

**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.

Rulemaking 04-04-003

**COMMENTS OF THE
COALITION OF CALIFORNIA UTILITY EMPLOYEES
ON THE
STAFF CAPACITY MARKETS WHITE PAPER**

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Pursuant to the Chief Administrative Law Judge's August 25, 2005 Ruling, the Coalition of California Utility Employees offers these comments on the Staff "Capacity Markets White Paper."

I. INTRODUCTION: DO WE HAVE TO GO THROUGH THIS ALL OVER AGAIN?

In 1994, the CPUC published its Blue Book calling for, among other things, electricity prices to be set by markets. It then took four years until the California Independent System Operator and Power Exchange replaced the cost-of-service regime which had previously provided reliable electricity to Californians for the better part of a century, and less than three more years before the PX collapsed. Now the CPUC is once more publishing a document calling for a market mechanism to determine electricity prices. The authors of the White Paper must believe that this time it will take less than four years to construct the market, and more than three more years before it fails. CUE is not so sanguine.

If the experience of the last decade has taught us anything about electricity, it should have taught us humility. We should now know that nothing is as simple as it first appears, that a market-based system is an invitation to market manipulation and that California takes a great risk when it cedes regulation of the electric utility industry to FERC.

The impossibility of simplicity can be seen in both the experience of the CAISO to date and in the White Paper itself. The CAISO is already up to about 70 amendments in 7 years, many of them the subjects of multi-year contested proceedings at FERC. The proposed capacity market is likely to be subject to a similar ongoing need for tinkering and modification as participants figure out one way after another to game it or as the CPUC and CAISO discover that it does not perform as expected.

The White Paper itself says that the proposed capacity market will need to be far more complex than the elementary structure implied by the simple intersecting lines of Figure 6 (p. 33). Just for a start, there will have to be separate markets for different geographical areas (as yet undefined) and for different time periods (as yet undefined).¹ The White Paper provides no guidance as to how these markets will each be defined, how arbitrage between them will be dealt with, what to do if suppliers prefer to bid in some

¹ White Paper, pp. 40-41, recommendations 4 (locational markets with “locally varying demand curves”) and 5 (“prices that fluctuate seasonally”). See also p. 2, paragraph (c), quoting President Peevey’s ACR regarding “locational attributes.”

markets and not others,² or even who will run the multiplicity of markets it contemplates.³ It also fails to address how the shape of the demand curve will be set, and how that shape will be modified over time, since the demand curve is intended to be a regulatory construct and not a market-derived curve.⁴ Most complex of all, the White Paper concedes that not all megawatts of capacity are created equal,⁵ but says nothing substantive about how different kinds of resources are to be differentiated in the proposed market, or whether there will have to be a separate market for each of the (unspecified) number of different resource types. Just as generators went through contortions in the early 1980s to establish themselves as “cogenerators” for PURPA purposes, so one can now imagine similar contortions to identify a generator as falling into some economically desirable category.

As for market manipulation, the experience of 2000-2001 and the long sections of the White Paper devoted to the need to guard against the exercise of market power each demonstrate that it is a very real risk. But in a world where energy suppliers will always have a far greater incentive than other

² The White Paper contemplates having a must-offer obligation as all Eastern capacity markets do (p. 22), but does that mean that every generator must bid in every market for which it is eligible? And how can a not-yet-built generator be forced to bid? And how can out-of-state generators be forced to bid, or municipally-owned generators outside of the ISO’s control area?

³ The only certainty is that the proposed markets would be FERC-regulated, since they would involve wholesale power sales, and thus California would cede yet more regulatory authority to the Federal government. President Peevey apparently expects the CAISO to run the capacity market (White paper, p. 2, paragraph (b), quoting from the February ACR).

⁴ White Paper, p. 33, Figure 6.

⁵ White Paper, pp. 8 (recommendation 2), 23 (performance incentives), p. 40 (“a thermal resource that takes 24 hours to start may provide only half the reliability of a quick-start unit”).

market participants to find loopholes (remember that the buyers in the proposed market, the LSEs, are acting on behalf of their customers, but the sellers are acting on behalf of themselves and the market designers at the CPUC and/or FERC and/or CAISO don't have any money at stake at all), can there be any doubt that guarding against both licit and illicit market manipulation will be a long and at least intermittently losing battle? After all, independent generators and marketers have an obligation to their shareholders to maximize profit, not an obligation to ratepayers to ensure that rates are just and reasonable.

