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 MORGAN STANLEY CAPITAL GROUP INC.
ON STAFF CAPACITY MARKETS WHITE PAPER

Morgan Stanley Capital Group Inc. ("MSCG") hereby submits these comments on the Staff’s Capacity Markets White Paper, dated August 25, 2005 ("White Paper"). MSCG is pleased to have the opportunity to share its general views on capacity markets and on certain of the Staff’s specific recommendations. First, MSCG offers general comments about market-oriented solutions. It then offers comments on experience it has gained in the Eastern capacity markets and in other electricity markets generally, certain of the White Paper’s recommendations, and expected agency interaction.

I. INTRODUCTION AND SUMMARY

MSCG understands that the purpose of the White Paper is to solicit comments on the development of the structure of a capacity market. MSCG, however, urges the Commission to consider alternatives to a capacity market before moving forward on the recommendations contained in the White Paper. A commonly cited need for capacity markets arises due to administratively imposed mitigation in the energy market, including energy bid caps, Must-Offer Obligations, Reliability Must-Run contracts, etc. While it is true that caps on energy prices necessarily dampen the price signals that the market receives concerning the need for investment in infrastructure and demand response, the proposed cure can exacerbate the problems.

1 These comments are submitted pursuant to the Chief Administrative Law Judge’s Ruling Providing Notice of Availability of Staff Capacity Markets White Paper and Providing for Comments of August 25, 2005 issued in Rulemaking 04-04-003.
Although proponents of capacity markets acknowledge that the capped energy market design is flawed, there is little evidence that existing capacity markets have corrected any of the problems. MSCG suggests using a market-oriented solution for the two most pressing issues facing liberalized energy markets today:

1. protecting the consumer from excessively high prices; and
2. encouraging the efficient deployment of capital in new infrastructure.

Although some believe that high and volatile spot prices encourage new investment in generation, this is really a misconception. In MSCG’s experience, major capital expenditures of that nature are made against margins that are known with certainty to cover the debt associated with the investment. Debt is necessary to keep capital costs reasonable, but lenders only provide it when there is assurance of repayment. Therefore, a sales contract with fixed prices is needed to ensure a revenue stream exists to repay ongoing debt obligations. Such contracts are available from creditworthy entities like MSCG. Administratively imposed capacity payments, by contrast, are inflexible and subject to significant regulatory risk. In short, in the Eastern markets, they have proven to not be bankable, as little, if any, investment has been made in generation in reliance upon installed capacity market payments.

There is also a need to have unmitigated spot energy markets. Energy markets where an unmitigated spot price signal acts to cause supply to equal demand in real time, combined with a Commission requirement that load-serving entities (“LSEs”) procure energy through forward contracts to protect against price spikes and protect consumers (e.g., Basic Generation Service requirements), will bring the proper amount of generation to California and protect retail consumers. Consumers receive the protection they need, but the sellers of that protection in the form of forward contracts will cover their obligations by entering into long-term purchases from investors in new capacity. Thus, forward price signals will clear the forward market much as spot price signals act on generator dispatch in the spot market.\(^2\) A spot market without an

\(^2\) Demand response should not be ignored. Although markets do not yet have the communications infrastructure to allow large numbers of consumers to respond to spot price signals, long term demand response has already been
associated forward contract can leave buyers unacceptably exposed, as recent experience in California has shown. That experience demonstrated that not requiring buyers to enter into forward contracts as a matter of business practice to hedge their exposure leads them unnecessarily exposed to the inherent volatility of the spot energy market.

MSCG notes that instituting a long-term capacity market is not a panacea for the problems addressed in the White Paper. Long-term capacity markets add inflexibility by locking in market participants' obligations for a long period of time based on inherently inaccurate supply and demand forecasts. And the further out one looks in a forecast, the less accurate it is. Thus, by lengthening the term of the capacity market, one merely forces market participants to make decisions and meet obligations based on inherently increasingly inaccurate data.

II. GENERAL COMMENTS

The White Paper begins its discussion of capacity markets with a sound premise—that workably competitive markets will lead to the right amount of generation by providing price signals and sufficient revenues to induce investment in generation. White Paper at 10. It then points to two problems that Staff believes prevent the market from working, which are a lack of demand response and the CAISO's inability to shut down service to specific customers. Because of these problems, the White Paper asserts that regulators should either set the spot market price to induce building more generation or impose resource adequacy requirements. White Paper at 11.

