Decision **DRAFT DECISION OF ALJ WETZELL (Mailed 9/27/2005)**

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 (Filed April 1, 2004)

OPINION ON RESOURCE ADEQUACY REQUIREMENTS

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OPINION ON RESOURCE ADEQUACY REQUIREMENTS

1. Summary

Reaffirming and clarifying the policy framework that it established in Decision (D.) 04-01-050 and D.04-10-035, the Commission implements a program of resource adequacy requirements (RAR) applicable throughout the service territories of California's three largest investor-owned electric utilities (IOUs). The IOUs as well as electric service providers (ESPs) and community choice aggregators (CCAs) (collectively, load-serving entities or LSEs) are required to demonstrate that they have acquired the capacity needed to serve their forecast retail customer load and a 15-17% reserve margin beginning in June 2006. The Commission takes this action to promote investment in the resources needed to reliably serve California's growing demand for electricity and ensure that those resources are available to the California Independent System Operator (CAISO), all while effectively and fairly allocating procurement and reliability responsibilities among market participants and oversight agencies. We are adopting RAR in order to spur infrastructure development and assure that capacity is available to the CAISO for dispatch. In so doing, we are rejecting business as usual and instead favoring more robust LSE procurement practices.

Key RAR program determinations made herein include the following:

- We adopt a monthly system peak approach to defining the resource adequacy (RA) obligation instead of a resource duration curve approach.

- We require that supply contracts that count for RAR purposes identify the specific resources that provide the qualifying capacity. In recognition of current industry practice, we provide for phased implementation of this requirement to avoid unduly impairing existing business arrangements.

- We affirm the need for a localized capacity requirement but defer its implementation until it can be fully considered.

- We affirm that sanctions for LSE non-compliance are required.

While we believe that this decision is a significant forward step, it does not represent the final word for resource adequacy in California. More work needs to be done. We have deferred action on certain RAR program elements that have been proposed because, despite their promise of more effectively promoting achievement of RAR program goals, they require further consideration before they can be implemented. Further consideration of RAR issues before this Commission will take place in a new, more focused proceeding. While the RA portion of this rulemaking proceeding is concluded by this decision, R.04-04-003 remains open for consideration of other pending issues.

2. Background

D.04-10-035 provided definition and clarification with respect to the RAR policy framework adopted in D.04-01-050, identified remaining implementation issues to be resolved in further proceedings, and outlined the procedural steps to be undertaken in Phase 2 of the RAR portion of this proceeding to ensure that a functioning RAR program for can be implemented during 2005. Pursuant to the direction given in D.04-10-035, Commission advisory staff, along with California Energy Commission (CEC) staff acting in an advisory capacity, facilitated 19 workshops between November 2004 and April 2005. Staff filed and served its Phase 2 workshop report on June 10, 2005.[1]

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[1] The Phase 2 workshop report can be obtained at the following internet link:

http://www.cpuc.ca.gov/PUBLISHED/REPORT/46914.PDF

With the issuance of the Phase 2 workshop report, the Administrative Law Judge (ALJ) established a schedule for comments and replies to comments on the Phase 2 workshop report. The ALJ provided notice to parties that Phase 2 would be submitted to the Commission on the record which consists of the workshop report and the comments and replies thereon. As set forth in the following table, 24 sets of opening comments and 15 sets of reply comments were submitted.

COMMENTING PARTIES[2]

	Commenting Party or Parties	Short Title for Party or Parties	Opening Comments	Reply Comments
1	Alliance for Retail Energy Markets	AReM	X	X
2	APS Energy Services	APSES	X	
3	California Independent System Operator	CAISO	X	X
4	California Electricity Oversight Board	CEOB	X	
5	California Large Energy Consumers Association and California Manufacturers & Technology Association	CLECA / CMTA	X	
6	Calpine Corporation	Calpine	X	X
7	City and County of San Francisco	CCSF		X
8	Cogeneration Association of California and Energy Producers and Users Coalition	CAC / EPUC	X	
9	Constellation Energy Commodities Group, Inc. and Constellation NewEnergy, Inc.	Constellation	X	X
10	Department of Water Resources-CERS	DWR-CERS	X	X
11	Department of Water Resources-State Water Project and State Water Contractors	SWP / SWC	X	
12	Duke Energy North America, LLC	DENA	X	X
13	FPL Energy, LLC	FPLE	X	
14	Independent Energy Producers Association	IEP	X	X
15	Mirant California LLC, Mirant Delta LLC, and Mirant Potrero LLC; and West Coast Power	Mirant / WCP	X	
16	Office of Ratepayer Advocates	ORA	X	X
17	Pacific Gas and Electric Company	PG&E	X	X
18	Powerex Corp.	Powerex	X	X
19	San Diego Gas & Electric Company	SDG&E	X	
20	Sempra Global	Sempra Global	X	X
21	Silicon Valley Leadership Group (formerly the Silicon Valley Manufacturing Group)	SVLG	X	
22	Southern California Edison Company	SCE	X	X
23	Southern California Water Company	SCWC	X	
24	The Utility Reform Network	TURN	X	X
25	SCE, PG&E, AReM, CLECA, CMTA, TURN, and ORA (AReM and CMTA did not join in Joint Parties' reply comments)	Joint Parties	X	X

[2] DWR-CERS submitted comments and replies by memorandum to the ALJ. CAISO and CMTA also filed supplemental comments with authorization by the ALJ.

3. The RAR Policy Framework

3.1. Introduction

The Commission's RAR policy framework was established in prior decisions, and the task for Phase 2 was to be, in large part, implementation of adopted policy determinations. It is for that reason that we ordered workshops on the myriad technical details that must be considered in developing a comprehensive RAR program. However, the Phase 2 workshop discussions revealed a need for us to clarify and amplify our underlying policies for RAR. We do so here before turning to the resolution of Phase 2 issues.[3]

3.2. The Adopted RAR Policy Framework

We begin by reiterating our adopted concept of resource adequacy as we expressed it in D.04-01-050:

> "Resource procurement traditionally involves the Commission developing appropriate frameworks so that the entities it regulates will provide reliable service at least cost. This involves determining an appropriate demand forecast and then ensuring that the utility either controls, or can reasonably be expected to acquire, the resources necessary to meet that demand, even under stressed conditions such as hot weather [footnote omitted] or unexpected plant outages. 'Resource adequacy' seeks to address these same issues. In developing our policies to guide resource procurement, the Commission is providing a framework to ensure resource

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[3] Beginning with Section 4, this decision follows the general organizational approach of the Phase 2 workshop report. Thus, Section 4 corresponds to Chapter 2 of the report, Section 5 corresponds to Chapter 3, etc. Accordingly, we address many of the 87 topics identified for comment in the same sequence as in the report. We combine some topics due to their overlapping nature. For example, Topic 80 (split RA obligation) is essentially the same as Topic 2 and is not separately addressed. Topics 4, 13, and 14 all address the must-offer obligation and are therefore considered together. Other topics are similarly combined for discussion.

> adequacy by *laying a foundation for the required infrastructure investment and assuring that capacity is available when and where it is needed.*" (D.04-01-050, pp. 10-11, emphasis added.)

The Commission envisions the resource adequacy program as the means by which the function of reliably matching resources to demand at least cost will be accomplished in the current industry environment. Historically, this function was the responsibility of integrated utilities that provided bundled service to retail customers, and the regulatory compact provided clear standards for utility accountability along with the opportunity for the utility's investors to earn a reasonable return on the investment they devoted to public service. Procurement and reliability responsibilities that were once the IOUs' are now diffused among various industry participants and oversight agencies, and both accountability mechanisms and the opportunities for investment returns are less well defined. Through RAR, the Commission is taking steps to (1) identify and assign these responsibilities in a manner that is effective in achieving reliability, cost-efficient, and fair for all stakeholders; and (2) foster an environment that is more conducive to investment.[4]

Several points from this foundational decision are worthy of emphasis here. First, the Commission seeks through RAR to ensure that the infrastructure investment required for reliability actually occurs. Second, the Commission seeks to ensure that the generation capacity made possible through that

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[4] Throughout this section we refer to the need for generation investment and generation capacity. We believe this is appropriate for the general nature of this policy discussion. We recognize that the adopted RAR program includes dispatchable demand response as a countable resource. Also, some parties draw a distinction between investment in new generation units and investment in existing assets. For purposes of our discussion here, we make no such distinction.

investment is available to the grid at the times and at the locations it is needed. Third, the Commission intends that capacity must be sufficient for stressed conditions, i.e., sufficient generation should be available under peak demand conditions even when there are unexpected outages. Finally, the Commission noted that the traditional utility role in procurement included the responsibility to provide reliable service at least cost, and that this is one of the “same issues” of traditional resource procurement that RAR seeks to address. Thus, the concept embodied in the phrase “reliability at any cost” is not a policy option. Ultimately, measures that are proposed to promote greater grid reliability should be evaluated by weighing their expected costs against the value of their expected contribution to reliability.

3.3. Revenue Adequacy

TURN is concerned that the topic of revenue adequacy for generation assets received little attention in either Phase 1 or Phase 2, and it urges that revenue adequacy should not be used as grounds for adopting a physical RAR. As TURN puts it, “the primary rationale for RAR up to now has been system reliability, not generator economics.” (TURN Opening Comments, p. 6.) However, even though “revenue adequacy” may not have been explicitly discussed in workshops under that rubric, there is no impediment to considering it here. This is because reliability and generator economics cannot reasonably be de-linked. It is axiomatic that those who risk funds to develop the generation capacity California needs should have an opportunity to recover their investment costs and a reasonable return commensurate with the risk. A discussion of the means to achieve reliability necessarily encompasses a discussion of revenue adequacy. We believe that Constellation appropriately recognizes the linkage of RAR, investment, and reliability as follows:

> "The fundamental premise for developing an RA requirement is to ensure that California maintains a reliable electric system by putting in place a resource adequacy construct that serves, first and foremost, to provide the appropriate incentives for new investment in infrastructure when and where it is needed." (Constellation Opening Comments, p. 2.)

We have already noted that under traditional regulation of integrated utilities, providing an opportunity for a reasonable return on investment was at the core of the regulatory compact. In significant part, generation is now provided outside of the traditional regulatory regime. Still, even in a market-based regime, revenues must be adequate so that investors who provide needed capacity can earn a return over time. An RAR program that does not address the need for a return on investment would fail in "laying a foundation for the required infrastructure investment."

Therefore, as we evaluate individual RAR program elements that have been proposed in Phase 2, we will, all other things being equal, give preference to those that promote appropriate investment needed for system reliability over those that do not do so. In particular, because capped energy pricing limits the revenues available for recovery of investment costs, which is particularly problematic for resources that are only needed for a few peak hours, we will look favorably to mechanisms that promote the recovery of investment costs through payments for capacity. It is for this reason that we view RAR as a physical, capacity-based program where a significant portion of the capacity is committed beforehand.[5]

[5] *See* D.04-10-035 at p. 44. After stating that the purpose of RAR is "inducing forward commitments" the Commission stated:

Footnote continued on next page

3.4. Resource Planning vs. Operational Requirements

In California's restructured electric industry, the CAISO is the designated agent for determining when and where generation capacity is needed in its control area on an operational basis. The Commission's policy that RAR should ensure that capacity is available when and where it is needed means that the RAR program design must be consistent with the CAISO's operational needs. Some parties have implied that because RAR is a resource planning exercise, it need not attempt to meet CAISO's system operational needs. Notwithstanding the distinction between planning and operational concerns, however, it is pointless to design a regulatory system that encourages investment in order to create capacity unless that capacity is actually available to the grid operator to serve load where it exists in day-ahead, hour-ahead, and real-time circumstances. Because our resource adequacy policy includes this availability dimension, we will not attempt to draw a bright line between planning and operational concerns. We will instead take a pragmatic approach to translating resource adequacy and availability into the operational needs of the CAISO. We note that it is not our intention to replace the operating reserve requirements of the CAISO with a more burdensome 15% reserve requirement extending into real time.

3.5. LSE-Based Procurement

D.04-01-050 adopted an LSE-based RAR program wherein each LSE is responsible for acquiring the resources needed for its own forecasted load and a

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Prospective limitations on liquidated damage contracts, eligibility thresholds that exclude energy limited resources that cannot be available for a minimum number of hours in a month, and other means by which

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reserve margin. This is consistent with the established regulatory principle of establishing prices on the basis of cost causation. Ultimately load will be served through the CAISO, and an LSE that does not provide resources in proportion to the load of its retail customers could effectively be subsidized by others. Through LSE-based RAR, we seek to eliminate "free ridership" and to minimize CAISO procurement where the costs of such procurement are socialized without reference to cost causation. Therefore, to the extent possible, we will favor RAR design elements that promote the LSEs' procurement responsibility over those that rely on CAISO procurement.

3.6. A New Paradigm for LSEs and Their Suppliers

We make one additional point in reviewing D.04-01-050's provisions for a resource adequacy program. In recent years, California has made significant progress in building its generation infrastructure, but by most accounts that progress has not been sufficient to assure adequate generation availability in the coming years.[6] Stated differently, it is apparent that, the status quo has not yielded a condition of resource adequacy in the CAISO control area, and cannot be relied upon to do so going forward. We are adopting RAR in order to spur infrastructure development and assure that capacity is available to the CAISO for

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capacity qualifies to cover loads and a 15-17% planning reserve margin are all part of creating a capacity-oriented resource adequacy requirement.

6 As noted in the Phase 2 workshop report, new power plant capacity totaling 6,700 MW has entered service in California since the end of 2001. Approximately 4,950 MW are under construction, with much of that total scheduled to enter service this year. (Workshop Report, p. 17.) However, the report went on to note that while an additional 8,500 MW of capacity has been permitted by the CEC, it is not under construction and has either been suspended or cancelled. (*Id.*)

dispatch. In so doing, we are rejecting business as usual and instead favoring more robust LSE procurement practices.

This almost certainly means that LSEs and their suppliers will need to change their procurement strategies. We will seek to avoid imposing unnecessary disruptions and costs on market participants, and we recognize that transitional mechanisms will be required to avoid unduly impairing existing business arrangements. On the other hand, as we move forward to give effect to D.04-01-050, we will not refrain from implementing those RAR program elements we determine to be necessary for reliability simply because those requirements may require changes in the operations of market participants.