As for FERC, the facts speak, indeed scream out, for themselves. From May 2000 until June 2001, FERC failed to take action to stop the hemorrhaging of money from ratepayers and the IOUs to the generators and marketers. Billions of dollars were taken, and the state entered into contracts that are the main reason California's current rates are too high, and will remain too high, for at least the rest of this decade. No matter how friendly the current relationship, it is inconceivable that California would create yet another market that depends on regulation by FERC.

Humility is knowing that it is not so simple, that we cannot design a market that cannot be manipulated when its participants have an obligation to try to do so, and that we cannot count on a federal agency to protect us. We – all of us – are not so smart that this time we can be certain we can get it

right the first time. We – all of us – cannot afford another catastrophic failure.

If the problem is that insufficient new generation is being constructed, the solution is vastly easier than creating another complex, FERC regulated market: regulated, cost-of-service generation. The model is right under our noses: California’s publicly owned utilities that have spurned deregulation, constructed new power plants, never had a generation-based blackout of their own making and continue to have lower rates than deregulation has ever provided.

II. THE PROPOSED CAPACITY MARKET DOES NOT SOLVE THE REAL RELIABILITY PROBLEM – GETTING NEW GENERATION

The Commission has already realized that spot energy markets are a recipe for boom-and-bust prices. Similarly, abolishing the historical IOU obligation to serve means that there is no guarantee that new generation will be constructed soon enough for that generation to be on-line when needed. This is a fundamental flaw of the market paradigm, as CUE pointed out over a decade ago.⁶

The White Paper is an attempt to design a market for capacity, a place where LSEs would pay for capacity and, as a result, customers would end up

⁶ Comments of the Coalition of California Utility Employees on Competitive Premise, Regulator’s Role and Marketplace Implications, June 8, 1994, R.94-04-031/I94-04-032, p. 19: (“Because of the long lead time nature of most generating resources ... [b]usinesses and residential users could face escalating prices and brown-outs.”)

getting reliability. The trouble is that it does not address the problem at the right time scale, and it undercuts actions already under way which do.

A. One year markets will not support 30 year investments with 5 year lead times

The White Paper does not actually identify the time scale the proposed markets are supposed to be for, but it appears to contemplate a forward capacity market only for about a one year period, the period of the forward procurement obligation under the Commission's resource adequacy requirement.⁷ But new resources take more than one year to build, and have economic lives measured in decades.

Having a one year forward market for capacity will no more lead to consistent construction of new 30 year resources starting 5 years in the future than having a spot market did. The White Paper admits as much for the present, but then expresses the wistful hope that once there has been a capacity market in operation for some years, its continued operation and prices will be predictable enough that they will be used by lenders to justify financing new generation with multi-year lead times.⁸ So at best, if the White Paper is right, the CPUC can expect several years of market design, followed by several more years of market operation during which changes are made to get the bugs out (like the 70 amendments made to the ISO tariff so

⁷ Sean Gallagher of Energy Division confirmed in a September 15, 2005 phone call that, at least initially, procurement through the proposed capacity market would be for the one month to one year period covered by resource adequacy requirements. The White Paper says it would be "short-run" (White Paper, p. 7, recommendation 1) and characterizes a 3-4 year forward market as "longer term" (White Paper, p. 26).

⁸ White Paper, pp. 25-26.

far), followed by several more years of stable operation for investors to gain faith that the rules have stabilized, and then someone will take a couple of years to build a new generator premised on capacity market revenues. The first such generator would thus come on line in perhaps 2016!

In any event, one year at a time capacity markets, like current energy spot markets, would still result in new generation having to break ground with no assured revenue stream.⁹

B. The proposed capacity markets undercut current long-term procurement which is actually resulting in constructing new generation

Since the crisis of 2000-2001, California has seen construction started on thousands of megawatts of new generation. The great majority of this new construction has been financed on the strength of either long-term bilateral contracts or cost-of-service arrangements. The new projects delivered under CERS contracts, the Mountainview, Palomar, and Otay Mesa projects, and the pending Contra Costa 8 project are all examples. So are every one of the municipal utility projects which are secured by traditional cost-of-service ratemaking: LADWP's new combined cycle plants, SMUD's new combined cycle plant, smaller combined cycles in Vernon, Santa Clara, Roseville, Modesto, Turlock and Burbank, and peaking projects in Riverside and elsewhere.