A. An Unmitigated Energy-Only Market is The Answer

The current level of investment in new generation in California suggests that existing forward market price signals are not sufficient to induce new investment in generation. The White Paper clearly recognizes this when it states that capping spot market energy prices "results in lower prices that tend to prevent the recovery of fixed costs of existing generation and

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demonstrated when forward signals are involved. Over time, if an unmitigated spot market structure is instituted, there will be investment in the technology needed to react to it.
therefore that do not encourage investment in new generation.” White Paper at 16. The White Paper concludes that “because of the spot energy bid caps, a significant amount of revenue is missing from the CAISO’s spot energy market, just as it is from the Eastern ISO energy markets.” White Paper at 17.

This observation may well be correct. MSCG believes that price caps cause involuntary rationing of investment in new capacity resources because they artificially constrain generation revenues necessary to cover costs and margins. It is important to remember, however, that the risk associated with high spot market prices as that risk is reflected in forward markets is what provides incentives for investment in generation. The White Paper advocates using administratively-derived capacity payments to satisfy the revenue shortfall resulting from mitigation of the energy markets. However, the evidence suggests that such payments have not provided investors with a “bankable” revenue stream upon which they are willing to invest in generation resources.

In areas of the country that have capacity markets, MSCG believes that supplemental capacity payments to generators have not encouraged new investment. These additional payments have, however, raised overall system costs by allocating to load the cost of capacity payments made to existing plants. In addition, the lack of new investment has caused prices to rise on average despite being capped in individual periods. Overall, the consumer pays twice—once to cover ineffective capacity payments and a second time for higher energy prices. Moreover, in what has become a constant attempt to make needed improvements, capacity markets in the East are becoming increasingly complex and complicated to administer, adding further to risk and cost.3

3 Many argue that an energy-only market will not provide a necessary reserve margin. MSCG believes this is only true to the extent that an additional, scarcity component is not included when system operating margins are violated. In other words, when the system faces unusual stress, operators appropriately use the safety margin that is available to them. That margin is available because operating rules require the system to maintain online and available the capability to survive several major system failures. For example, a simple rule might be to have sufficient spinning reserves (on-line but not generating) in any zone that equals at least the loss of the single largest source into or in that zone. Since these reserves are not providing power, they have to be compensated and this cost is either covered through some allocation to the energy price (uplift) or through an explicit reserve market. In the latter case, providers can choose to generate or offer reserves and so the two markets track each other to some extent. However, during periods of extreme system stress, operators will commit reserves, so these missing reserves are not replaced.
MSCG believes that a better solution to the issues raised in the White Paper is using an unmitigated energy market paired with the imposition of mandatory forward purchases. The following measures would likely eliminate any perceived need for a formalized capacity market.

1) The Commission Should Require Forward Contracting Through Basic Generation Service-Type Auctions

The Commission should require LSEs to enter into forward contracts and hedging contracts, in an unmitigated energy market. Basic Generation Service ("BGS")-style auctions, similar to that used in New Jersey, Maryland and DC, or regular RFPs such as those conducted by New England utilities (without the capacity obligations) can be implemented. All LSEs could be given default access to varying term forward contracts procured through regular auctions sponsored by the Commission. MSCG recommends that BGS be available with contract durations of at least six months, and up to three years. If demand exists, then terms could even be as long as five years. These "default service agreements" should be available to all LSEs.

In the BGS context, MSCG believes that there should be a general prohibition in the market against exposing customers to the direct pass-through of spot market prices unless specific conditions are met. This is similar to the standard applied to investors who must show wherewithal and acknowledge risk in order to be offered certain financial instruments. Only customers who demonstrate that they are capable of bearing the risk (e.g., sufficient credit and power market sophistication such as demonstrated capability to interrupt load) should be permitted to realize direct pass-through of spot market prices.  

for a period of time. During that period, the increased probability of a further disruption and thus probability of system failure must be priced into the energy market. The effect of these higher prices, plus the extra costs of operating the reserve market, will provide additional risk components that find their way into the forward market and drive investment in capacity in an amount that also covers necessary reserves.

As in financial markets which allow lowered regulation to "sophisticated" investors, exemptions could be granted to those who demonstrate economic wherewithal to pay high prices or the ability to curtail during price spikes.

Credit issues could be dealt with by ensuring that consumer payments are made into a lockbox and used to pay the BGS supplier rather than the LSE in the event of LSE default. In this way BGS suppliers would only be exposed to diversified end-user credit risk. MSCG has demonstrated a willingness to do this in existing auctions and RFPs.

MSCG also recommends making other options available, such as remaining on hourly pricing or using shorter duration contracts. For example, in the New Jersey BGS auction market, the smallest customers—residential and small commercial and industrials—are insulated from hourly pricing. Those customers capable of understanding the risks associated with being exposed to the vagaries of spot market prices could have the option to realize hourly
With this requirement in place, MSCG believes consumers will receive the perceived protections of a price cap through market-based solutions, and eliminate the driving need for a centrally planned capacity market and its negative consequences on investment and reliability.

