments that allow the modernization of the existing generation sites into new, environmentally superior, in-state sources of reliable power. Besides the reliability benefits

¹ See, e.g., *Comments of Duke Energy North America on the Proposed Decision of ALJ Wetzell Regarding Resource Adequacy Issues*, September 20, 2004 in R.04-04-003 arguing that the utilities should be given interim or transitional procurement authority to secure capacity in anticipation of RAR; *Opening Brief of Duke Energy North America on Electric Utility Resource Planning*, October 18, 2004 in R.04-04-003 arguing in favor of a interim contracting arrangement as described in testimony presented in that case; *Reply Brief of Duke Energy North America on Electric Utility Resource Planning*, November 1, 2004 in R.04-04-003, arguing for interim steps to maintain availability of existing capacity while focusing on the eventual development of a formal capacity market structure; *Comments of Duke Energy North America on the Proposed Decision of ALJ Brown Regarding Electric Utility Long Term Resource Plans*, December 6, 2004 in R.04-04-003 arguing for including authority for interim procurement contracts with existing capacity; *Comments of Duke Energy North America In Response to Commissioner's Ruling Regarding Interim Resource Adequacy Obligation*, February 18, 2005 in R.04-04-003; *Supplemental Comments of Duke Energy North America Concerning Latest Round of Workshops on Resource Adequacy Issues, May 10, 2005 in R.04-04-003*; *Comments of Duke Energy North America Regarding Draft Energy Action Plan II*, July 1, 2005 letter to CEC President Peevey and CEC Chairman Desmond; *Reply Comments of Duke Energy North America in CEC Docket 04-IEP-1D, California and Western Electricity Supply Outlook Report*, August 5, 2005.

associated with maintaining availability of existing resources' generation capacity, this two-pronged approach will lead to plant modernization projects that improve plant fuel efficiency and their air emissions profile.

II. Comments in Response to ALJ Ruling

Consistent with the ALJ Ruling, DENA's comments first address the Staff's recommendations as outlined in Section VII of the Whitepaper. The appropriate roles are then addressed, followed by short comments on the "lessons learned".

A. Comments Concerning Staff's Recommendations Outlined in Section VII

The Staff's recommendations are found at pages 40-42 of the Whitepaper. Below DENA provides short responses to each recommendation. DENA's overarching position is that the CPUC should continue to move forward with the implementation of the LSEs' RAR procurement obligation through bilateral arrangements on a pragmatic basis to avoid a supply insufficiency crisis. Development of a formalized capacity market will help supplement LSE procurement options. The comments below start from a conceptual approach that there must be some type of phase-in of the capacity market structure given the need to ensure stability through predictable market transformation and realize needed capacity development as soon as possible.

Recommendation 1: Adopt a short-run capacity market approach with a downward sloping capacity-demand curve for the CAISO.

DENA Response: DENA supports the use of the demand curve approach provided that the mechanism is anticipating capacity needs in satisfaction of the general RAR policy (i.e., presumably 115% of peak monthly demand to be adopted in the pending RAR decision) with enough look-ahead in terms of forecasting needs to encourage new market entry.

Recommendation 2: Further investigate alternative availability metrics (e.g. UCAP v. ISO-NE’s proposed metric based on performance during shortage conditions) and ensure development of an availability metric that is applicable to hydro, wind, thermal and other generation technologies, and to appropriate demand response products.

DENA Response: DENA supports some measure of asset availability that, in terms of a formal capacity market operation, could be distinct from the built-in metric reflected in the RAR capacity “counting rules” insofar as a unit’s forced outage rate is reflected in the “qualifying capacity” of a resource under the RAR rules.

DENA views the capacity market structure as an additional tool to help LSEs satisfy their RAR procurement obligation. Imposing additional availability rules within the capacity market structure itself would essentially over-mitigate the resources such that the cushion built into the RAR planning reserve level would be superfluous, and asset owners would need to reflect the potential risk of forced outages in their offerings for the capacity. Similarly, DENA would presume that the demand curve approach would require modification to reflect the potential forced outage rate of resources on the system.

DENA encourages the Commission to avoid mitigation measures addressing anything more than market power concerns, particularly during the initial development of the capacity market. Commercial arrangements (i.e., bilateral contracts) should be the primary means of addressing performance concerns. The Commission should also recognize that the failure of an asset to perform will also be addressed by the adjustment of the RAR “qualifying capacity” quantity. Should there be continuing concerns about poor performance from an RA capacity resource, the Commission can reconsider the need for an additional performance metric with financial repercussions within the structure of the formal capacity market. However, at this point in time imposition of such a rule may be counter productive.