⁹ The White Paper points out (p. 26, fn. 9) that merchant plants were built before 2000-2001 without having longer term contracts, but that just buttresses the point being made here. If energy markets are perceived as stable, then a 1-year capacity market is unnecessary as an incentive for new generation construction. If markets are perceived as unstable, then a 1-year capacity contract will be inadequate as an incentive for new generation investment.

More recently, PG&E has conducted an RFO specifically requiring that all bids be from new generation. Thus, the Commission has every reason to believe that cost-of-service generation and bilateral contracting in concert with its resource adequacy requirement can and will lead to adequate new generation investment so long as cost recovery is assured.

But why should any LSE procure long-term bilaterally if it will just have to remarket in the capacity market? The White Paper contemplates, though it never says so directly, that *all* generation that counts for resource adequacy purposes will have to be sold into the capacity market.¹⁰ If shareholders are at risk for the gains/losses from bilateral contracts at prices which turn out to be under/over capacity market prices, that will be an incentive to cease buying bilaterally. Even if ratepayers are at risk, the availability of a capacity market which satisfies resource adequacy requirements means that a risk-averse LSE will simply buy from the capacity market rather than procuring longer-term. Thus, the proposed capacity markets would end the only methods that are actually resulting in new generation!

¹⁰ See White Paper, pp. 2 (quotes from the ACR referring to a “centralized” capacity market) and 33 (Figure 6, showing a demand curve based on peak load rather than residual load unmet after accounting for resources procured outside the capacity market; p. 33 also says, “All LSEs would pay the applicable market clearing price for their requirement,” which suggests that all requirements must be procured from the centralized capacity market). Also, Sean Gallagher of the CPUC Energy Division stated directly in a September 15, 2005 phone call that he contemplates that LSEs would have to buy 100% of their capacity resources from the capacity market, and sell 100% of their resources procured elsewhere into it.

III. THE PROPOSED CAPACITY MARKET ALSO FAILS TO SOLVE SEVERAL OTHER PERSISTENT PROBLEMS OF DEREGULATION

Proponents of the capacity market might argue that getting new generation built is not the only problem facing the electricity sector in the wake of deregulation. They would certainly be right. But there is no reason to think that the proposed capacity market will solve any of deregulation's other problems either. The comments below describe some of the problems that are referred to in the White Paper.

A. Exercise of market power through withholding of resources

The White Paper acknowledges that there can be many hours each year in which “many suppliers become pivotal” and “conditions are ripe for market power.” It identifies a “must-bid requirement” as a way to mitigate market power, while conceding that must-bid requirements in Eastern capacity markets have only a “limited” effect.¹¹

CUE agrees that withholding by generators can be a serious problem in electricity markets. In 2001, withholding by generators played a key role in triggering rolling blackouts at times when load was never above 35,000 Mw, even though power had remained on the previous summer when loads were in excess of 40,000 Mw.

¹¹ White Paper, p. 22.

At this time, the CAISO has a must-offer obligation which applies to all generators in its control area. Adding a new capacity market with its own must-offer obligation will not provide any improvement to reliability.

On the other hand, including a must-offer obligation as part of the proposed new capacity market raises problems of its own. Even though a resource is paid for providing capacity, it does not need to operate in every hour. During low-load periods, requiring capacity resources to be offered into energy markets will raise costs by requiring uneconomic resources to run at their minimum loads.

The CAISO has already confronted this problem in the existing spot energy markets, and has had to erect a complex administrative machinery to allow generators to request waivers from the must-offer obligation and then get payments from the CAISO if their waiver requests are denied. In 2004, CAISO payments to generators for minimum load operating costs during waiver denial periods reached \$287 million.¹² The CAISO Amendment 60 proceeding at FERC, which seeks to change how must-offer costs are allocated among LSEs, has been going on for well over a year, with no end yet in sight.¹³ Creating a new must-offer obligation for capacity bidders will inevitably lead to new litigation at FERC over how to administer waivers

¹² This figure does not include the additional millions of dollars paid to those generators in the CAISO's imbalance market for the energy they produced.