3.7. Current Objectives for RAR

It has been suggested that this Phase 2 RAR decision should specify the "end state" for California's electric industry design. For example, Mirant/WCP support a resource adequacy construct that includes, among other things, central market-clearing mechanisms for uncommitted capacity and a capacity pricing mechanism that employs demand curve pricing. IEP similarly urges that we focus on an end-state that, in IEP's view, should include (among other things) an active market for trading capacity. While such ideas may well have merit, and we will explore many of then in the near future, we are not ready to adopt them here. As we determined in D.04-10-035, topics such as a multi-year RAR and the development of a capacity tagging and centralized trading regime are second generation issues that will be considered in other proceedings.[7] The only end

[7] Parties were notified that certain topics would not be taken up in Phase 2, and it would contravene due process to take up such topics here. We note that the February 28, 2005 ruling of Assigned Commissioner Peevey advised parties that while evaluation of a capacity market approach is not being carried out in Phase 2, it was his

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state that we specify at this time is, as indicated in the Phase 2 workshop report (at p. 19), a capacity-based resource adequacy program.

Some parties contend that there are significant practical impediments to implementing a comprehensive RAR program for 2006, and that certain proposed program elements are not ready for adoption. For example, CLECA / CMTA find gaps in the framework despite the extensive workshop discussions, and urge that we proceed by implementing RAR for 2006 on a trial basis with compliance penalties waived for that first year. SDG&E recommends adoption of a minimalist, non-precedential RAR program for 2006-07 while important implementation issues are further considered. TURN believes that several critical implementation elements are not "ready for prime time," and suggests a "keep it simple" approach for the first year of RAR implementation. Joint Parties urge adoption of only those measures that have a realistic chance of being implemented between the Fall of 2005 and June 2006. In its reply comments, PG&E argues for a streamlined RAR program for Summer 2006. Several parties urge that we postpone implementation of the local capacity requirement until that element of RAR is more fully developed.

In the remainder of this decision we will consider the myriad RAR implementation issues laid out in the workshop report. As we do so, we will give careful consideration to the state of readiness of the various program elements that have been proposed. Substantial and immediate progress toward

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"expectation that the issues being addressed in Phase 2 will be resolved in a way that would not foreclose our movement toward a capacity market in the near future." We affirm the Assigned Commissioner's approach as the Commission's. We also note that the Energy Division published a staff white paper regarding capacity markets on August 25, 2005.

the achievement of our goals for RAR through the adoption of a program at this time is vital to the development of the infrastructure needed for reliability. However, we will consider postponement of those elements that, despite their merit, require further consideration. The alternative of delaying the start of any RAR program until the details of all possible program elements are more fully vetted is simply unacceptable given the fragility of California's grid reliability. The other alternative--implementing program elements that have not been fully and fairly considered--is equally unacceptable given both due process requirements and the possibility of adopting unnecessarily costly RAR schemes.

4. Nature of the RA Obligation

4.1. Generator Obligations

As we noted earlier, the adopted RAR framework establishes an LSE-centered obligation under which the regulatory requirements apply to LSEs that fall under the Commission's jurisdiction. The obligation of suppliers to be available and perform is established indirectly through their contracts with LSEs. D.04-10-035 outlined (at p. 41) certain broad aspects of the contractual obligations to be imposed on generators. These include a sequential generator obligation to (1) be scheduled by the LSE, (2) bid into the forthcoming day-ahead market if not already scheduled, or (3) be subject to the CAISO's Residual Unit Commitment (RUC) process if the bid is not accepted. The Commission determined that in order to count for RAR purposes, contracts executed after the Phase 2 decision should include such provisions.

The Phase 2 workshop discussions revealed concern that this approach to the assignment of LSE and supplier obligations could jeopardize RAR security objectives and burden LSEs alone with the RA obligation. LSEs noted in particular that they will not be in a position to know whether resources actually perform according to the contract terms, and they objected to the possibility that they would be subject to sanctions if the supplier failed to perform.

In response to these concerns, Commission staff and the CAISO developed a working proposal that would refine how the RA obligation is split between generators and LSEs. The LSE obligation would essentially be that outlined in D.04-01-050 and D.04-10-035, although the LSEs' RAR showings would be made to the CAISO as well as the Commission, and the proposal suggests the use of contract reference numbers. The key component of the Staff/CAISO proposal is the promulgation of CAISO tariffs with availability and performance requirements applicable to generators. To qualify as an RAR asset, a generator would be obligated to (1) be available for testing by the CAISO to determine qualifying capacity, (2) have its qualifying capacity linked to performance (i.e., forced outages impact the next year's or period's qualification), (3) be included on the CAISO's "listing" of qualified capacity so the CAISO can make an accounting against the LSEs' submittals, (4) bid into the CAISO's forthcoming day-ahead market, and (5) be subject to pay CAISO sanctions for non-performance, such as Uninstructed Deviation Penalties.

Staff reports that workshop participants agreed that this approach would resolve many of the implementation and fairness issues and provide better incentives than the LSE-only approach. Notwithstanding widespread support for symmetrical LSE/generator obligations, however, comments on the workshop report show that most if not all parties believe that further consideration is required before the proposal can be implemented. We concur in this assessment. In any event, the establishment of generator obligations as contemplated by the proposal is the province of the CAISO.

Accordingly, while we generally approve the concept of a split RAR obligation that includes CAISO enforcement of specific generator availability and performance duties, we cannot and will not adopt the Staff/CAISO proposal here. On the other hand, we do not think that we should delay implementation of the RAR program until the Staff/CAISO proposal can be vetted and implemented by the CAISO. Instead, we believe that it is reasonable to proceed as planned with an LSE-based RA obligation that extends the availability obligations described in D.04-10-035 to generators through contract provisions. While we recognize the LSEs' concern that they might be held accountable for generator performance over which they have little or no control (or even knowledge), we believe this concern can be reasonably mitigated. In particular, we would expect contracting parties to formulate terms and conditions that appropriately allocate any risks of generator nonperformance that accrue to the LSE.

Ultimately, a coordinated CPUC/CAISO RAR program that includes CAISO-enforced generator obligations such as those contemplated in the Staff/CAISO proposal holds considerable promise for a more effective approach to achieving RAR goals. The approach is consistent with the fact that the CAISO is the only entity with the ability to know whether a generator has met its obligation and showed up in the market. A CAISO registry of RA-qualified resources could provide an incentive for plant investments/upgrades and a reduction in forced outage rates, and CAISO-based enforcement may be more effective than an LSE-only obligation. At the same time, LSEs would have better information regarding the value of the capacity when making purchases. Finally, staff notes that the approach is more consistent with the pricing and transmission service rules established in FERC's Standardized Interconnection Rules, and that it builds on the experience in the Eastern markets.

We therefore direct our staff to work closely with the CAISO towards that end, building off the record of the Phase 2 workshops and comments and working with all concerned stakeholders. Once the CAISO has promulgated tariff provisions that define generator obligations, contracts that qualify for RAR showings should include provisions obligating the supplier to comply with the CAISO protocols.

4.2. Treatment of De-Rated Resources

Some workshop participants argued that the CAISO-listed capacity of multi-year contracts should count for RAR purposes for the life of the agreement, even if that capacity is de-rated based on the resource's performance. According to these parties, doing otherwise would undermine longer-term contracting. Other parties believe that fixing the level of qualifying capacity without regard to actual performance would both create disincentives for the contracted resources to perform and for LSEs to make good choices from among available resources. While this issue arose in connection with Staff/CAISO proposal for rebalancing the RA obligation between LSEs and generators (*see* Section 4.1 above), and implementation of a de-rating requirement would be a part of such rebalancing, we state our policy preference here because of the importance of this issue to the RAR program.

Because we are implementing a physical capacity-based RAR program, it is our policy that a resource should only count to the extent that the capacity of that resource can be relied upon to perform. For example, if it is known that a resource with a multi-year LSE contract that once qualified at 100 MW can only be relied upon to provide 80 MW in the future, it would run counter to our RAR objectives to allow the LSE to continually count the full 100 MW for its RAR showings for the duration of the contract. If the LSE were not required to replace the missing 20 MW, it would in effect be able to socialize the costs of that missing capacity. As noted earlier, we seek to adopt RAR program elements that minimize or eliminate such free ridership.

The principle argument against de-rating the capacity that counts in RAR showings is that it might undermine long-term contracting. We support the use of longer-term forward contracts for capacity to foster a stable planning and investment environment. However, we see no justification for promoting long-term contracting through an artifice that (1) ignores the actual capacity availability of a particular resource, and (2) does so at the expense of reduced reliability, cost shifting, or both.

Moreover, we are not persuaded that a de-rating policy will unduly discourage long-term contracting. Several parties have observed that LSEs can protect their interests by negotiating appropriate contract terms. For example, Constellation notes that contracts could provide that if the capacity rating of the resource has diminished, it will be the obligation of the resource's owner to replace the amount of the capacity reduction. We also note that such provisions would provide incentives for suppliers of capacity to operate and maintain their assets efficiently.

Thus, if the CAISO determines that the effective capacity of a resource is to be de-rated based upon the resource's actual performance, then only the adjusted amount should be counted as qualifying capacity in subsequent RAR showings. Similarly, if a resource makes investments to increase capacity, its capacity contribution should be recalculated to incorporate the upgrades.

The workshop report described general agreement of the participants that a policy of aligning a resource's qualifying capacity with the CAISO's capacity rating for that resource implies that the required 15-17% reserve margin should be evaluated and possibly adjusted. This is because if average forced outage rates decline as a result of tying RAR eligibility to performance, then presumably the overall reserve requirement could be safely reduced. Conversely, if average forced outage rates are high, then a higher reserve requirement may be justified. After we have gained experience with the operation of the RAR program, it will be appropriate to revisit the 15%-17% reserve margin and consider possible adjustment.

4.3. The Must-Offer Obligation (MOO)

The MOO is a FERC-approved, CAISO-administered mechanism under which certain generation units not otherwise scheduled are obligated to operate and bid into the CAISO's real time market. The mechanism includes a process under which the CAISO grants or denies MOO waiver requests. The CAISO provides some compensation to units that are denied waivers and thus required to operate in real time. FERC has indicated its intent that the MOO will be terminated when our RAR program becomes operative. Generators, in particular, are eager to have the MOO eliminated as soon as possible, and they recommend that the mechanism be terminated when the RAR program is implemented. Other parties believe that the mechanism should be retained until both the RAR and the CAISO's Market Redesign and Technology Upgrade (MRTU) programs are operating. MRTU is slated to commence operation in February 2007.

In connection with the SVLG's proposal for standard contract language (*see* Section 4.4 below), the Phase 2 workshop report invited comments on whether the MOO and associated waiver process should be extended until the MRTU process is implemented (Topic 4). Also, in connection with interagency coordination issues (*see* Section 5 below), the workshop report invited comments on (1) the proposition that the Commission, the CAISO, and the FERC must coordinate to determine both replacement requirements and the schedule for eliminating the CAISO's MOO authority (Topic 13); and (2) the proposition that RAR will replace the FERC-imposed MOO (Topic 14). We take up these three related topics here.

The CAISO, LSEs, and their customers generally support extending the MOO, including the waiver denial process, until the CAISO's MRTU program is implemented. As described in the workshop report, there is concern that if the MOO and the associated waiver process are eliminated earlier, the CAISO will not have a means to commit RA resources for the next day. However, such a means will be available with implementation of the day-ahead market as part of the MRTU. Extending the MOO until MRTU implementation would provide an interim mechanism to assure dispatch of needed resources. SCE believes that continuing the MOO will provide needed market power mitigation until MRTU is implemented.

Joint Parties believe that the MOO will remain necessary until the RAR program has been proven to meet California's energy needs, the CAISO has implemented the MRTU and its day-ahead market, and the CAISO has authority to enter into backstop local capacity contracts.[8] They also propose that the

[8] CMTA states that it no longer joins the other parties with which it submitted joint comments (CLECA and Joint Parties) with respect to their positions on the MOO. CMTA now characterizes the MOO as a "vestige of the energy crisis which should be eliminated as soon as possible." (CMTA supplemental comments, p. 2.)

CAISO track waiver denials for non-RA resources and report them to the Commission. They believe that this would indicate whether the CAISO is relying on excess reserve levels, needed local resources have been identified, and the RAR program design is missing any needed element.

Suppliers of generation and others opposing continuation of the MOO beyond June 2006 contend that it would undermine the incentive to contract for long term capacity, and discourage investment by continuing short-term procurement and inadequate compensation. They also believe that the MOO will not be necessary when the RAR program is operative, and in particular they dispute the workshop report's conclusion that the MOO mechanism is necessary as an interim measure for the CAISO to commit resources a day ahead. For example, IEP contends that there is no need to keep the MOO since RAR contracts will provide the CAISO with the commitments and resource availability is needs.

It appears that the MOO and associated waiver mechanism may discourage contracting, provide inadequate compensation, and fail to foster a stable investment environment. For these reasons, the mechanism is not aligned with our RAR goals and should be terminated.[9] Nevertheless, we conclude that it should be retained at least until the MRTU mechanism and the day-ahead market are operative. As discussed later in this decision, we are permitting the use of certain non-unit specific contracts for RAR showings on a transitional

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[9] We note that on August 25, 2005, IEP filed a complaint with FERC, seeking to replace the MOO with an alternative tariffed payment structure. The Commission will be participating in that proceeding, *Independent Energy Producers Assoc. v. California Independent System Operator Corp.*, FERC Docket No. 05-146.

basis. These contracts may not provide the CAISO with the level of commitment that unit-specific contracts should provide.

In light of this, the lack of a mechanism for scheduling units in the day-ahead time frame prior to MRTU implementation, and the recognition that any major new program such as RAR may have unanticipated initial implementation issues, it is prudent to proceed with caution. For the early stages of the RAR program, we do not have the same level of confidence as the generator parties that RAR contracts will provide the CAISO with the commitments and resource availability that it needs.

While we recognize that the MOO may act as a disincentive for LSEs to enter into forward contracts, one of our purposes in adopting RAR is to provide an incentive that should lead to that very result. Eventually, adding a multi-year forward commitment dimension to the RAR program may enhance this effect. In any event, we note that nothing prohibits multi-year forward capacity commitments from qualifying for year-ahead RAR showings, and we encourage such commitments.

At this time, we will not approve the other pre-conditions for termination of the MOO that were suggested by Joint Parties. In particular, we will not require that RAR be proven (at least in the context of a formal proceeding) to have met California's energy needs, as that strikes us as an unnecessarily high standard for elimination of a mechanism that appears to be at odds with our RAR goals.[10] The proposal that the CAISO track waiver denials for non-RA resources

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[10] Of course, mid-course corrections to the RAR program may prove necessary. Also, as noted elsewhere in this decision, we are planning to conduct further proceedings to upgrade the RAR program and to consider developing a centralized capacity market.

and report them to the Commission appears reasonable as an early means of monitoring the effectiveness of the RAR program. We request that the CAISO periodically provide such reports to our Energy Division during the transitional period between the commencement of the RAR program and the termination of the MOO.