Recommendation 3: Consider subtraction of peak energy rents from the capacity payment.

DENA Response: DENA favors market-based approaches which reflect the value of the services provided. The capacity payment should reflect the value of maintaining available capacity, which in turn should cover a portion of fixed costs. Additional fixed cost recovery, as well as marginal O&M costs, return and scarcity values, would be recovered through energy payments. While some netting out of energy payments may be appropriate, the netting mechanism should allow scarcity values to be received in the payment stream when capacity is its most valuable and when energy and reserves would be their most scarce. The goal of the capacity market, coupled with the operation of a well-functioning energy market, should be to provide clear and sufficient market signals to both the LSEs and the suppliers of the value of the resources and thereby encourage supply development. Netting out all peak energy rents and failing to reflect some scarcity value would undermine those signals and thereby reduce the efficacy of the wholesale market structure.

Recommendation 4: Adopt reasonable locational installed capacity requirements with locally varying demand curves.

DENA Response: Ideally a formalized capacity market could be initiated with a locational installed capacity procurement obligation with geographically distinct capacity demand curves. While DENA believes this is an appropriate structure for the capacity market in the longer-term, the CPUC may want to take a more pragmatic and simple approach initially in order to make clear progress on infrastructure development where it is currently needed. There are well publicized forecasts of supply insufficiencies or retirement risks within SP-15, particularly under some more adverse system conditions. Phasing in additional local reliability areas (LRAs) over time may allow time to begin initial implementation targeted to the most pressing “problem

areas” and then expanding to other LRAs as implementation details are ironed out. DENA is concerned that a too complex structure could result in the continuing delays that have plagued California since the Energy Crisis and perhaps before that time. If, however, an interim contracting approach is taken to provide a bridge with enough time to develop and implement a capacity market, then it may be possible to simultaneously apply a well-refined LRA procurement obligation in conjunction with geographically distinct capacity demand curves.

Recommendation 5: Consider protecting against capacity exports during times of tight supply through the use of capacity prices that fluctuate seasonally.

DENA Response: DENA believes that the Commission should be particularly careful of requiring “recallable” resources or other actions that may be seen as “protectionist” by other market participants in the broader Western Region. This may not be required as an explicit element of the capacity market design. Instead, it could be reflected within the RAR “counting” or “deliverability” rules whereby capacity within California may not count toward supporting a LRA-based RAR obligation if that capacity is sold firm out of the LRA or control area.

If the RAR procurement obligation reflects a sufficient planning reserve level, then between potential penalties for a LSE’s failure to procure and the capacity market’s demand curve design, there should be sufficient signals to avoid “times of tight supply.” If, however, the RAR qualifying capacity rules are not correctly designed (or adjusted over time), then some resources with limited energy production or other availability limitations may be over-counted, which could result in “tight supply.” DENA believes that the market structure should encourage efficient regional transactions and avoid imposing new “seams” in the regional wholesale marketplace.

DENA agrees with the Whitepaper that “the capacity market may need to pay more for capacity in August to make sure California gets what it needs.” Whitepaper page 41. DENA

believes that if the RAR procurement obligation is correctly set on a forward basis, prudent procurement practices in both the bilateral setting and the formalized capacity market would reflect the higher value of capacity during the high demand summer periods. This should be an ordinary result of market function where there is supply sufficiency. The market itself need not have rules that seasonally change price mitigation or adjust demand curves. Such approaches would add unnecessary complexities and increase the perception of regulatory uncertainty. Instead the markets should have established rules that will allow for prices to reflect scarcity values so that the LSEs will undertake procurement strategies that seek to avoid satisfying their RAR procurement obligation at the last-minute. By allowing the capacity market structure to express resource value in the pricing, regional supplies can compete (to the extent they count under RAR rules) and LSEs can manage price risks through forward procurement in the bilateral markets.

Recommendation 6: Investigate the dependability of capacity import contracts during times of high West-wide load.

DENA Response: DENA's concerns with this question are similar to those expressed above. If other regions with resources that would import to California LSEs are "recallable", then there is a "seams issue" that will undermine the efficacy of the regional marketplace and potentially impact reliability as described on Whitepaper pages 41-42. If there are resources with production limitations that are not adequately reflected in California's RAR procurement obligations on LSEs, then there could be problems if those imports are not, in fact, available. However, the crux of the concern underlying this Whitepaper is the assessment of import capability under adverse transmission conditions where system dynamics may create transmission congestion that impedes import deliverability. In those cases some mixture of transmission and supply investments could alleviate the reliability risk. Concern and analysis of

that type of issue should be distinct from the understanding that transient events can occur that would impede imports.