¹³ FERC proceeding ER04-835. CPUC staff participated actively in several months of ultimately fruitless settlement negotiations.

from that obligation and how to compensate those denied waivers. The White Paper ignores these consequences of its proposed must-offer obligation.

B. Absence of locational signals

The White Paper concedes that the value of capacity varies by location and that a “well-designed capacity market” should be “locational.”¹⁴ ZP26, for example, is an area in which generation substantially exceeds loads, and the sort of capacity pricing shown in Figure 6 of the White Paper might well result in a price for capacity of zero. On the other hand, the Los Angeles Basin is an area where the CAISO and the CPUC believe there is a substantial need for new generation or at least firm commitments to operate from existing capacity. The White Paper also admits that capacity markets without locational aspects have run into problems.¹⁵

But nothing in the White Paper addresses what would be entailed in setting up such a locational capacity market. Would the capacity market zones track existing ISO zones? If so, they would not send the right price signals, because capacity would be equally valued on both sides of known intra-zonal transmission congestion points such as the south-of-Lugo path in SCE’s service area, the Greater Bay Area boundary in northern California, and the Mission substation in the SDG&E service area.

But if new zones are to be created for capacity marketing purposes, where will their boundaries be, and how will they be administered? There

¹⁴ White Paper, pp. 24-25, section IV.H.

¹⁵ White Paper, pp. 35-36, discussing problems in the current non-locational PJM capacity market.

has been a great deal of contention in the CAISO Amendment 60 case at FERC over just this sort of question, as parties dispute who is responsible for minimum load costs associated with various intra-zonal transmission constraints, and the CAISO disparages its ability to administer any system involving subzonal reliability pricing.¹⁶

C. Current lack of transparent pricing could lead to overpayment in bilateral markets

One theoretical benefit of a centralized capacity market is that it would produce a more “visible market price.”¹⁷ Increased price transparency is presumably desirable as a means of deterring overcharging by sellers in bilateral markets.

The notion that California LSEs are at risk of overpaying because of their lack of knowledge of market prices is a dubious one. There is public data on the costs of utility-procured cost-of-service generation. There are numerous public estimates of the cost of various types of new generation. By conducting numerous rounds of RFOs, the large California LSEs have become privy to the offering prices of numerous sellers of capacity. The CPUC, which has oversight authority over the regulated utilities, also sees all those offers. So do the Procurement Review Groups for SCE, PG&E, and SDG&E.

Indeed, it is possible that it is sellers, rather than buyers, who are in the weaker position in bilateral trading because they do not know what their

¹⁶ The boundaries may also need updating as transmission upgrades eliminate some constraints and create new ones.

¹⁷ White Paper, p. 2, item (b).

competitors are charging. If so, then creating a new capacity market will aid sellers by enabling them to know the market-clearing price and avoid making cost-based bids which are substantially below that price. The White Paper’s attempt to identify a target price for capacity¹⁸ could **prevent** competition between sellers in bilateral markets from producing lower prices than the “target.”

This is a good example of why humility rather than hubris should be the guiding principle when considering establishing another market-based system in this industry.

D. Not enough capacity is being procured

The White Paper argues that “a well-designed capacity market stabilizes and guides the market to provide the target level of generation adequacy ...”¹⁹ Thus it presumably avoids the reliability risks of having insufficient generation.

But the CPUC has already determined that California needs capacity sufficient to provide reserves of 15-17%, and has mandated that each LSE procure such capacity. The proposed capacity market, rather than providing a means to comply with the resource adequacy requirement, provides a means to not comply. Figure 1 on page 11 of the White Paper purports to show how in current CAISO energy markets supply can fail to meet demand,

¹⁸ White Paper, pp. 19, 30, 33; Figures 4-6.

¹⁹ White Paper, p. 18, section IV.A.

and prices will escalate indefinitely until they reach administratively determined price caps.²⁰

Consider what would happen with the exact same supply curve in the White Paper's proposed capacity market. If supply bids into the capacity market had the shape shown in Figure 1, but faced the capacity market demand curve shown in Figure 6, then supply and demand would intersect at a point to the left of the desired reserve margin. The White Paper admits as much: "It is usual for the clearing point to be higher or lower than [the target reserve margin]."²¹ In other words, if supply is lower than desired, the capacity market proposal allows reserve margins to also be lower than desired.