2) **Encourage Establishment of An Energy-Only, Locationally-Priced ("LMP") Market**

MSCG believes there is also a need to send accurate price signals in the forward contract market. There should be an unencumbered energy-only, LMP market established in the CAISO. Energy price caps should be eliminated or, at the very least, increased substantially. MSCG believes this will allow an appropriate price signal to appear in long-term purchase contracts sought by intermediaries such as MSCG who seek to hedge the forward sales contracts offered to LSEs. This price signal will more accurately and more cost effectively encourage new investment.

Energy-only markets operate most efficiently when energy is priced in a manner that reflects actual system and operational constraints. MSCG believes that LMP is the only tested and proven congestion management and pricing system implemented in the United States, or indeed anywhere in the world in which MSCG operates. Energy markets that are locationally priced do not rely on uplift payments. Such markets allocate cost based on causation principles and thus, tend to generate more accurate price signals, increase transparency in the market, and better highlight where long-term investment is needed.

3) **Streamline Siting and Permitting Requirements**

The Commission should actively encourage the streamlining of the process for siting and permitting additional generation and transmission resources. Overlapping and unnecessarily burdensome siting and permitting requirements for new resources should be streamlined so that California can rely on the energy and contract markets to provide the economic incentives for new capacity resources of the best sort, in the right location. This is especially true for

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pricing. However, they do not, and should not, default to hourly pricing. Only the very largest customers should perhaps default to hourly pricing.
transmission now that added investment in transmission has been mandated in the Energy Policy Act of 2005.

Simplifying the siting and permitting processes, and establishing a clear commitment to market-based solutions, will have a significant impact on the willingness of investors to install new generation.\(^7\) This will reduce regulatory risk and uncertainty and bolster investors’ views about doing business in the state.

4) Improve Demand Response Programs

In conjunction with these market solutions, MSCG believes that the Commission can and should develop additional demand response mechanisms. The White Paper ignores the fact that additional demand response mechanisms may further develop in California. The Commission should investigate whether it can develop a method of crediting demand side response separately from the BGS-type default service. By independently estimating and assessing the impact of demand-side response, MSCG believes certain market participants could offer products designed to facilitate demand response and receive the benefit of the reduced demand, without adding unnecessary burden to the manner in which the BGS default supplier is invoiced.

III. EXPERIENCE IN OTHER ELECTRICITY MARKETS

As the White Paper discusses, NYISO, PJM, and ISO-NE all have capacity markets either in place, or in various stages of development/modification. White Paper, at 28-38. All three either currently use, or are planning on using, similar designs, including locational pricing and a downward sloping demand curve. Id. at 29-30. As the White Paper itself recognizes, these efforts have not achieved the desired results.

NYISO has a short-term, locational capacity market, priced using a downward sloping demand curve. However, the demand curve structure in NYISO that was implemented three years ago has not led to the development of a liquid secondary market. Nor has it demonstrably increased investment in new generation. NYISO’s shortcomings rest in the lack of either

\(^7\) MSCG also believes that economic and tax incentives will further encourage such investment.
resource adequacy requirements and/or a BGS-type auction process. In other words, NYISO’s overall energy and capacity market structure does not provide adequate long-term incentives/price signals to invest in new and existing generation facilities.

PJM’s existing capacity market is short-term, but lacks any locational elements—all generating capacity is deemed to have the same value and receives a single price. PJM also includes certain states, such as New Jersey, which have implemented BGS requirements. As originally implemented, however, PJM’s capacity market has not demonstrably driven new investment, nor prevented plant closures. MSCG believes that this has resulted in the worst outcome possible for consumers—no new investment, constraints that drive up energy prices, and ICAP payments that are not effective in attracting investment to drive down prices.

PJM has recently filed to implement a new capacity market design based on a downward sloping demand curve with locational characteristics. PJM’s proposal, however, seeks to implement a long-term capacity market where LSEs purchase capacity for a one year term, four years forward. In other words, LSEs must purchase a one-year term capacity product in 2006, for “delivery” commencing in 2010. MSCG believes that this proposal is inherently flawed in that long-term capacity markets eliminate or curtail bilateral, forward contracting to a great extent, which further interferes with accurate price signals.