The workshop report states that continuation of the MOO mechanism on an interim basis may require that supplier cost information be provided to the CAISO so that it can efficiently select necessary resources. It also notes that existing must-offer compensation may duplicate payments under RA contractual arrangements, and suggests that appropriate adjustments to must-offer compensation for RA resources should be considered. After reviewing all of the comments and replies, we are persuaded that these measures are not necessary. In particular, the possibility of duplicate payments seems somewhat unlikely.

Based on the foregoing, we determine that an extension of the MOO and associated waiver process is necessary to facilitate commitment of RA resources until CAISO's MRTU process is implemented.

4.4. SVLG's Standard Contract Proposal

In connection with the resource availability dimension of the RAR program, D.04-10-035 observed (in Section 3.8.2, pp. 41-43) that standard contract terms and conditions would be important to the development of readily transferable capacity contracts. While it was not ready to endorse the creation of a mandatory, centralized capacity market, the Commission noted that a readily traded capacity contract that parties can voluntarily exchange would be useful.

The Commission included this topic in the scope of Phase 2 workshops, and it raised the possibility of approving specific contract language.[11]

For the Phase 2 workshops, SVLG developed a set of proposed "essential elements" of a capacity contract along with illustrative contract language. According to the Phase 2 workshop report, the SVLG proposal is viewed as a replacement to the MOO and would only be effective until implementation of the CAISO's MRTU. The report notes that SVLG's proposal would (1) allow the buyer to count capacity towards RAR, (2) allow the seller to retain ownership and/or control of the capacity, (3) qualify the contract capacity, (4) ensure that capacity is not double-counted, (5) require the seller to make its resource available to the CAISO for all hours of the delivery period in the contract.

Most of the parties addressing this question oppose our adopting specific, mandatory contract language, and SVLG itself does not propose that we do so. We are persuaded that it is neither necessary nor desirable to require that specific language be adopted as a mandatory component of qualifying contracts. As AReM point out, contract language is sometimes modified on a company-by-company basis due to internal legal requirements or preferences. We agree that the focus should be on essential contract elements.

We appreciate the extensive efforts of SVLG and others who participated in this aspect of the workshops. Still, we are concerned that the proposal has not been fully vetted. We note that even though TURN participated in those

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[11] D.04-10-035 proposed the following workshop discussion topic (among others):

> "What specific standard language, if any, should be included in future contracts between LSEs and generators that will sufficiently obligate generators to bid into Day-Ahead markets and be subject to RUC and other appropriate processes?" (D.04-10-035, p. 42.)

workshops, it did not receive the version of the proposal that was attached to the workshop report until the report was issued. ORA does not believe that the current draft of the SVLG proposal fully reflects workshop discussions.

Moreover, notwithstanding these reported shortcomings of the workshop process with respect to this proposal, SVLG, the proponent, did not file reply comments. It is not clear whether SVLG would concur in any of the modifications that were proposed in opening comments. Finally, we understand that the SVLG proposal is offered as a replacement for the MOO for the period before MRTU implementation, yet we have determined that the MOO should be retained for that period.

We conclude that while the concept of established criteria for tradable capacity products should be pursued, and substantial progress has been made, more work needs to be done before the SVLG proposal or any variation of it can be adopted.

This does not mean that the RAR program cannot go forward pending completion of such work. Even though we have not established rigorous criteria for tradable capacity products, resources that qualify for RAR under the determinations made in D.04-01-050, D.04-10-035, and this decision represent capacity products. Moreover, we note that PG&E has developed contract language as part of its efforts to fulfill its incremental RA portfolio for 2006. (*See* PG&E Advice Letter 2695-E and Resolution E-3955.) Whether or not this language would be an appropriate template for other parties and in other circumstances, PG&E's advice letter demonstrates that parties are able to craft necessary contract language without our first adjudicating it.

The workshop report suggested that the Commission should consider how any changes to standard contracting elements should be incorporated into the

Renewable Procurement Standard (RPS) contracting process. We concur with a number of commenters who indicated that this topic was not developed in workshops and that such consideration is not necessary at this time.

Before leaving this topic we make two observations. First, the proposal for four basic required characteristics for a capacity product set forth in AReM's opening comments (Table 2, p. 11) represents a good starting point for further consideration of the elements of a tradable capacity contract. It may well be an appropriate statement of necessary if not also sufficient elements of a tradable capacity product.

Second, we note that TURN has proposed that there should be a capped energy strike price for contracts where suppliers are recovering fixed costs through capacity payments. Without commenting on the merits of such a cap, we observe here that this would seem to be a major addition to the RAR program, yet one that has received scant attention to date. Such a proposal would require full vetting before it could be adopted as a mandatory requirement. However, nothing in this decision precludes parties from voluntarily pursing such contract terms.

5. Interagency Coordination

5.1. Introduction

In addition to this Commission, the CAISO and the CEC will each play a role in the implementation and ongoing operation of the RAR program based upon its expertise and jurisdiction. For example, D.04-10-035 explicitly calls for the CEC to review LSE load forecasts. Earlier in this decision we determined that our staff should work with the CAISO and stakeholders in defining CAISO-administered generator availability obligations. The workshops included discussions of CAISO's role in compliance and enforcement in addition to its roles in conducting deliverability analyses and developing local procurement requirements. Also, the workshop report indicates that the RAR program is a foundational component of the CAISO's forthcoming market design.

As the Phase 2 workshop report also notes, these agencies must work in concert to meet the RAR program's policy objectives. Following the organization of the workshop report, Section 5 focuses on approaches to how the involved agencies will implement and operate certain aspects of the RAR program.

5.2. Load Forecasts

D.04-10-035 provided that LSEs will submit preliminary load forecasts and supporting documentation for review by the CEC. The CEC will assess these for plausibility and consistency, in the aggregate, with load forecasts prepared by CEC and/or the CAISO. The LSEs' forecasts are also to be adjusted by the CEC for programmatic impacts (such as energy efficiency and demand response) and coincidence, as it is generally recognized that individual LSEs may not have the data necessary to make such adjustments. The CEC will calculate an adjusted load forecast for each LSE to serve as the basis for the LSE's qualifying capacity obligation and the compliance filing due each September 30 for the subsequent year. The Commission requested that the CEC bring to its attention any discrepancies in the LSEs' preliminary forecasts prior to the LSE's compliance filings.

In connection with the CEC's review of the preliminary load forecast submittals, the Phase 2 workshop report posed a series of questions for comment that we take up here. Before doing so, it will be helpful to articulate our overall understanding of how this Commission and the CEC will administer the load forecast component of the RAR program, at least for the initial implementation stages of RAR.

The RAR program is being established pursuant to our broad jurisdiction over IOUs as well as our narrower jurisdiction with respect to ESPs and CCAs. While the CEC also has jurisdiction to review LSE load data and does so separately from the RAR program, the extent of its authority to enforce our RAR requirements was not fully explored in workshops. Therefore, as the RAR program commences, it is appropriate for this Commission to retain control over the load forecast review, assessment, and adjustment process even as we utilize the expertise and resources of the CEC to carry out this aspect of the program.

Eventually, it may turn out to be more efficient if the CEC formally administers the load forecast component of the RAR program pursuant to the RAR policies of this Commission. Assuming that it has the authority to enforce the requirements, the CEC could receive, analyze, and adjust the LSEs' preliminary forecasts, and then report the results to the LSE. The LSE would then submit its RAR compliance filing to the CPUC using the CEC-approved forecast. This approach warrants further study.

Until further notice, LSEs' preliminary load data should be submitted to this Commission's Energy Division, which will promptly transmit the data to the CEC for review and analysis.[12] As suggested by AReM, the LSE's submittal should include contact information for responsible personnel. The CEC will report the results of its review and any adjustments it has calculated to the Commission's Energy Division as well as the LSEs and the CAISO. The LSE will then use that adjusted forecast as the basis for its procurement obligation.

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[12] This is the approach ordered by the ALJ in his June 24, 2005 ruling directing LSEs to submit load data to the Commission. As a practical matter, LSEs can and should simultaneously provide the data directly to the CEC, but it should be understood that the submission is formally being provided to the Commission's Energy Division.

The confidentiality rules adopted by this Commission will govern this process. LSEs should work directly with the designated CEC staff to respond to any CEC data requests, and failure of an LSE to respond would constitute violation of an order of this Commission. Any disputes between the CEC and an LSE should, in the first instance, be addressed informally by the principals and, where appropriate, our staff.[13] If a dispute cannot be resolved this way it should then be referred to this Commission. We will direct our staff to explore detailed procedures for responding to such referrals and make appropriate recommendations for our consideration. Until further notice, such disputes should be referred to the Commission by a motion in R.04-04-003 or successor proceeding that addresses RAR.

In comments on these issues a number of parties expressed the view that LSEs should not be held accountable for the accuracy of their load forecasts. We generally agree that this should be the case, as forecasts of demand by their very nature may entail considerable variability. At this time, we do not have information regarding the extent of such variability that would allow us to set reasonable accuracy standards. In order that we may explore such standards in the future, we ask the CAISO to provide actual load data to the CEC to enable the CEC to evaluate load forecast accuracy on an LSE-specific basis.

We add this caveat: if it were demonstrated that an LSE knowingly used false or unreasonable assumptions to skew the forecast in its favor, it would be reasonable to hold the LSE accountable for such actions. Moreover, regardless of the assumptions or methods used, if any LSE's load forecasts consistently or

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[13] This would include compliance issues such as failure to timely respond to CEC data requests as well as disputes about input assumptions, CEC adjustments, etc.

systematically understate actual demand, that will be reason for investigation and possible sanction.

The workshop report noted that some LSEs believe that if they are to be subject to sanctions for their forecast errors, then the forecasts should be formally adopted by either the CEC or this Commission. Since we are not holding LSEs accountable for the accuracy of their forecasts, but only for knowingly making false or unreasonable assumptions or failure to engage in the process, we do not see a need for routine formal adoption of the CEC-adjusted LSE forecasts by either agency. In fact, once the CEC staff and the LSE have agreed on a forecast for that LSE, there may not be additional value in subjecting that determination to a formal review process. Moreover, the limited time available between the initial submission of the LSE's preliminary load forecast and the submission of the LSE's actual compliance filing may not be sufficient to allow for a meaningful, formal review and adoption process. We note, however, that if an LSE disputes an adjustment calculated by the CEC and the dispute culminates in a Commission decision, that LSE's forecast would be formally adopted.

IEP believes that the RAR program would benefit from a common forecasting methodology endorsed and developed by both the CAISO and CEC. IEP further believes that a formal memorandum of understanding between CAISO and CEC to accomplish this would eliminate ambiguity as to what the true long- and short-term forecasts are. While not critical to implementation of the RAR program at this time, we find this suggestion intriguing and urge the agencies and stakeholders to study it.

5.3. CAISO Enforcement

The workshop report invited comment on CAISO's enforcement role regarding the RAR program. The few parties that addressed this question, including CAISO, agreed that this Commission should enforce the requirements that are applicable to LSEs. We concur. As the workshop report also notes, the CAISO may be the most appropriate entity to review the performance of resources nominated by LSEs since it is uniquely aware of the physical attributes of California generators, their use through the Day Ahead scheduling process, and any downstream unit commitment and dispatch instructions that were issued even if not scheduled by the LSE.

In Section 4.1, we directed our staff to work with the CAISO to address generator obligations that would complement the obligations we are placing on LSEs. This process will clearly need to address the CAISO's enforcement role.

5.4. Resource Listing and Testing

The workshop report discussed the possibility of the CAISO maintaining a centralized listing of capacity resources that would qualify for RAR showings. The report noted that the Staff/CAISO proposal (discussed in Section 4.1) suggested that testing could eventually be a part of a resource-specific qualifying capacity determination. The report invited the CAISO to comment on whether it is prepared to undertake these activities.

In response, the CAISO acknowledged that it is likely the appropriate entity to administer a program of performance standards for resources, but it also believes that implementation of a testing program should await further development. For the time being, CAISO recommends using the reported values to set the qualifying capacity of a specific resource. We appreciate CAISO's acknowledgement of a future role, and we adopt its proposal to use reported values for the present.

CAISO also notes that it now has much of the suppliers' data regarding qualifying capacity based on "counting" determinations made in D.04-10-035.

This data was provided in connection with CAISO's baseline deliverability analysis. However, because it still does not have the data for certain resources, CAISO proposes that we specify that a unit cannot be considered a qualifying resource for purposes of the RAR program unless it has submitted its qualified capacity value and supporting documentation to the CAISO. Those resources that made prior submissions to the CAISO would be deemed to have satisfied this requirement. This strikes us as a reasonable and effective means of extending RAR obligations to resources, and we therefore adopt it.

6. Load Forecasting Issues

6.1. Best Estimate vs. Current Customers Approach

D.04-10-035 adopted a protocol whereby LSEs are required to submit load forecasts using their best estimates of future customers and their loads. The Commission rejected an alternative approach that would have required LSEs to assume that their customer base will remain fixed for the forecast period, *i.e.*, that load migration will not occur. This issue resurfaced in the Phase 2 workshops, and TURN filed a petition for modification in which it sought to vacate the Commission's adoption of the best estimate approach and to defer final resolution of the matter to this Phase 2 decision. In support of its petition, TURN noted that Phase 2 workshop discussions addressed several alternative proposals for dealing with the effects of customer load migration. AReM and Sempra Energy Solutions filed responses in opposition to the petition.

TURN's petition refers generally to workshop discussions regarding the problem of customer load migration and alternatives for dealing with it, but it does not refer to any particular impacts on LSE load forecasts or point to any specific new facts or arguments that arose in those discussions. We therefore conclude that the petition is procedurally deficient.[14] The question of which load forecast method to use has already been resolved, and we will not revisit the question here. In accordance with D.04-10-035, LSEs should prepare and submit hourly load forecasts based on the best estimates approach.

As the CAISO noted in its comments, an organized capacity market might provide LSEs with a means of addressing the impact of load migration on their RA obligations. While we deny TURN's petition for the reasons stated herein, and we are committed to going forward with the RAR program using the best estimate approach, we are willing to revisit this topic at an appropriate time in the future. In particular, if a capacity market is in place and it has been shown that the load migration problem can be readily addressed by the ability of LSEs to acquire and dispose of increments of capacity sufficiently small (and located where needed) to match such migration, then it would be reasonable to revisit this topic. We note that Sempra Global, an opponent of TURN's proposal to vacate the best estimate approach, agrees that a capacity market would readily accommodate load migration.