It may well make economic sense to say that there is a tradeoff between price and reliability, and if capacity prices are high, then California LSEs should buy less capacity, with concomitant reductions in reliability. That's what Figure 6 of the White Paper says. But it's exactly what the Commission's resource adequacy decisions have *not* said. The Commission has not said that California LSEs should procure 15-17% reserves, except when prices justify procuring less or more. The Commission has not said that the level of reliability of the California electrical system should be a function

²⁰ The White Paper fails to address whether the concern with existing markets it raises is real or hypothetical. In how many of the 37,000+ hours since June 2001 (when a must-offer obligation was imposed by FERC on CAISO markets) has the market actually failed to clear and price caps been imposed? The answer is certainly very small, and CUE does not believe any of those hours had any actual blackouts – supply and demand have managed to balance despite price caps.

²¹ White Paper, p. 33.

of market prices resulting from a not-yet-existent market. Yet that is what would result from a centralized capacity market structured like the market described in White Paper Figures 4 through 6.

The White Paper market adds nothing, except to require CPUC/CAISO/FERC to set a cap price above which blackouts will be allowed to occur!

E. Generators aren't being paid enough in energy markets because of bid caps

The White Paper suggests that one problem in the current electricity market is that generators are being underpaid because of bid caps in energy markets.²² The White Paper provides no data to show that bid caps significantly affect generator revenues.²³

But if bid caps are a problem in energy markets, why is the White Paper proposing them here? Figures 4 through 6, which each illustrate a capacity market, each have a demand curve which is horizontal on the left.²⁴ In other words, there is a maximum price which buyers will pay for capacity, no matter how little supply is offered and no matter how low reserve margins are. The capacity market proposal would allow FERC to administratively determine the price above which California blackouts would be preferable to further procurement! Surely this is a solution which is worse than the alleged problem.

²² White Paper, p. 17: "because of the spot energy bid caps, a significant amount of revenue is missing from the CAISO's spot energy market...."

²³ See footnote 20, *supra*.

²⁴ White Paper, pp. 19, 30, 33.

On the other hand, what if bid caps are not such a large problem, and do not greatly diminish the revenues suppliers are receiving for their generation? Then adding a capacity market on top of the existing energy markets could lead to what the White Paper calls “double-payment in the energy and capacity markets.”²⁵ The White Paper proposes to address this self-created problem of excessive generator revenues by a system of “subtracting the spot energy profits of peakers from the capacity payment established by the demand curve.” How the “spot energy profits” are to be determined, why generators would participate in forward capacity markets if they have to give up an indeterminate (at least in advance) part of their operating profits, and why investors would consider the resulting revenue stream any more certain or stable than the revenues under current markets is completely unclear.

IV. CONCLUSION

The issue before the Commission is not *how* to construct a capacity market, but *whether* to create it.

In answering that question, the first principle should be humility. This industry is complicated, and California got it very, very wrong the first time we put faith in markets. We will pay the terribly expensive price for many years to come. It is unlikely that we can make new capacity markets secure from manipulation by those who have opportunity and motive to

²⁵ White Paper, p. 21, section IV.D.

maximize profits. And we should not turn over more control of a vital industry to a federal agency that dramatically failed us before.

Perhaps, though we are dubious, it would be worth rolling the dice again if capacity markets actually solved the reliability problem. They will not. One-year markets will not support 30 year investments with 5 year lead times. Even worse, they would undercut the new generation procurement that is actually producing new power plants. Utility owned generation, both investor-owned and municipally-owned, has been and is being constructed.

Here is the real solution: more cost-of-service generation by utilities and bilateral contracts by others. It is not complicated or risky. The Commission need do no more than genuinely enforce its resource adequacy requirements on all load-serving entities.

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CERTIFICATE OF SERVICE

I hereby certify that I have this day caused the foregoing COMMENTS OF THE COALITION OF CALIFORNIA UTILITY EMPLOYEES ON THE STAFF CAPACITY MARKETS WHITE PAPER to be served upon all parties to Rulemaking 04-04-003 via email, mail or messenger pursuant to the Commission's Rules of Practice and Procedure.

Dated at South San Francisco, California, this 23rd day of September, 2005.

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