DENA is not convinced that issues surrounding use of imported power would trigger a need for “special requirements for import contracts, such as higher penalties for default, and/or a different price-setting mechanism than that used for internal capacity contracts.” Whitepaper page 41. Such mechanisms would impede the operation of a regional marketplace by creating new “seams”, discouraging contracting with imports or development of projects that may seek to import. It would also likely impede exchange agreements or other procurement approaches that take advantage of divergent timing of regional demand.

Recommendation 7: Make the fixed-cost recovery curve explicit.

DENA Response: “A capacity market approach developed for California should specify its desired fixed-cost recovery curve – i.e. the relationship between the level of installed capacity and the fixed-cost recovery that an investor can expect – and should show that its design comes close to providing this level of fixed cost recovery to investors.” Whitepaper page 42. DENA supports the notion of undertaking a transparent process for development of the demand curve that will satisfy some portion of the resources fixed cost recovery. However, there are some concerns that should be considered. First, the proxy resource used in the demand curve may not be the particular type of resource that is best suited for system needs. Said differently, if the proxy resource is a simple cycle combustion turbine with some operating limitations such as a limited range of operating points, there may be a need to also reflect the additional value the control area operator needs in terms of regulation services or provision of partially unloaded capacity. Resources with those operations characteristics may have different levels of fixed costs. While DENA strongly agrees that parties want to know that the capacity market’s “design

comes close to providing this [sufficient] level of fixed cost recovery to investors”, there should also be an understanding that fixed cost recovery would not necessarily only come from the capacity payment, but also likely from some revenues associated with the provision of ancillary services and energy. Accordingly, the demand curve should be designed to provide sufficient revenues to support new development and it should have some durability, rather than being subject to annual adjustments.

Recommendation 8: Strive for regulatory credibility.

DENA Response: DENA supports this recommendation and believes it is critical. California has lost precious time correcting the market design flaws associated with the Energy Crisis. Given the status of California’s current generation fleet, there is a need to maintain availability of existing resources via contract while simultaneously pushing for the development of newer generation to replace the aged plants. There has long been a need for a clear plan for implementing steps to correct the flaws. DENA has advocated for some time the use of an “interim” or “bridging” contract to secure existing resources. That has not occurred, and as reflected in a recent CEC report, there are over 3,000 MWs of existing resources that are not under contracts.² It is not prudent to presume that resources not contracted for will continue to remain available. Yet that presumption continues today at the same time there are no market mechanisms that will secure existing resources or will lead to the development of new capacity.

² See, Transcript of September 12, 2005 Joint Energy Agencies meeting, posted at http://www.energy.ca.gov/energy_action_plan/meetings/2005-09-12_meeting/2005-09-12_TRANSCRIPT.PDF, pages 14-15 and 22-23 discussing 3000 MWs of existing generation without contracts that was previously categorized as at high risk of retirement and whether assumption continued availability.

B. Appropriate Roles And Responsibilities Of The Commission And CAISO In The Development, Design, And Potential Implementation Of Capacity Markets Outlined In California In Section VIII

DENA believes that the Commission should develop the broad policies for general market design goals (or market design principles), and then have the CAISO develop market structures that will forward those goals/principles. The Commission would continue its oversight of jurisdictional LSEs to have assurances that they comply with RAR procurement policy requirements. The CAISO would develop and implement a formalized capacity market structure that simultaneously provides a means for LSEs to satisfy their RAR procurement obligations as well as providing incentives for development of capacity should the LSEs not bilaterally secure that capacity for their own needs.

This division of responsibilities—the CPUC setting policy requirements for RAR procurement obligations and the CAISO developing a market structure that echoes those policies and provides a market mechanism for securing compliance—is the best means of imposing the RAR policy upon the full spectrum of uses of the CAISO Controlled Grid. Moreover, this division is consistent with the resources and expertise of the entities. Namely, the CPUC’s policy development expertise (as well as oversight of jurisdictional entities), and the CAISO’s expertise as the control area operator and FERC-jurisdictional ISO.

C. “Lessons Learned and Related Policy Questions” outlined in Section VI. E.

Much of the comments provided above touch on areas discussed under the “lessons learned” portion of the Whitepaper. Rather than discussing each “lesson” DENA comments on some select items below.

Lesson Learned #3. Bilateral capacity markets should be accompanied by a centralized market that accommodates smaller LSEs. This does not interfere with bilateral contracting and can increase the efficiency and reduce the market power in bilateral markets (Whitepaper page 38.)