[14] While TURN's petition did not refer to such facts or arguments, its opening comments on the workshop report referred to workshop discussions of how the LSEs' month-ahead RAR showings might be updated to reflect customer migration. However, even if we were to accept this late-supplied information as resolution of the petition's procedural deficiency, and reconsider the best estimate approach, we are not persuaded that the ability to update forecasts a month ahead adequately addresses the LSEs' legitimate concerns regarding load migration. Additionally, it would be quite disruptive to the LSE load forecast review process that is already underway, and put timely implementation of RAR at risk. (*See* June 24, 2005 ruling of the ALJ directing LSEs to submit load forecast data, which ruling we have affirmed in Footnote 12, *supra.*)

6.2. Coincidence Adjustment Methodology

D.04-10-035 provided that RA obligations should rest upon coincident peaks rather than the unadjusted peaks of each LSE. Two alternative approaches to the coincidence adjustment were discussed in the Phase 2 workshops: (1) use of historic coincident factors (historic approach) and (2) determination of coincident peaks directly from the hourly load forecasts submitted by the LSEs (forecast approach). The workshop report described advantages and disadvantages of both options and invited comment on which of them should be adopted. The comments revealed preferences for both options.

We adopt the historic approach. While, in theory, forecasts might be more accurate (and as CAISO observes, more in line with our decision to use the best estimate rather than the current customers approach), we have insufficient experience with these forecasts to justify making that conclusion. It may be the case that the historic approach is just as accurate, if not more so. As PG&E notes, using load forecasts based on differing forecast methods of individual LSEs could introduce “forecast noise” to the analysis. SCE and SDG&E make similar points. SWP/SWC also underscore the report’s point that the historic approach simplifies the planning process and would permit the coincident adjustment factor to be identified earlier. At least until we have gained experience with the RAR program, we think this benefit outweighs any theoretical gain in accuracy that might be realized with the forecast approach.

In addition to the issues identified in the workshop report, PG&E makes two additional recommendations for coincidence adjustments. First, non-coincident load should be defined as the difference between (1) the sum of the LSEs’ non-coincident peaks and (2) the CAISO control area’s coincident peak, expressed as a percentage of the sum of the LSEs’ non-coincident peaks.

According to PG&E, this percentage is the average coincidence adjustment factor of all LSEs in the control area, and it takes advantage of the pooling effect of LSEs with diverse peaks and load shapes within the CAISO control area. Second, PG&E recommends adoption of a single adjustment factor for all LSEs. Thus, each LSE's forward procurement obligation would be its final, forecasted non-coincident load for a month, as determined by the CEC, reduced by a factor that reflects the average load diversity in the CAISO's control area in that month. As PG&E notes, averaging is more stable and easier to calculate, monitor, and apply. We adopt the PG&E approach, and grant discretion to the CEC to determine the exact method by which the PG&E approach is implemented.

6.3. Allocating Demand Side Impacts

D.04-10-035 outlined how energy efficiency (EE), demand response (DR), and distributed generation (DG) programs will affect load forecasts. While dispatchable demand side options will be considered as resources and counted as qualifying capacity, non-dispatchable DR and EE programs will be accounted for in load forecasts.

The Phase 2 workshop discussions regarding the quantification of EE and DR impacts and the allocation of those impacts to LSEs led to a working group (WG) paper which includes the following allocation recommendations:

> Regarding the allocation of the EE/DR impacts, the WG recommends that for RA purposes the impacts associated with the utilities' EE/DR programs be allocated to the LSEs in fixed proportion using metrics that are transparent, equitable, and relatively simple to quantify and apply.
>
> In principle, the EE/DR impact should be allocated to the LSEs in proportion to the funding their respective customers provide toward the utilities EE/DR programs. In order to simplify the allocation process, as a proxy for their funding contribution, the WG

> recommends allocating the impacts in proportion to the LSEs energy sales, as follows:
>
> - For EE programs, the WG recommends using the percentage of total IOU retail sales (i.e., bundled plus DA) represented by incremental EE savings for each utility to determine an LSE's share of that utility's incremental EE impact. [Material omitted.]
>
> - For DR programs, as a proxy for funding the WG recommends using the percentage of each LSE's sales to the sum of all LSEs' sales within a utility's service area to allocate that utility's DR impact. Because an LSE's funding contribution to a utility's DR programs can vary by program (at least in the case of the CPA program now administered by PG&E), the allocation percentages for DR impacts can vary by program. [Footnote omitted.]
>
> This report provides estimated allocation percentages for the existing utility EE/DR programs by utility. The WG recommends that the utilities determine the EE/DR RA impacts and allocation percentages annually. (Phase 2 workshop report, Appendix C, pp. 1-2.)

Even though the WG paper is denoted as a draft, we understand that it is the WG's proposal. As set forth in the Phase 2 workshop report, staff believes that the WG paper generally makes sense, but that certain elements were problematic. For example, staff expressed concern that the report did not recognize the distinction between programs that are dispatchable and those that are not. Upon review of the comments filed by PG&E and SCE, we are persuaded that the staff's concerns have been addressed and do not require further discussion. Nothing in the WG paper is inconsistent with D.04-10-035's determination that dispatchable programs are to be counted as resources, and the paper supports the idea that EE impacts are to be debited from load forecasts.

We accept the WG recommendations for allocation of demand side impacts and adopt them as our own.

6.4. Measurement and Evaluation

With respect to the quantification of the EE/DR impacts, the WG recommended that parties continue using their present methodologies, and review and evaluate those methodologies based on the results from measurement and evaluation (M&E) efforts currently planned for next year in R.01-08-028 (in particular the December 30, 2004 ALJ ruling) for EE, and in R.02-06-001 for DR.

The WG paper also notes a need for improved M&E efforts, and the workshop report observes that modification of existing M&E efforts for various program categories is a key linkage to resource adequacy needs that should be pursued in terms of the research design changes and funding required to accomplish these new studies in a timely manner. The workshop report goes on to recommend that the Commission "direct EE, DR, and DG [M&E] efforts to support the hourly load shape impact assessments that are necessary to the inclusion of the impacts of policy-preferred resources within RAR." PG&E and SCE are supportive of this recommendation. We adopt the staff's recommendation in principle, and ask that our staff provide us with specific recommendations for its implementation.

6.5. Responsibility To Quantify EE, DR, and DG Effects

The Phase 2 workshop discussions surfaced the need for the three IOUs to prepare and document the hourly impacts of EE, DR and DG programs within their service areas and to provide these impacts to the CEC for use in the adjustment of LSE load forecasts. Staff notes that these impact evaluation responsibilities must be completed and documented for handoff to the CEC each spring. Staff notes further that to the extent that the Commission assigns programmatic M&E activities for EE, DR or DG to entities other than the IOUs, then these entities must also provide comparable impact products to the CEC.

Staff recommends that the IOUs and any independent evaluators be required to prepare EE, DR, or DG impacts according to the informational needs of RAR. While this recommendation is largely uncontested, SCE points to the need for funding of additional studies and SDG&E's concerns about its lack of historical data are applicable. We adopt staff's recommendation. While there is no funding proposal before us for studies, we commend to the appropriate EE and DR proceedings consideration of the data needs of the RAR program and the specification of, and funding options for, studies to develop such data.

The workshop report recommends that the Commission direct IOUs to make monthly estimates of EE, DR, and DG for all twelve months of the year despite any uncertainties of responsibility about program administration. PG&E supports this recommendation. SCE does not explicitly support the recommendation but it notes that program administration responsibility has been clarified, and that IOUs are better able to provide monthly forecasts for EE, DR, and DG programs. SCE also notes that IOUs have little control over many variables that can affect estimates, and that there can be large month-to-month variations in program impacts. Finally, SCE notes that the IOUs will have little choice but to rely on nameplate ratings for monthly estimates for DG.

SDG&E states that it does not collect monthly or hourly history nor are there studies to guide estimates. SDG&E believes that any attempts to quantify hourly or monthly impacts would be unreliable. Nonetheless, developing impacts in this manner is essential to estimating peak impacts. We will direct the

IOUs to make monthly estimates of hourly EE, DR, and DG program impacts as recommended by staff. In view of the understandable data problems, the IOUs shall work with Commission staff and CEC staff to develop estimating methods appropriate for each IOU's existing measurement and evaluation data.

6.6. DG Impacts

Staff reports that the workshop participants generally agreed that DG impacts are less important than those of EE and DR. Where there are thousands of megawatts of aggregate impacts from EE and DR programs, DG programs appear to have no more than a few hundred megawatts. The participants essentially agreed that each IOU would prepare DG penetration and stereotypical electrical production patterns that would allow development of hourly impacts. These will be provided to the CEC for use in adjusting preliminary LSE load forecasts on a pro-rata basis like those of EE and DR. We agree with staff's conclusion that if DG impacts appear to become more significant in the future, then more sophisticated methods identifying impacts and attributing them to the specific customers of individual LSEs may become important.

At this time, a simple DG impact assessment methodology is acceptable for RAR forecasting. IOUs shall provide data to the CEC in accordance with the foregoing discussion.

6.7. Total Losses Methodology

D.04-10-035 directed LSEs to include all losses in their load forecasts, including distribution losses, transmission losses, and unaccounted for energy (UFE), and it directed further consideration of implementation details for this policy in Phase 2. In the Phase 2 workshops, the CAISO presented data that could form the basis for a simplified approach in which hourly distribution loss factors (DLFs) would be used with an upward adjustment of three percentage points for both transmission losses and UFE. The 3% adder would apply in all hours. The workshop participants agreed on this approach, and the comments reflected universal support for it, at least for initial implementation of the RAR program. We will adopt this straightforward approach for transmission losses and UFE, and leave possible refinements to future proceedings.

Staff is concerned that while the IOUs have DLFs available on their websites to support direct access load scheduling and settlement, these factors are intended for short-term purposes and may not be compatible with developing long-term forecasts. It is apparent that further study may identify DLFs that are more appropriate for purposes of the RAR program. For initial implementation of the program, however, the simplified approaches suggested by PG&E and SCE are adequate. CEC, in consultation with the IOUs, should develop DLFs on the basis of the best information available. The DLFs should be made available to all LSEs, and proposals to use website postings appear to be reasonable for this purpose.

7. Resource Issues

7.1. Monthly Peak Method vs. Load Shape Method

While the nature of the RA obligation was addressed in D.04-10-035, the Phase 2 workshop discussions revealed deep divisions about an important aspect of the obligation. Specifically, the issue of whether LSEs should be required to acquire capacity to meet each month’s peak demand for all hours of that month remains unresolved. By ruling dated April 7, 2005, the ALJ scheduled additional workshops to consider this issue, deferred issuance of the Phase 2 workshop report, and rescinded the previously established procedural schedule to accommodate the additional workshops.

Two general approaches to defining the the RA obligation emerged from this process. The first, supported principally by the CAISO and by generator parties, would establish each LSE's procurement obligation for each month as the LSE's peak day load for that month, measured in megawatts (MW), plus 15%. This monthly peak approach was commonly referred to as the "top-down" (TD) method.

According to the workshop report, the TD method recognizes that many of the qualifying resources will not be available in all hours of the month. The report describes two alternative proposals for implementing the TD method. The IEP alternative would create special rules with limits on the CAISO's ability to call on energy-limited, environmentally limited fossil, pumped storage hydro, non-pumped storage hydro, Qualifying Facilities (QFs), and intermittent resources. Another alternative for the TD method, advanced by Mirant/WCP, would create interim exceptions for limited availability contracts with specific resources or portfolios of resources and standard delivery attributes (e.g., 6x16 firm energy contracts), limited availability call contracts with specific resources or portfolios of resources and non-standard dispatch attributes (e.g., 6x16 options with two-day-ahead call), and firm liquidated damages contracts for delivery within California. Mirant/WCP advocate a maximum cumulative contribution of specified resource categories with physical and contractual availability limitations to alleviate over-reliance on resources that could not be counted on to serve a large portion of a month outside of the peak period. There would be no need in the LSE compliance showing to acquire additional resources to "make up" for those resources that are not available at all hours due to allowable constraints.

The second general approach to defining the RA obligation, supported by LSEs and their customers as represented by Joint Parties as well as SDG&E, is based on calculating each LSE's load duration curve to determine the hourly resource need (in MW) for each hour of each month, then adding 15% across all hours. This LSE-specific resource duration curve approach is commonly referred to as the "bottom-up" (BU) method. A resource eligibility factor (REF), a proposed measure of the percent of time resources can be counted against an LSE's RAR, would be used to compare the LSE's resource portfolio to the resource duration curve. Non-energy-limited resources without planned outages would have a 100% REF, i.e., they would count towards an LSE's monthly RAR 100% of the time. Certain energy-limited resources could meet the 100% REF standard in specified conditions; otherwise, however, energy-limited resources would not be able to qualify for a 100% REF.

Apart from the TD and BU methods, no other alternative means of defining the RA obligation were proposed. We must adopt one of the two methods so that the RAR program may go forward. Accordingly, we will determine the method that appears to more effectively promote our policy objectives for RAR.

Availability of Resources to the CAISO - Proponents of TD argue that their approach meets CAISO's needs since the availability requirement is similar to the current MOO mechanism. The CAISO also contends that the TD method is more consistent with its operations because resources are offered for all hours they are physically capable of running (subject to environmental and other regulatory limitations). TD advocates note that under the BU approach, resource availability is limited not only by their physical capabilities but also by contract, creating a possible impact on the CAISO's ability to optimize resources.[15] The CAISO also argues that the BU approach may limit the CAISO's ability to respond effectively to energy deficiencies because such deficiencies can occur in any hour, and the BU method does not require resources to be available outside of their contracts.

BU advocates on the other hand maintain that their approach not only ensures an adequate supply of resources in all hours to meet load plus reserves, it ensures an appropriate resource mix and reveals planned outages in all hours. They argue that under the TD method, it is unclear how RA is impacted by use limitations in off-peak hours.

The major availability advantage that we see for the BU approach—that it would reveal planned outages in all hours—is outweighed in our view by the major availability advantage that we see for the TD approach—that resources are available to the CAISO by rule and, increasingly as non-unit specific contracts are phased out, not restricted by contract terms. Another reliability advantage claimed for the BU approach is that it would better preclude over-reliance on energy-limited resources. However, the CAISO notes that high load periods can occur during off-peak times, especially on Sundays. CAISO is concerned that under the BU approach, the load duration curve could indicate that load would be satisfied during these times by a peaking resource that may not be available due to contract terms.

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[15] However, as staff notes and CAISO reiterates in its comments, the TD approach may also be subject to this inefficiency to the extent that existing contractual arrangements are deemed eligible to satisfy the RA obligation.

We find that on balance, the TD approach is likely to be more effective than the BU method in terms of ensuring that resources are available to the CAISO.

Joint Parties point to another form of availability problem. They contend that the BU method would lessen the chance that the CAISO would face circumstances where it would have to manage an excessive amount of generation during off-peak hours. Joint Parties believe that excessive generation could lead to minimum load conditions in which the sum total of operating generation exceeds load, which in turn could lead to congestion that would undermine reliability. PG&E makes a similar point. Neither Joint Parties nor PG&E provide us with adequate information to assess the frequency with which minimum load conditions might occur, how severe their reliability impacts might be, or how much more effective the BU method would be in preventing it than TD would be. Accordingly, while we do not discount the possibility of minimum load conditions occurring, we are not presented with an adequate basis for preferring the BU approach because of possible minimum load conditions. We find it significant however, that the CAISO itself has not raised this as a significant concern.