Finally, MSCG believes that the administratively-established demand curve that is either in place or has been proposed for the Eastern markets removes a central element to a market—demand. Instead of relying on buyers to indicate their needs, a regulator must step in and go through a lengthy and contentious process to develop a curve to indicate demand. This artificial construct may reduce price volatility associated with vertical demand curves, but it is not the optimum method to signal the market when additional capacity is needed. It also supports the creation of a self-fulfilling prophecy of the market becoming reliant on regulators to step in and impose regulatory fixes as opposed to allowing the market to respond to such concerns. As noted in these comments, the result of regulatory-driven responses inherently is to suppress and/or muddle price signals.
IV. COMMENTS ON WHITE PAPER RECOMMENDATIONS

Each of the recommendations from the White Paper is addressed below:

1. Capacity Market With Downward Sloping Demand Curve: Adopt a short-run organized capacity market approach with a downward sloping capacity-demand curve for the CAISO.

As discussed above, capacity markets arguably are necessary only to compensate for artificial price caps. Removing these caps, and requiring forward contracting (such as through BGS-type auctions) using locationally-priced, energy-only markets will signal the forward markets and, ultimately, achieve the desired result—the optimum level of investment in generation to ensure reliability—through market behavior.

If the Commission adopts the recommendations in the White Paper, then MSCG believes that the “market” established will simply be an administrative codification of the failed energy market design. The contemplated structure would have an administratively-constructed demand curve intersect with a supply curve that “provides a revenue stream to resources for recovering fixed costs at a pre-determined price.” White Paper, at 29. There is nothing left for a “market” to do if demand is administratively set at a predetermined price.

And, if the Commission endorses the development of a capacity market, a long-term forward capacity market would be the least efficient and competitive design structure. First, demand/load forecasts are inherently inaccurate, and more inaccurate the further out they look. Locking in investment and payment obligations based on an increasingly inaccurate forecast simply compounds inefficiency. Second, by relying on the market operator’s long-term forward forecast, the design necessarily removes market participants’ market expectations from the equation. In other words, market participants are not allowed to participate in the market. Thus,
a long-term capacity market, rather than a short-term capacity market, exacerbates existing problems rather than mitigates them.

2. **Performance Measures**: 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.

This recommendation only highlights the high administrative burden and complexity of the capacity market approach. Market-oriented solutions avoid contentious proceedings over whether such measures should be used and if the calculations are correct.

3. **Avoid “Double” Payments**: Consider subtraction of peak energy rents from the capacity payment.

Given the acknowledged inefficiency or outright ineffectiveness of capacity markets, there is no way to avoid customers paying “twice,” once to cover capacity payments and secondly in the form of higher prices. Untangling one from the other would be difficult to identify and administratively complex.

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

The energy markets should be locational for both supply and demand. If it is, and if the other recommendations that MSCG makes regarding forward contract coverage at each location are followed, then this recommendation is moot.

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

Since MSCG views energy-only markets as the most effective design, this modification will have minimal useful impact.

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

MSCG believes that capacity import contract—firm LD Contracts—are dependable and reliable for ensuring system reliability. Such contracts contain an obligation to provide: (a) the
contract quantity energy; or (b) damages in the form of the market price of energy for the contract quantity. Such contracts necessarily signal to the market the need for new investment to the same extent as capacity contracts. The pricing signal sent by market participants covering energy obligations when there are curtailments also sends a signal when there is a scarcity of supply. It would seem detrimental to the market if a market participant were required to pay exorbitant liquidated damages because no generation is available to replace a curtailed import.

7. **Explicit Curve:** Make the fixed-cost recovery curve explicit.

   This is an enhancement to a fundamentally flawed proposal.

8. **Regulatory Credibility:** Strive for regulatory credibility.

   All well functioning markets are grounded in certain principles, including regulatory stability and legal certainty. The cost of dealing with regulatory and political risk is extremely high. Freedom to contract and the certainty of contract enforcement is another important principle, found in most developed economies and lacking in those less developed. MSCG heartily endorses this recommendation.

V. **INTERAGENCY ACTIONS**

   MSCG believes that neither the Commission nor the CAISO should be in the role of central planning. Whether demand resources, existing generation, new generation, or transmission upgrades are the best suited to meet demand/supply needs is a decision that should be made by the market. There is no reason for the Commission or the CAISO to assume the role of trying to generate years of stable revenues for power plants or transmission developers. Rather, the CAISO should focus on the here and now—ensuring the immediate avoidance of capacity shortages that result in service disruption and by assisting in providing transparent, discoverable prices that accurately signal tightness and looseness of capacity in the market. The
Commission can assist in establishing the necessary markets and then streamlining the siting and permitting processes to facilitate development of needed generation.

Respectfully Submitted,

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Dated: September 23, 2005
CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of Comments of Morgan Stanley Capital Group Inc. on Staff Capacity Markets White Paper on all known parties to RM04-04-003 by transmitting a copy by email to those parties with email addresses on the official service list and by mailing a properly addressed copy by first-class mail with postage prepaid to each party without an email address on the official service list.

Executed on September 23, 2005 at Washington, D.C.

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