DENA comment: DENA concurs that a formalized capacity market structure will be an important tool for LSEs to satisfy their RAR procurement obligation. It is important that the structure not interfere with bilateral contracts as those contracts are likely to be the primary means of supporting new infrastructure development. The “backstop” role of the capacity market may also support development, but it will more likely provide a means for LSEs to acquire smaller increments of capacity and suppliers to sell “odd lots” of capacity not acquired under whatever standardized products develop in the bilateral markets. Assuming that issues regarding “partial capacity commitments” are worked out with the CAISO, the formal capacity market will increase efficiency of generation asset utilization.

Lesson Learned #5. Capacity should not be defined as name-plate capacity, but should be adjusted for performance. (Whitepaper page 39.)

DENA Comment: DENA believes that parties have essentially addressed this issue in the RAR workshops under the “counting rules” insofar as poorly performing units will have reduced “qualifying capacity” levels based on historic performance. This approach appropriately balances performance levels within the control of the asset owner with the provision of a reliable product. It would not be particularly fair for the capacity market structure to call for the stripping away of capacity payments already paid to the resource should a unit experience a forced outage during peak demand periods. Transient events and forced outages do occur, and this risk is best managed through the procurement of reserves. The inherent risks are already addressed through the elevated reserve levels adopted under the RAR procurement obligation. That said, DENA does expect that bilateral arrangements made outside the formal capacity market will likely include performance-based mechanisms such as availability adjustments or

efficiency incentives. It would not, however, be commercially beneficial to impose an additional layer of commercial risks on suppliers through the capacity market.

Policy Question #3. Would this mechanism assist California in meeting its goals to be resource adequate and reach a minimum of 15-17% reserve margins? (Whitepaper, page 39.)

DENA Comment: The question of whether the RAR procurement obligation is met focuses more on LSE procurement practices than on the existence of the capacity market. That said, DENA does believe that the capacity market provides an important tool for LSEs to buy or sell qualifying capacity to better match their supply portfolio against their RAR procurement obligation. If the LRA procurement requirements and associated demand curves reflect the need to exceed a 115% capacity reserve level, then the structure should encourage investments to meet that reserve target.

Policy Question #4. To address deliverability concerns and meet the ISO's requirements, is it appropriate to investigate solutions for local areas as a first step?

DENA Comment: It would be optimal to have the capacity market roll out with this functionality, but DENA believes that time is of the essence in terms of assuring supply sufficiency and therefore it would not be prudent to delay initial implementation to acquire this capability. Clearly the "end state" design requires this element. But given the pressing need for additional capacity, particularly in Southern California, there is more value in taking a pragmatic approach that identifies certain pressing "problem areas" for interim or bridging arrangements. Put most succinctly, where the CAISO has or foresees major local area reliability problems, the first course of business should be assuring that 2006 RAR compliance procurement addresses those needs. This would most likely have to occur on a bilateral basis. Subsequently, when a

capacity market is closer to implementation, it would either include a full LRA procurement mechanism, or provide for a phasing-in of that capability.

III. Conclusion

DENA applauds the Energy Division's work on development of a capacity market structure for California. While DENA believes that a capacity market is a critical component, it appears unlikely that it can be designed and implemented in short order. Accordingly, it is critical that the Commission take immediate steps to have LSEs secure existing capacity through interim contracting to avoid a supply crisis in Southern California. While a locational procurement requirement is critical, definition and implementation of a multiplicity of LRAs may be better tackled through a phase-in after implementing a less complex capacity market structure that treats broader areas with individual demand curves.

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DENA urges the Commission to outline the capacity market “end state” that should exist and have that structure incorporated into the CAISO’s broader marketplace. This approach will reach to more entities than are subject to Commission direct procurement oversight. Given the likely time required to incorporate the structure into the CAISO, interim bridging bilateral contracts consistent with the Commission’s RAR policies should be pursued. Lastly, DENA urges the Commission to avoid approaching the capacity market design question as a means of creating some formula for cost-based rate regulation; instead the focus should be on developing a mechanism that provides clear and durable price signals that reflect the value of capacity in achieving LSE RAR compliance.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Eric Janssen, am over the age of 18 years and employed in the City and County of Sacramento. My business address is 2015 H Street, Sacramento.

On September 23, 2005, I served the within document, **Comments Of Duke Energy North America On Capacity Markets White Paper**, in R.04-04-003, with electronic and mail service as prescribed in R.04-04-003 and the August 25, 2005 ALJ Ruling, and personal service on the Assigned Commissioner and Assigned Administrative Law Judge, at San Francisco, California.

Executed on September 23, 2005, at Sacramento, California.

Eric Janssen

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