Infrastructure Investment - The other principal means by which we seek to promote reliability through RAR is establishing an environment conducive to investment in the resources needed to serve retail load in the IOUs' service territories. As discussed earlier, we have determined that a capacity-based RAR program that encourages forward commitments is a key to accomplishing this.

As the workshop report notes, the BU method and its use of an LSE's load duration curve would serve to promote the creation of differentiated capacity products. On its face, this appears to be inconsistent with development of a standard capacity product. TD advocates, on the other hand, argue that their approach ensures that appropriate forward capacity demand signals are registered in the marketplace as soon as possible, resulting in price signals that will establish the true value of capacity.

We conclude that the TD method would do more to move LSEs towards adopting capacity products and away from mixed products for which the capacity value is at best implicit within the energy value but not recognized or known. Moving toward a rational pricing approach for capacity, where the true market value of capacity is revealed, should provide the appropriate incentives for needed investment to occur.

While we have not determined that a centralized capacity market should be developed, we have determined that the question of whether to do so should be studied in additional proceedings. We have also determined that actions we take here should not preclude development of a capacity market. To the extent that use of a resource duration curve to define RA obligations promotes the development of differentiated capacity products, the BU approach may hinder development of a capacity market.

Cost Differences - There are two dimensions to considering the cost differences between the TD and BU methods. Not only should we consider whether the costs that accrue to individual LSEs and their customers are lower under one of the methods, we should also consider whether one method or the other yields lower overall costs for all participants. The Commission noted in D.04-07-028 that LSEs were able to schedule infeasible and undeliverable energy contracts, and that the CAISO therefore had to incur congestion, must-offer, and re-dispatch costs to serve load. We seek to avoid such outcomes except in circumstances where the CAISO is able to undertake procurement at demonstrably lower total cost and assign those costs to those who cause them to be incurred. We understand such circumstances to be extremely limited at best.

One of the advantages claimed for the BU approach is that it is more compatible with the existing procurement strategies of LSEs. The converse of this argument is that the TD method may require LSEs to revise those strategies at potentially higher cost. However, to the extent that current LSE procurement strategies yield cost savings because they fail to provide adequate opportunities for the recovery of investment costs, such savings may be illusory, and in any event they would be inconsistent with the achievement of our RAR objectives.

A major concern raised regarding the TD proposal is that it would lead to significant and costly over-procurement for off-peak periods. We think that this concern is overstated, and it may miss the point that the RAR program is intended to promote needed infrastructure investment. As the CAISO pointed out, the value of capacity in off-peak times is minimal. Moving to a 24x7 obligation should not significantly increase costs because sellers are unlikely to recover significant capacity value in the off-peak periods. Therefore, any cost benefit in favor of the BU approach is unlikely to be meaningful. In any event, as the workshop report correctly observed, if there is a substantial difference between the TD and BU approaches, it is because of the former's provision for fixed costs being paid to suppliers providing needed capacity. To the extent that resource owners are currently absorbing the cost of making capacity available without adequate compensation, and the TD approach is more effective than the BU approach in providing for adequate compensation, then any higher costs of the TD approach that are due to providing such adequate compensation are consistent with our RAR objectives.

Joint Parties argue that if the ability of LSEs and existing California generating resources to engage in exchanges or off-system sales is undermined through the imposition of a must-offer requirement that extends to all hours, then the imposition of the TD method would result in substantial revenue losses and possibly a substantial increase in costs to meet needs that otherwise would have been met through exchanges. We find this concern to be overstated as well. As the CAISO and others have noted, sellers are unlikely to recover significant value in off-peak periods. Moreover, the exchanges at issue are short term in nature and unlikely to be major components of RAR portfolios.

Implementation - This issue boils down to which method was more fully developed in workshops and is therefore more ready to be implemented. We do not find that either method has a clear advantage with respect to either ease of or readiness for RAR program implementation. On the one hand, the TD approach is aligned with practices in eastern markets, and the lessons learned from those markets may be helpful to some participants in dealing with California's new program, including the CAISO itself. On the other hand, California LSEs are accustomed to operating in an environment that resembles the BU method, and implementation may be easier for them under BU. As we noted earlier, however, preservation of the status quo is not a reason to refrain from pursuing our adopted RAR policies.

Compliance - Compliance topics in general received relatively little attention in the Phase 2 workshops, and it is probably for this reason that no party presented persuasive arguments that one method or the other should be preferred because of compliance considerations. We note that the TD method is inherently simpler in that the key indicator of compliance is whether the LSE's resources are adequate for the monthly peak, whereas for the BU method compliance will have to be assessed across all hours.

Procurement Policies - ORA contends that the BU method is consistent with integrated resource planning and the loading order of the Energy Action Plan (EAP). ORA notes that the resource duration curve approach reflects the quantity and mix of resources that the Commission has ordered the IOUs to procure and can account for changes in the quantity, priority, and mix of resources in the IOUs' portfolios. By contrast, ORA contends, the TD method does not address off-peak resources, and exception rules would likely be static.

ORA's arguments strike us as little more than a variation of the status quo preservation approach discussed earlier. We see no compelling reason to conclude that movement to a capacity-based resource adequacy system significantly or unduly impedes progress in the implementation of the EAP loading order.

Conclusion - While the TD and BU methods appear in stark contrast to each other conceptually, their differences diminish when practical implementation concerns are introduced. Whether exceptions are adopted in connection with the TD method or an REF mechanism is adopted in connection with the BU approach, both methods have to address the fact that not all resources are available 100% of the time.

Nevertheless, differences remain. The BU approach is more in line with current LSE procurement strategies, but we are concerned that those very strategies may be at odds with RAR objectives. We find that the TD approach is more closely aligned with our policy objectives for RAR and should therefore be adopted. We take this action not because it is essential to the development of a centralized capacity market, as some suggest, but rather because it is essential to carrying out the policies adopted in D.04-01-050 and D.04-10-035.

We adopt the alternative version of the TD method suggested by Mirant/WCP. This alternative provides for exceptions that reflect the transitional nature of the program we are adopting. Specifically, as discussed later herein, we provide for a transition away from reliance on non-unit specific contracts in order to mitigate impacts on current practices and arrangements.

7.2. Dispatchable Demand Response (DR) Programs

D.04-10-035 found that in most circumstances dispatchable DR programs should be classified as resources that are eligible to count toward RAR. The Commission stated that it is "strongly supportive of demand response" and "willing to create special rules that permit it to qualify provided that [it does] not endanger system reliability in doing so." (D.04-10-035, pp. 26-27.) The Commission determined that DR resources should be available at least 48 hours each summer season to count as qualifying capacity, and that DR resources that operate two hours per day should be eligible but subject to a limit of 0.89% of monthly peaks.

The Phase 2 workshops addressed issues regarding how the DR programs will be dispatched. Some programs are only used under declared CAISO emergencies, which, arguably, is inconsistent with counting DR resources for RA so that they can be used to *avoid* emergencies and load interruptions. Also, because certain DR resources are only required to be available under emergency provisions, they do not currently have to bid or be scheduled in the day-ahead timeframe. This is arguably inconsistent with the concept of must-offer requirements for all RA resources.

In accordance with our prior determination that special RAR rules may be appropriate for DR programs as long as system reliability is not endangered, we will not adopt the CAISO's recommendation that emergency-only DR resources should not count for RAR. Nor will we require DR resources to bid or be scheduled a day ahead. We are concerned that these actions could effectively negate the value that these programs provide to the ratepayers who fund them. If the programs do not qualify as RA capacity, ratepayers would have to provide additional funding for the equivalent capacity value of the programs. The recommendations also appear to be inconsistent with the EAP, which gives policy preference to DR. We note that even though the CAISO states that emergency-only DR resources conflict with the objectives of RAR, it does not claim that allowing these resources to count would endanger reliability. For the same reasons, we find that it is appropriate to plan to use dispatchable DR programs up to the limits now established for each such program.

We recognize that some DR programs have been developed without the needs of the RAR program in mind, and, in particular, that the CAISO's ability to call on them may be sub-optimal. We anticipate that as the RAR program goes forward and that as DR programs continue to evolve, the programs can be better coordinated over time. However, at this time, we believe it is appropriate to recognize that ratepayers have been funding these programs and will continue to do so, and that the programs do provide capacity value even if they also create operational issues for the CAISO.

The workshop report asked parties to comment on how DR programs that are included in an LSE's RAR portfolio will be triggered. PG&E does not believe that the CAISO needs explicit dispatch authority for the DR programs as long as they can be executed in a timely fashion by the LSE. SCE believes that whether the CAISO or the LSE dispatches a program, the LSE should retain physical control over the program's use. Both PG&E and SCE refer to the need for protocols governing program dispatch established by the CAISO and LSEs.

We are generally supportive of DR program triggering protocols that would create a hierarchy in which price responsive DR programs are dispatched before emergency programs. We urge the CAISO and the LSEs to pursue this approach in conjunction with agency staff. As suggested in the workshop report, their discussions should include an evaluation of whether and when to apply DR triggers throughout the CAISO control area rather than just IOU service territories. We emphasize, however, that nothing in today's decision is intended to amend or revise current tariffs or other rules for existing or planned DR programs, whether with respect to triggering protocols or otherwise.

As noted earlier, D.04-10-035 established two restrictions on the use of DR resources in RAR portfolios—the 48-hour minimum availability requirement and the 0.89% cap on two-hour resources. The workshop report asked for comment on possible additional limitations on the countability of DR resources. Specifically, the report asked whether a program with a maximum call capability of four days per summer month should count.

As PG&E notes in its comments, the issue of limits on DR resources was discussed in the Phase 1 workshops and resolved in D.04-10-035. SCE believes a four-day call capability is generally insufficient, but it also believes that a single threshold cannot be applied to all types of DR. CAISO is concerned that a program providing only four days per month is potentially insufficient for RA, but it notes that the concern is mitigated by limiting the magnitude of DR capacity. CAISO also believes the topic warrants further discussion. We concur, and further determine that such discussion should take place in future RAR proceedings before additional restrictions on DR are adopted. We do not find it necessary or appropriate to modify the decision at this time.

7.3. Deliverability Issues

D.04-10-035 adopted the principle that to qualify for fulfillment of RA obligations, resources should be subject to both within-control area and out-of-control area deliverability screens. It also adopted the CAISO's proposal for a baseline analysis to determine deliverability of qualifying resources. The CAISO published a preliminary deliverability baseline analysis report and conducted a stakeholder meeting in May 2005, after the Phase 2 workshops were concluded. According to the Phase 2 workshop report, CAISO's May 2005 analysis found that (1) historical imports were deliverable and (2) while certain generation within generation pockets is not deliverable, that deficiency can likely be mitigated with transmission upgrades. The workshop report noted, however, that the deliverability test is only applicable to physical resources in the LSE portfolios, *i.e.*, contracts that specify where the contract is being sourced.

Methodology - While the CAISO deliverability analysis methodology has general support, some parties questioned how often import data would be updated and whether import levels would be adjusted to reflect abnormal operating circumstances that could have affected the analysis. CAISO responded to these questions by proposing annual assessments timed to coincide with annual transmission grid planning. In these assessments, CAISO would adjust historic data to reflect both unusual operating circumstances and incremental capability from transmission upgrades. In response to specific direction in the workshop report, CAISO also included with its opening comments a description of how it would account for anomalous conditions that might be reflected in the deliverability assessment.

The comments on this topic describe several unresolved methodological issues that parties seek to have addressed. Fortunately, CAISO's determinations that historical imports are deliverable and that non-deliverability issues for generation within pockets can be mitigated by transmission upgrades allows us to proceed with the first cycle of RAR showings, before the methodological issues are resolved. We urge the CAISO to consider, through its stakeholder process, the concerns raised in comments on the methodological issues, including those raised by Calpine, Constellation, FPLE, PG&E, and Sempra Global.

Allocation of Import Capacity - The ability of LSEs to count import resources towards their RA obligations depends on the extent to which they can count upon access to inter-tie capacity. The workshop report describes three alternative proposals for allocating to LSEs the CAISO-determined level of import capacity:

1. Allocate inter-tie capacity in proportion to each LSE's contribution to the CAISO's transmission access charge (TAC). Parties favoring this approach support bilateral trading of unused inter-tie capacity among LSEs.

2. Allocate inter-tie capacity based on the TAC as in Option 1, but grandfather existing resource commitments. Bilateral trading or selling of an LSE's capacity share would not be required.

3. Allocate import capacity according to each LSE's share of CAISO system peak load. LSEs would assign their total intended RAR use to specific import paths and provide that information to the CAISO. The CAISO would then determine if the LSE's shares are feasible. If the CAISO determines that the allocation on a particular path is not feasible to meet a local requirement, then it would allocate first based on 'evergreen' priority, and then based on the load share percentage. LSEs could trade and sell their load share provision on a path in advance of the determination for feasibility, but reselling or re-trading would not be allowed.

Selection of the most appropriate allocation option turns in large part on questions of equitable treatment of LSEs (and their customers) that have extensive import commitments on the one hand and those that do not on the other hand. The comments underscore the important question of whether LSEs with extensive import commitments should benefit from increased allocations that would result from grandfathering their commitments. As the workshop report explains, it is arguably inequitable to give preference to existing commitments because the costs of the transmission grid are socialized through TACs. The argument holds that LSEs that use the transmission system less because they rely on resources closer to load centers not only pay a socialized rate, they would also be disadvantaged by preferential treatment for existing commitments.[16] The counter-argument is that long term commitments made on behalf of IOU customers prior to industry restructuring should be recognized.

It is our judgment that, on balance, the interests of LSEs and their customers who have made and invested in long-term commitments for imports outweigh the interests of those who pay socialized TACs. Moreover, we are concerned that failure to recognize long-term commitments here could discourage long-term contracting in the future. Accordingly, we will approve the grandfathering (*i.e.*, evergreening) approach.

It is also our judgment that the third option is the most appropriate approach for allocating import capability among LSEs. Its use of load share rather than TAC charges as an allocator appears more in line with the capacity-

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[16] The comments refer to SCE's reliance on imports from coal and nuclear resources that it owns in the Southwest, but we understand the issue is generic and could apply in other circumstances as well.

based nature of the RAR program, and the TAC may be less valid as an allocator in that it covers all costs, not just those transmission lines used to import into the CAISO control area. We note that even though Option 3 did not receive specific attention as a package during the workshop discussions, it appears to have benefited from those discussions by addressing the underlying issues. In this respect, Option 3 actually appears to be a more complete package, and one that is more ready for implementation by the CAISO than are the other options. We note that it avoids the problem of LSEs with unneeded allocations withholding unused capacity as well as market power issues that could be associated with a secondary market for import capacity rights.

DWR Contracts - D.04-10-035 determined that DWR contracts will be subject to the adopted deliverability screens. As noted in the workshop report, grandfathering existing commitments (*i.e.*, adoption of an "evergreen" provision for existing resource commitments) raises the issue of how to account for the deliverable portion DWR contracts. SCE proposed that DWR contracts be considered firm resource commitments eligible for evergreen treatment. SCE maintains that this will ensure that ratepayers will not have to pay for capacity to replace portions of the DWR contracts, which cannot be counted due to insufficient import capability. For contracts with sellers' choice provisions, SCE proposes that the contract's historical delivery be used to assess the path on which the contract will most likely be delivered.

We find that basing the allocation of the import capability of the DWR contracts on historic usage of the paths to deliver such supplies is consistent with grandfathering non-DWR contracts as well as our prior determination that DWR contracts should be subject to deliverability screens. SCE's evergreening proposal is adopted.

Deliverability in Generation Pockets - The CAISO's May 2005 deliverability analysis found approximately 2,300 MW to be undeliverable to the aggregate of load in the control area. Of this amount, 933 MW is located in PG&E's service territory, 1,270 in SCE's and 160 in SDG&E's. Staff reports that overall, relatively minor transmission remedies or operating solutions would resolve the deliverability limitations found in the study.

In its stakeholder meeting on the deliverability study results, the CAISO recommended that the existing units and imports be considered deliverable so long as the Participating Transmission Owners (PTOs) agree to complete the transmission upgrades by a date certain. Given that the reliability criteria violations that resulted in the undeliverable resources are "low level" and require relatively low costs fixes, the CAISO thinks the resources should be counted for RA purposes.

The Phase 2 workshop report identified and invited comments on two options for proceeding in light of the CAISO's deliverability findings:

1. Count all the generation as deliverable assuming that the transmission upgrades will be completed by the Participating Transmission Owners (PTOs). This option requires a commitment by PTOs to complete the transmission upgrades within a reasonable amount of time.

2. Disallow undeliverable capacity for counting toward the RAR until the transmission upgrades are completed. This option will require allocating the de-rates among the generators within the load pocket. A pro rata allocation of the de-rates to suppliers within a generation pocket seems the most equitable and simplistic approach.

In view of the CAISO's confidence that generation pocket non-deliverability can be mitigated by the PTOs by June 1, 2006, we will adopt the first option for the first compliance cycle of RAR. In the event that anticipated transmission upgrades are not completed and it is necessary to allocate de-rates among generators, we support a "first-come, first-served" approach as recommended by SCE and TURN rather than a pro rata allocation. Under this approach, if a constraint exists, capacity would first be allocated to generators that paid for firm transmission upgrades to make them deliverable or who did not need to add transmission capacity to be deliverable.

7.4. Liquidated Damages Contracts

In the context of this proceeding, liquidated damages (LD) contracts are bilateral agreements that provide energy, capacity, or ancillary service products without reference to a specific unit or resource backing the obligation. The enforcement mechanism for breach of these contracts is their liquidated damages provisions.[17]

D.04-10-035 noted that LD contracts are widely used in California and it acknowledged that they provide economic value. They are considered firm, and as AReM has pointed out, they have a track record of dependability as evidenced by the fact that four LSEs have never experienced circumstances where a liquidated damages clause in a CAISO-market LD contract was triggered, and a

[17] As DENA points out in its comments, the term "LD contract" may not be most descriptive term. The real issue at hand is not whether contracts between LSEs and resource suppliers have liquidated damages clauses, but whether they identify specific, committed assets or units (*i.e.*, physical resources) that back up the contractual obligations. The term "unit-specific contract" may be more descriptive. We also recognize that liquidated damages clauses are not uncommon in commercial contracts. We nevertheless elect to use the term "LD contract" in this decision because the parties have used it widely in both Phase 1 and Phase 2.

fifth LSE only experienced such a trigger for one hour. SCE also notes that these contracts performed according to their terms during the 2000-2001 energy crisis.

However, despite their proven performance, their failure to identify a specific resource that backs a capacity obligation could still undermine the integrity of the RAR program. Two concerns are especially problematic: LD contracts are not subject to deliverability screens, and they allow the possibility of double-counting resources that are nominated by LSEs in fulfillment of their RA obligations. Either of these shortcomings could affect the CAISO's ability to operate the grid. Additionally, while a supplier's failure to perform may result in financial compensation to the buyer through the LD clause, this incentive for the supplier to perform does not necessarily translate into availability of capacity to the CAISO when and where it is needed. Finally, the proven performance record of LD contracts does not mean they are an effective means of inducing forward capacity commitments.

The Commission's expressions of such concerns led to further consideration of LD contracts in Phase 2. The workshop discussions and subsequent comments underscore the concerns previously expressed by the Commission and they add to our concerns about the suitability of LD contracts for the RAR program. In particular, it is now apparent that LD contracts cannot meet the needs of local RAR due to their inherent deliverability and dispatchability constraints.

Some parties suggested mechanisms intended to make LD contracts more workable for RAR, such as year-ahead assessments by CAISO, day-ahead scheduling, and annual audits. We are not persuaded that these techniques would be effective, and they could raise new issues. For example the proposed year-ahead assessment would require that the qualified capacity of LD contracts be reduced pro rata in the event that the CAISO's assessment found a load / resource imbalance. We are concerned that such pro rata reductions could lead to new "free-rider" issues unless CAISO were able to identify the individual LSE and / or the specific LD contract responsible for the imbalance. Also, as Constellation points out, an assessment of what is available, while useful, does not ensure the commitment of resources.

We find that LD contracts are fundamentally incompatible with achieving the objectives of a physical capacity-based RAR program and that, ultimately, their eligibility for fulfillment of LSEs' capacity obligations should be disallowed. At the same time, however, we recognize that California's IOUs and ESPs have relied and continue to this day to rely extensively on the use of these contracts to serve their retail customers. Despite the shortcomings of LD contracts with respect to RAR, they have been valuable in other respects and no doubt will remain so. Terminating their eligibility to count for RAR showings too rapidly would be unnecessarily disruptive and costly to LSEs. This could be particularly problematic for ESPs that enter into contracts for energy services with their end-use customers. For them, any added costs that result from a capacity requirement could not be easily passed on to existing customers, at least in the short term. Accordingly it is our policy that the eligibility of in-area LD contracts to qualify for the LSEs' RAR showings should be phased out in a manner that fairly and effectively balances the needs of the RAR program and the interests of LSEs that rely on LD contracts.

We turn to alternatives for how to accomplish this phase-out. The options identified in the workshop report include (1) a grace period during which LSEs can continue to enter into new LD contracts and have them count in future RAR showings; (2) a sunset of and limitations on the countability of LD contracts (both existing and newly signed, if any); (3) term limits for LD contracts signed after the Phase 2 decision but before LD contracts are no longer permitted to count for resource adequacy; (4) limits on the extent to which LD contracts may count for resource adequacy, and (5) waivers.

Grandfathering Existing LD Contracts - The workshop report describes Calpine's position that only those LD contracts that were signed on or before October 28, 2004, the effective date of D.04-10-035, should count for resource adequacy. It also notes PG&E's proposal that current-form LD contracts signed after the effective date of this Phase 2 decision should not count for RAR. In effect, PG&E proposes that LD contracts signed before the date of today's decision should be grandfathered.

Grandfathering existing LD contracts is consistent with our decision to phase out rather than totally disallow the use of LD contracts for RAR at the commencement of the program. Even though D.04-10-035 referred to problems with LD contracts in the RAR program, and it provided for further evaluation of them in Phase 2 workshops, it did not definitively state an intention of this Commission to terminate their usage for RAR. We conclude that D.04-10-35 did not constitute fair notice to LSEs that, as of October 29, 2004, they should only enter into new LD contracts with the understanding that they were at risk that those contracts would not qualify for RAR. Nor did any other event prior to issuance of the draft decision constitute such notice.

We conclude that LD contracts executed on or before September 27, 2005, the issue date of the ALJ's draft decision should be grandfathered, i.e., they should count for RAR showings subject to the sunset provisions and portfolio limitations described below. We again emphasize that this action affects only the extent to which LD contracts qualify for the RA obligation. We are not precluding their use for other purposes.

Grace Period for New LD Contracts **-** Proponents of a grace period hold that LSEs should be permitted to enter into new LD contracts after the effective date of this decision and have those contracts count for future RAR showings. During the workshops, AReM, TURN, and ORA proposed grace periods ranging between 90 and 180 days after the Phase 2 decision is issued. This would arguably permit a transition in the market to establish capacity products and allow LSEs to continue with business as usual. To avoid a rush on newly signed LD contracts, TURN further proposed that any firm LD contract signed within the grace period should only be grandfathered for one year.

We determine that the need for making progress towards full implementation of the physical capacity-based RAR program outweighs the interests of LSEs in an extended period during which they can continue historic procurement practices that do not provide identified physical capacity. Accordingly, we do not adopt proposals for a grace period beyond today.

Sunset Date **-** The workshop report describes general agreement that a sunset date should be established after which LD contracts would no longer count towards RAR, although some parties oppose any such sunset date. Most of the parties advocating a sunset date suggest that LD contracts should continue to count for capacity only through 2008. They do so based upon indications that the State's need for physical capacity will become more urgent in the 2008-2009 time frame. While we do not necessarily concur in the view that capacity additions are not critically needed until 2008 or 2009, we accept the common judgment that a transition of approximately three years is warranted. Therefore, we determine that LD contracts will not count for purposes of RAR showings after December 31, 2008.

Portfolio Share Limitation **-** SCE proposed that the use of LD contracts be capped at 25% of an LSE's overall RAR portfolio. PG&E proposed that in addition to being subject to a sunset date, LD contracts should also be subject to a scheduled phasing out in the interim. Thus, for 2006, an LSE could rely on LD contracts for 25% of its portfolio, but this limit would be reduced to 15% for 2007, 5% for 2008, and 0% for 2009 and beyond. ORA notes that a 25% of portfolio cap on LD contracts may be inappropriate for small LSEs. However, ORA did not propose criteria that would constitute a rational basis for defining "small" LSEs that might benefit from a higher cap.

We will adopt the declining share of RAR portfolio approach proposed by PG&E as it gives consideration to the LSEs' need for time to rebalance their RAR portfolios away from LD contracts. At the same time, it assures reasonable progress toward our goal of a physical capacity-based RAR program. This will apply to all LD contracts, regardless of the date signed, to eliminate incentives for parties to rush to sign large quantities of additional LD contracts.

As noted later in this decision, we are adopting a local capacity requirement and ordering its implementation after additional details of that RAR program element are considered. In light of the unsuitability of LD contracts for meeting local RA obligations, it is possible that the implementation of such local obligations will result in some LSEs having to acquire additional physical capacity in lieu of LD contracts to meet those obligations. We place all LSEs on notice that while we grandfather existing LD contracts and allow their continued use subject to the sunset date and phase-out schedule adopted herein, they may be subject to further limitations on the use of LD contracts to fulfill local RA obligations.

Finally, we note that by phasing out the ability of LD contracts to count in LSEs' RAR showings, we are not abrogating those contracts as has been claimed. The contracts will remain in effect until they expire on their own terms.

Waivers - AReM proposed that a waiver process be approved to protect LSEs against the possibility they will be unable to meet their RA obligations. AReM raises two primary concerns: (1) the market may fail to develop RA products and (2) a generator or generators may have opportunities to exert market power, particularly if a local RA obligation is adopted.

AReM's concern that the market may fail to develop needed RAR products is highly speculative in our view. With respect to market power concerns, as AReM and the Phase 2 workshop report point out, the Commission stated in D.04-10-035 that it would not require LSEs to sign contracts that meet RAR requirements at any cost. (D.04-10-035, p. 15.)

We stand by our earlier commitment to ensure that LSEs are not placed in a position whereby they would have to pay any price to acquire the capacity needed for their RA obligations. However, we are not persuaded that a specific waiver mechanism needs to be adopted to give effect to the commitment. Moreover, as TURN points out, the ability to submit comments on the workshop report does not provide adequate opportunity to develop a robust and well-conceived waiver process. We therefore decline to adopt such a mechanism at this time. As we give further consideration to the implementation details for the local capacity element of the RAR program, we will revisit the need for a waiver protocol.

7.5. Imports

D.04-10-035 approved several uncontested counting conventions that were addressed in the Phase 1 workshops and described in the June 2004 Phase 1 workshop report. These include counting conventions for import resources. Pursuant to D.04-10-035, the qualifying capacity for import contracts is the contract amount if the contract (1) is an Import Energy Product with operating reserves, (2) cannot be curtailed for economic reasons, and either (a) is delivered on transmission that cannot be curtailed in operating hours for economic reasons or bumped by higher priority transmission or (b) specifies firm delivery point (*i.e.*, is not seller's choice).

In Phase 1, the CAISO had raised concerns about the possibility of sellers curtailing deliveries to meet native load requirements and about the definition of economic curtailments. However, after researching the applicable terms of the Western Systems Power Pool (WSPP) Agreement, the CAISO determined (and reported in its Phase 1 workshop comments) that the WSPP terms represented "acceptable and appropriate risk." D.04-10-035 provided that concerns about the use of firm transmission rights would be taken up in Phase 2.

In Phase 2, Powerex, the marketing subsidiary of British Columbia Hydro and Power Authority, offered a white paper consisting of a discussion of and proposals for the treatment of imports in the RAR program. (*See* Phase 2 Workshop Report, Appendix E.) The Phase 2 workshop report invited comment on the Powerex white paper. It also invited parties to address the exemption of imports from the determinations made with regard to resource availability, and related matters.

Powerex believes that even if, or when, intra-CAISO control area LD contracts are not allowed to qualify for RAR, firm LD import contracts should still be allowed because they are, Powerex contends, as reliable as unit-specific contracts if not more so. The only limit on import LD contracts would be the CAISO's deliverability test for intertie capability. Powerex further believes that CAISO Firm Transmission Rights (FTRs) should not be required of import resources for RAR purposes. Powerex notes that import contracts are not limited to energy products, and that an "import-backed Day Ahead capacity call option" product is useful and available to LSEs. In connection with this capacity product, Powerex proposes that imports not be subject the to the must-offer requirements established by D.04-10-035 because this would prevent it from re-marketing power that the LSE chooses not to use.

Firm import LD contracts do not raise issues of double counting and deliverability that led us to conclude that other LD contracts should be phased out for purposes of RAR. We note that firm import contracts are backed by spinning reserves. Accordingly, we approve the exemption of firm import LD contracts from the sunset/phase-out provisions applicable to other LD contracts as adopted in Section 7.4. We also approve the request of Powerex that import contracts not be required to have FTRs, as import transmission capability will be allocated to LSEs. We will not at this time approve the proposed exemption of call option contracts from the must-offer protocols adopted in D.04-10-035. Absent more definitive information that would enable us to weigh the trade-off between the business opportunities for the suppliers and the reliability benefit of the must-offer protocols that we have adopted, we are compelled to decide in favor of reliability. Powerex may present such information and renew its request in future RAR proceedings.

FPLE has proposed elimination of the requirement adopted in D.04-10-035 that imports have operating reserves. FPLE notes that the Western Electricity

Coordinating Council (WECC) has been studying the question of reserves, and in recent months WECC committees have released draft documents that seek to clarify the origins and obligation of the reserves requirement. We do not find that these recent developments constitute a persuasive case for modifying our earlier decision, and we therefore deny this request.

7.6. Allocation of Capacity to Non-IOU LSEs

The Phase 1 Workshop Report described workshop discussions leading to the issue of whether any portion of the capacity value of the DWR contracts, QF contracts, and other utility retained generation should be allocated to non-utility LSEs. This issue was not resolved in the Phase 1 decision, but was instead addressed in the Phase 2 workshops.

Most direct access (DA) customers (*i.e.*, those who are not "continuous" DA customers) pay a Cost Responsibility Surcharge (CRS). AReM maintains that by paying the CRS, these DA customers pay for DWR contract capacity that is assigned to the IOUs. AReM also contends that all DA customers pay a share of the costs of capacity associated with utility-retained generation (URG), including QF contracts, through the Competition Transition Charge (CTC). On the basis of cost causation principles and basic fairness, AReM takes the position that customers who pay for capacity should receive a capacity credit toward meeting their RA obligation. AReM proposes that the capacity credits would only be allocated to non-utility LSEs for RAR purposes. IOUs would retain full use of the contracts to meet their loads.

As described in the workshop report, opponents of allocating any portion of DWR contract capacity to non-utility LSEs maintain that DA customers only pay a portion of the above-market component of DWR and QF contracts. In contrast, the opponents argue that bundled service customers pay the full amount of the market value of such resources and, due to the 2.7 cent cap on the DA CRS, they currently pay a greater than proportionate share of the above-market component of such costs. Moreover, they contend, due to the deferred recovery of the balance of above-market costs from DA customers, it is impossible to determine how much, if any, of the above-market DWR costs will ultimately be paid by DA customers.

AReM relies on principles of equity and cost causation to support its case for capacity credits. However, as noted above, the cost responsibility of DA customers is capped. However, that cap does not appear to be governed by the cost causation principles that AReM espouses. We find that it is not reasonable to craft remedies for possible cost shifting in this proceeding, where only a portion of the cost shifting issue is reviewed. Such remedies should be evaluated in proceedings where the totality of DA customer cost responsibility can be considered, including any cost shifting that may benefit DA customers. AReM's proposal to allocate RA capacity credits is denied.

7.7. Wind and Solar Resources

D.04-10-035 addressed issues of determining the qualifying capacity of wind and solar resources without backup by selecting an historic performance approach rather than using Effective Load Carrying Capacity adjustments. Under the adopted approach, the Commission requires that monthly performance differences be revealed, and that historic performance be computed during the peak period as defined in QF Standard Offer 1 (SO1) contracts. The Commission directed that methods for carrying out these determinations be taken up in Phase 2. Additionally, D.04-10-035 determined that proposals to segregate historic performance by different wind resource area would have to be supported by persuasive data, and that such proposals would be taken up as a second generation issue rather than in Phase 2.

The Phase 2 workshop report invited comments on how long the historic period for assessing generator capacity should be, what specific hours should be used for evaluation of the peak period, whether different types of generators should be measured separately, and the process for updating renewable-specific capacity assessments.

Averaging Period **-** Unlike hydroelectric generation, where rainfall and generation statistics are available over many years, there is not a large body of historical evidence regarding the performance of solar and wind generation. In addition, performance of solar and wind resources has been improving, and relying on old information about their performance could understate future estimated capacity factors. On the other hand, a longer history would smooth out the variability among individual months due to weather and other variables.

Workshop participants reached consensus that the best compromise would be a three-year rolling average of performance history. For example, for June 2006 the generation results for June 2003, 2004, and 2005 would be averaged. If 2005 data is not available, the most recent available data from the previous three years could be used. Workshop participants considered this a sufficiently short time to avoid downward bias because of technology changes, yet enough time to smooth out the variable results of any one particular year.

Comments on the workshop report echoed the consensus of the workshop discussions. Parties either support or accept the use of a three-year rolling average. We adopt the use of month-specific three-year rolling averages for determining the qualifying capacity of wind and solar generation because this approach strikes a reasonable balance between the need to recognize technological improvements and the need to smooth out recorded performance variations due to weather and other variables.

Peak Period Definition **-** As noted above, D.04-10-035 adopted the use of the standardized peak hour definition in SO1 contracts for purposes of calculating the qualifying capacity of wind and solar resources. The SO1 contract summer peak hours are noon to 6:00 p.m., and while this is reasonably consistent with the CAISO summer load profile, the Phase 2 workshops addressed problems that this raises for non-summer months. The SO1 contracts define mid-peak or partial-peak hours for the non-summer months but not peak hours. The CAISO non-summer peak generally falls in the range of 5:00 p.m. to 8:00 p.m. in the non-summer hours.

In its workshop report comments, CAISO proposes using the SO1 summer peak hours of noon to 6:00 p.m. on a year-round basis. We find this is a reasonable compromise of this surprisingly complex issue. CAISO notes that wind and solar production can vary dramatically across the afternoon hours, and that the wider six-hour window of SO1 hours could give a "somewhat added boost to these resources." As the workshop report notes, reasonableness and ease of administration argue in favor of a simpler method for defining peak periods. We therefore adopt the simplified approach of using SO1 peak hours year-round as recommended by the CAISO.

Differentiating Generator Types **-** The Phase 2 workshops addressed the idea of breakouts by technology and/or by vintage. This discussion reportedly yielded only partial consensus. The workshop report observes that benefits of differentiating resources by technology or by vintage would be small from a resource adequacy perspective. As also noted in the workshop report, our adoption of the three-year rolling average has the additional benefit of updating the sample by one-third each year. We think that this is an appropriate means of recognizing the addition of newer technologies for RAR, and that further consideration is not warranted at this time. As PG&E notes, qualifying capacity need not distinguish between technology types or vintage.

Renewables - The workshop report observed that the adopted methodology for assessing wind and solar generation capacity and expected output should not unduly disadvantage renewable generation, and it invited comment on this topic. None of the comments expressed any disagreement with the principle that the use of renewables should not be disadvantaged in or by the RAR program. SCE recommends using slightly higher expectations such as a 3% adder for newer wind technologies to compensate for data lags associated with the introduction of those new technologies. CAISO on the other hand recommends against methods that over-estimate peak-hour production from renewables.

An adder such as that suggested by SCE appears to have merit as an appropriate means to prevent possible disadvantaging of renewable resources that are offered to meet the RA obligation. We will adopt an adder of 3% for newer wind technologies for 2006 only, and provide for further consideration of the need for such an adder in future RAR proceedings. Additionally, as the operation of the RAR program unfolds, if we become aware of unintended consequences that unduly impact renewable resources we will be prepared to consider and make any necessary RAR program adjustments.

7.8. Energy-Limited Resources

D.04-10-035 determined that to qualify for RAR, a resource must (1) be able to operate for a minimum of four hours per day for three consecutive days and (2) be able to run a minimum aggregate number of hours per month based on the number of hours that loads in the CAISO control area exceed 90% of peak demand in that month. The second prong of this test (*i.e.*, the 90% rule) is applicable to the summer months only. D.04-10-035 referred to Phase 2 the development of an appropriate rule for energy-limited resources for non-summer months.

Using data from 1998 through 2003, the CAISO calculated the number of hours in each summer month that load was greater than 90% of the monthly peak. The range is from 30 hours (for May) to 60 hours (for August). However, load shapes are less peaked in the non-summer months, with the result that the number of hours with loads in excess of 90% of the peak could be much higher, as much as 300 hours in some months.

The workshop discussions confirmed the view that the 90% rule is unworkable for the non-summer months. As the workshop report points out, if the qualifying capacity of energy-limited resources has to meet expected run times of up to 300 hours, the capacity will be severely degraded. PG&E notes this could affect the availability of hydroelectric units to the CAISO. Moreover, operation in the non-summer months for long periods would not be the best use of such resources. Rather than development of a substitute rule that would accomplish for the non-summer months the equivalent reliability value that the 90% rule accomplishes for the summer months, the workshop discussions yielded general agreement that there should be no second prong of the test for energy-limited for the non-summer months.

We are unwilling to adopt a rule that could cause LSEs to contract for large amounts of capacity that will not be called upon, because there is little assurance that such a rule would create reliability benefits that outweigh the cost of that capacity.

We note that the CAISO states that it is pursuing rules in its MRTU process that would address problems of energy-limited resources. Through that process, CAISO will be able to grant waivers for energy-limited resources, which "implicitly means accepting as RA resources those resources that are not capable to produce enough energy to run for all hours, but qualify as Ancillary Services certified during some off peak months." (CAISO comments, p. 35.)

Based on the foregoing, we affirm the applicability of the two-prong test for energy-limited resources for the summer months as adopted in D.04-10-035. For the non-summer months, the first prong of the test, *i.e.*, the four hour-by-three consecutive day rule, shall apply. The second prong, *i.e.*, the 90 % rule, is waived for the non-summer months. We concur with the CAISO that aspects of this rule, including a limit on the total MW and a priority order, may have to be reviewed in future RAR proceedings.

7.9. Commercial On-Line Dates

The Phase 1 workshops and decision addressed the need for conventions for when and how to treat resources that are under construction as qualifying capacity. D.04-10-035 noted that project databases maintained by the CEC and the CAISO are the appropriate foundation for determining the commercial operation dates (CODs) for resources nominated for RAR, and referred the topic to Phase 2. The Phase 2 workshop discussions addressed criteria that the CAISO and CEC cooperatively used to develop a working proposal for counting rsources under construction and estimating CODs. The CAISO-CEC working proposal is attached to the Phase 2 workshop report as Appendix F.

The essence of the CAISO-CEC proposal is that the CAISO and the CEC would jointly create and post monthly on a public website a report for the use of LSEs. The report would list the expected date of commercial operation as reported by the developer of each resource under construction or with an expected date of commercial operation of one year or less, that has a nameplate capacity rating of one MW or greater. For the annual year-ahead showing of resource adequacy, an LSE would be able to include, for any given month, a resource that is still under construction provided that the latest revised date of commercial operation posted on the public web site is no later than the first calendar day of the applicable month, and the operational status is expected to be achieved no less than 60 days prior to that date. A resource that meets those criteria would be considered to have achieved qualified status for the year-ahead showing. For example, a resource that the developer reports is expected to achieve commercial operation no later than July 1, 2008 could be used by an LSE in its September 2007 report to demonstrate compliance in its year-ahead showing for the month of July 2008. For a month-ahead showing of resource adequacy, qualification of a resource is dependent upon the unit having achieved operational status 60 days prior to the month in which it would be counted for resource adequacy purposes. For example, if a month-ahead showing for the month of August 2011 required a month-ahead filing by June 30, 2011, that filing could only include a resource that had achieved operational status no later than June 1, 2011.

All parties that commented on this proposal either support or accept it. SCE notes that the 60-day provision may have to be revisited when more experience is gained. It may be possible to reduce that delay to 30 days or even less. We appreciate the joint efforts of the CAISO and the CEC in developing this proposal as well as their commitment to maintain the listing. We hereby adopt it as reasonable.

7.10. Local RAR

Through its Local Area Reliability Service (LARS) process, the CAISO identifies generators that must be available in or for a particular area due to transmission constraints. To assure operational reliability, the CAISO enters into reliability must run (RMR) contracts with those generators. RMR costs are paid by all load through CAISO uplift charges.

Addressing the local reliability challenges posed by constrained transmission limits, D.04-07-028 stated that "a utility scheduling practice or procurement plan that focuses solely on least cost energy, without regard to deliverability of the procured energy to load or to local reliability, is not in compliance with our prior decisions, approved short-term procurement plans, and Assembly Bill 57." (D.04-07-028, pp. 9-10.) The Commission also stated that "it is our intention to minimize the use of RMR contracts, and that the utilities should include local reliability in their long-term procurement plans for the purpose of reducing the need for RMR contracts." (*Id.*, p. 13.)

Concerns about local reliability and CAISO's reliance on RMR contracts led to consideration of localized RAR for all LSEs in Phase 1. D.04-10-035 determined that adding a local component to the RAR program would be consistent with the Commission's prior decisions in which it has been held that LSEs are responsible for procuring the resources needed to meet their customers' needs. Discussing the costs of local RAR (higher procurement costs, higher forecasting and planning costs for LSEs, program complexity, and possible market power) as well as the benefits (contracts with longer terms than RMR contracts would assure revenue streams to generators, LSEs would be better able to identify cheaper and environmentally friendly alternatives to RMR contracts, and possible incentives for transmission upgrades) the commission determined that the likely benefits of local RAR outweigh the likely costs.

D.04-10-035 directed parties to address the implementation details of local RAR in future proceedings. It also laid out the sequence of events for how this should be done. First, when completed, the deliverability baseline analysis that was being conducted by the CAISO would be an important data source for identifying conditions that define load pockets, the geographic scope of load pockets, and methods for updating them.[18] Next, once the first step is completed, the extent to which customers reside in load pockets, methods for tracking customers, and other LSE-specific load forecasts would be addressed. Finally, once LSE-specific load forecasts in load pockets are known, the timing of LSE local procurement would be coordinated with the expiration of existing RMR contracts.

Development of localized RAR was taken up in the Phase 2 workshops. The CAISO presented a working proposal for establishing local capacity requirements, and in response to initial workshop discussions it revised the proposal. The CAISO's January 25, 2005 working proposal is attached to the Phase 2 workshop report as Appendix G, and an alternative proposal by Mirant is attached as Appendix H. CAISO issued its "RAR Local Capacity Straw Proposal" and "Local Capacity Technical Analysis-Overview of Study Report and Preliminary Results" on June 23, 2005, and it convened a stakeholder meeting on June 29, 2005. The Phase 2 workshop report states that given that issues such as cost allocation and pricing for CAISO supplemental procurement,

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[18] CAISO issued its "Preliminary Deliverability Baseline Analysis Study Report" on May 3, 2005, after the Phase 2 workshops were completed.

and local market power mitigation are FERC-jurisdictional, the locational capacity procurement framework is "somewhat incomplete."

We reaffirm our intention to establish a local capacity component of our RAR program as we determined in D.04-10-035. As DENA correctly observes, "the local area requirement runs to the heart of the 'where and when needed' aspect of the RAR policy." (DENA comments, p. 12.) We note that parties appear to be unanimous in their concurrence that a local dimension to the RAR program is required. The principal issue that divides the parties is whether the local component should be implemented for 2006, when the basic RAR program is to be implemented, or for 2007.

We concur with DENA that local reliability should be reflected in RAR and implemented as soon as possible. We cannot concur, however, with those who advocate that the local component of RAR should go into effect with the initial wave of RAR implementation. We will provide for implementation of local procurement requirements in 2007 for several reasons. Most significantly, several important aspects and possible consequences of the proposed local program have not been fully or fairly considered in the Phase 2 workshops, as underscored by the fact that the CAISO's preliminary baseline deliverability analysis was published after the Phase 2 workshops were completed and its "straw proposal" for local capacity was distributed several weeks after that.

Among other concerns, the record before us does not allow to find that the reliability benefits of the CAISO's straw proposal justify the costs and operational burdens that will be imposed on LSEs and their customers. We share the concern of Joint Parties that CAISO's preliminary findings indicate that LSEs may need to procure over 25,000 MW of local RAR in 2006. We are also concerned that for some areas, local generation capacity may exist but not be available to smaller

LSEs. Absent a showing that the local procurement obligations that would be imposed on LSEs will be more cost-effective than current local procurement through the RMR mechanism, we are not prepared to order LSEs to pursue such obligations for 2006.

The CAISO proposal may result in higher capacity requirements than are currently under contract through RMR contracts. Also, the analysis appears to have resulted in unexpectedly high levels of local capacity requirements because of some combination of transmission and generation contingencies and 1:10 peak loads that are collectively more extreme than the analyses justifying RMR contracts. Further, it is not clear that local capacity requirements based on extreme conditions associated with 1:10 peak weather must be available 8,760 hours per year.

Additionally, we have not been presented with an adequately developed method by which local capacity requirements can be allocated to individual LSEs, and it remains unclear how LSEs with small portions of the overall capacity requirements in any one load pocket could acquire necessary capacity from eligible generation. Parties discussed allocation of local capacity requirements using locational attributes included within LSE customer billing systems without apparently undertaking the effort to conduct the assessments needed to implement the concepts discussed. Given the potential volatility in customer relationships among ESPs, CCAs, and the default IOU, it is apparent that these allocations would need to be updated frequently, perhaps annually.

While the CAISO has pursued development of its local capacity procurement proposal through its stakeholder process and is reportedly continuing to do so, implementation of the proposal without an opportunity for it to be vetted before this Commission is not consistent with the three step sequence of events that we outlined in D.04-10-035. More generally, such implementation would be inconsistent with the processes and the authority of this Commission. We have committed to working cooperatively with the CAISO towards the development of complementary RAR and MRTU programs that serve California's needs for reliable electricity supply at reasonable costs. In carrying out this commitment, we are mindful of the respective roles of each entity. In view of the fact that important details of the CAISO's proposal for local capacity requirements are being developed by the CAISO through its stakeholder process but have not been considered on the record of this or any other Commission proceeding, approving the CAISO's preliminary proposal at this time would, in effect, constitute an inappropriate delegation of our own authority to make determinations regarding the balancing of reliability and the costs of achieving that reliability.

As set forth in Section 9 of this decision, we are providing for further proceedings to complete the implementation of our RAR policy framework. Those proceedings will be the forum to complete the development and the evaluation of the various details of the local RAR component so that it can be implemented in 2007. They will provide parties with an opportunity to present us with information regarding the appropriate overarching policies for local RAR;[19] costs and benefits of alternative approaches to reliability critereia used to define the local obligation; means of preventing or mitigating market power; mechanisms that will allow LSEs, especially smaller ones, to acquire capacity to

[19] We note that the policy principles suggested by AReM in its opening comments may represent an appropriate starting point for discussions of local RAR policy; however, we do not necessarily endorse the AReM positions stated therein.

meet their localized obligations; whether there is a need for waivers and if so what form they should take; cost allocation issues; whether the MOO mechanism should be retained until the CAISO has authority to enter into backstop local capacity contracts; and assurance that the need for transmission upgrades to address load pockets is considered and weighed against the need for local capacity. To ensure that we are presented with a comprehensive proposal for implementation of a local RAR that can be timely implemented for 2007, we hereby direct the IOUs and authorize other parties to file such proposals in this or the successor RAR proceeding within 60 days of the date of this order.

For 2006, the local procurement policies we adopted in D.04-07-028 remain in effect. We also note that, despite its deficiencies in terms of promoting infrastructure investment and allocating costs on the basis of cost causation, as PG&E notes the existing CAISO RMR mechanism remains available and effective for achieving local operational reliability.

8. Reporting, Review, and Sanctions

8.1. Preliminary Load Forecast Reporting

Scope Of Load Forecasts - The Phase 1 workshop discussions regarding year-ahead reporting requirements assumed that load forecasts would cover the five summer months of May through September only. However, D.04-10-035 adopted a year-round month-ahead requirement as well as the year-ahead requirement. The Phase 2 workshops revealed that the month-ahead requirement results in (1) a need to have the LSEs' preliminary load forecasts submitted as part of the year-ahead process include load forecasts for all 12 months of the year, and (2) a need for the CEC review process to make adjustments for the entire year. We therefore direct LSEs to submit documented hourly load forecasts for all 12 months of the year as part of the year-ahead preliminary load forecasts they submit each spring.

Schedule for Preliminary Forecasts **-** As set forth in the workshop report, the Phase 2 workshop discussions resulted in the following suggested annual schedule:

April 1 – May 1	LSEs submit preliminary forecasts to initiate CEC review for anomalies and CEC adjustments for EE/DR/DG impacts and coincidence
July 1	Final forecasts determined by CEC and sent to LSEs for resource acquisition
September 30	Final compliance package submitted by LSE

We recognize that a key issue for LSEs is their need to receive final, adjusted load forecasts from the CEC by July 1 to allow them sufficient time for final resource acquisition and a showing of such acquisition on September 30. This means that the LSEs' preliminary forecasts need to be submitted by the April 1 to May 1 period.

For the first RAR compliance cycle, this process was initiated by ALJ ruling. (*See* Footnote 12, *supra*.) For subsequent years, the suggested schedule should be followed with minor modifications. Rather than specify a range of dates (April 1 to May 1) we will set April 15 as the submission date for preliminary load forecasts. We also adopt the CEC staff suggestion that historic data be filed by each LSE prior to its preliminary load forecast, as this would allow coincidence studies to be undertaken and assure that data transfer issues are resolved prior to the critical load forecast review itself. Historic data should be submitted a month prior to the LSE's load forecast, *i.e.*, on March 15.

As we gain experience with the RAR program, modifications to this schedule may be necessary. We also note that Rule 48(b) of the Rules of Practice and Procedure provides an expedited informal process for parties to request extensions of time. As TURN points out, the possibility of an "open season" for CCAs to declare their intent to begin serving customers raises additional coordination issues. The ALJ assigned to this or any successor proceeding addressing RAR and the ALJ assigned to R.03-10-003 may need to establish procedures and schedule modifications for such coordination.

Documentation Requirements - D.04-10-035 adopted certain agreements, reached in the Phase 1 workshops and described in the Phase 1 Workshop Report, regarding the level of detail that each LSE will use in submitting its preliminary load forecast. In the Phase 2 workshops, the following additional points were raised:

> Load forecast submissions encompass:
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> Load forecasts will need to encompass all months of the year, because it is impractical to use the month-ahead reporting process to make the necessary adjustments to the non-summer month load forecasts that will already have been made for the five summer months.
>
> Load forecasts should include hourly load values for each month.
>
> Load forecasts should include estimates of losses including distribution, transmission, and UFE added onto customer-meter loads.
>
> Load forecast documentation includes:
>
> Current and projected customer counts.
>
> Projected changes in contract loads.
>
> Adjustments for municipal departing load and community choice aggregators projected to depart from an IOU in the forthcoming year.
>
> Description of load forecasting methodology including regression equations and other descriptive information.
>
> Other historic data needed to understand nature of load forecasting methodology.

Historical hourly loads for the previous year.

Historical hourly loads adjusted to normal weather, and the weather data and methodology used to make such adjustments.

The workshop process has clarified that in order for the CEC to determine what level of EE, DR, and DG impacts should be used to adjust an LSE's preliminary load forecast, the LSE must document any such impacts it believes are already included in the preliminary load forecast and provide a methodological rationale supporting this belief.

As discussed earlier, we recognize that CEC staff may need to work with LSEs in their review of LSE forecasts, and that LSEs will be obligated to respond timely to CEC data requests. We believe that this process will be enhanced if, a month or more before the LSEs' respective historic and forecast load submittals are due, the CEC, in coordination with our Energy Division, issues instructions to each LSE regarding those submittals. CEC may wish to consider PG&E's suggestion that LSEs use the data format used for the 2005 Integrated Energy Policy Report.

We affirm the Phase 1 determinations regarding the scope and content of LSE load forecasts made in D.04-10-035, and we endorse the additional load forecast definitions and documentation requirements set forth above.

Confidentiality of LSE Load Data **-** Confidentiality issues for the first RAR cycle of LSE preliminary load data submittals were resolved with the issuance of the ALJ's Protective Order on June 24, 2005.[20] Before we adopt specific confidentiality protocols for LSE load data for future years, we will complete our

[20] By a joint motion filed on August 31, 2005, TURN, AReM, SCE, IEP, and Constellation have proposed a revised protective order.

more generic review of confidentiality issues in R.05-06-040. Since that review may not be completed before the next RAR cycle's load data submittals are made next spring, we will provide that such submittals shall be subject to the ALJ's June 24, 2004 protective order or successor protective order.

8.2. Preliminary Load Forecast Review

D.04-10-035 provides for the CEC to review preliminary load forecasts from LSEs to determine plausibility and to make certain adjustments that an LSE cannot make by itself. In Section 5.2, we outlined the process by which the Commission and the CEC will administer the review and adjustment of LSE load forecasts. An additional topic related to the review process--whether the aggregation of adjusted LSE load forecasts should be compared to CEC and/or CAISO short-term load forecasts as the basis for possible further "reconciliation" adjustments--was addressed in the Phase 2 workshops.

Staff reports there was agreement among workshop participants that such comparisons are appropriate, and that LSEs agreed that adjustments to preliminary load forecasts may be needed if the discrepancies are too large. Moreover, the participants seemed to agree that a reasonable threshold for considering reconciliation adjustments was a 1% or greater difference between the aggregated LSE load forecasts and the reference load forecast. Thus, if the sum of the adjusted LSE load forecasts is 99% or less, or 101% or more, of the reference case forecast (itself adjusted as necessary to match RAR load forecasting conventions), then each individual LSE load forecast would be further adjusted proportionally. Such reconciliation adjustments could either be set so that the aggregate sum exactly matched the reference load forecast or was brought to within 1% of the reference forecast.

The comments reflect general agreement that a reconciliation adjustment is appropriate along with concern that a pro rata adjustment could create an incentive for LSEs to socialize procurement costs by under-forecasting their load. IEP notes that pro rata adjustments may not be appropriate for LSEs with flat load shapes, and recommends that thought be given to a better approach to making adjustments.

We find that an adjustment that reconciles the LSEs' load forecasts to the State's official load forecasts provides an appropriate reality check on the integrity of the RAR program, and has the effect of better integrating the RAR program with the state's resource planning efforts. Such adjustments to LSE forecasts should therefore be made by the CEC as part of its load forecast review. We adopt 1% as the minimum threshold. We also adopt the alternative of adjustments that bring aggregate LSE forecasts to within 1% of the reference forecast as that is consistent with the idea of a threshold.

We share IEPs interest in developing adjustment methods that may be more suited to LSEs with flat load shapes, and welcome proposals for such methods in future RAR proceedings. Until and unless such methods are developed, we do not find that pro rata adjustments are unreasonable for all LSEs.

We recognize the concern that pro rata adjustments could, in theory, create an incentive for individual LSEs to under-forecast. This is essentially the same "free rider" issue that we addressed in the Phase 1 decision. We are satisfied that other aspects of the review process, particularly the plausibility check, adequately address any free rider issues associated with a reconciliation adjustment. Additionally, the dispute resolution process being established pursuant to our discussion in Section 5.2 will be available to address anomalous situations.

8.3. Year-Ahead Compliance Filings

Filing Process - The essence of an LSE's year-ahead compliance filing is a demonstration that it has acquired sufficient resources to satisfy the 90% forward commitment obligation for loads plus reserve requirements for each of the five summer months May - September. We see the CAISO as the entity with primary responsibility for performing the reviews of the LSEs'resource tabulation submissions. However, as noted earlier, this Commission is establishing the RAR program pursuant to its authority and jurisdiction, and it retains ultimate responsibility for the program. Among other things, this Commission's determinations regarding confidentiality should be and remain applicable, and this Commission is responsible for compliance and enforcement regarding LSE obligations. Accordingly, RAR compliance filings should be made with the Commission and simultaneously served on the CAISO and the CEC.

Because the LSEs' submittals are compliance filings, we will invoke the Commission's existing advice letter process rather than either (1) requiring formal filings with our Docket Office or (2) requiring only informal submittals to our staff. We believe that the advice letter mechanism is sufficiently flexible and adaptable to the needs of the RAR program with respect to IOUs as well as ESPs and CCAs.

Resource Tabulation Template - A quantitative tabulation of each resource that contributes qualifying capacity to meet loads plus reserves is needed for each month. Appendix I to the Phase 2 Workshop Report is a working proposal prepared by the CAISO that incorporates revisions discussed in the workshops. In general, the CAISO's proposal creates a set of reporting instructions and a template focusing on a display of resources, by category, for a specific peak load forecast for which a compliance demonstration is required. Comments on the Phase 2 workshop report demonstrate support for use of this template.

As IEP notes, a minor correction is needed. The template and instructions should reflect that the year-ahead obligation is 90% of the LSE's load including 15% reserves, *i.e.*, 90% of 115%, not 90% plus 15%. Staff notes that the proposed template and the instructions fail to identify DR programs that the LSE submits as part of the qualifying capacity to cover loads and reserves.

We endorse and adopt the proposed template and instructions with the corrections noted by IEP and by staff.

Confidentiality Issues **-** The comments revealed a general consensus that LSE resource tabulations are considered as confidential as LSE load data or even more so. As we noted earlier in connection with the confidentiality of LSE load data, the Commission is generically considering confidentiality protocols in R.05-05-040. Pending the completion of that process, we will take a conservative approach to the treatment of LSE resource data by providing that such data shall remain confidential until further order. Subject to appropriate non-disclosure protocols, access to this confidential data shall be limited to this Commission, the CAISO, the CEC, and other government agencies to the extent required by law. In addition, non-market participants shall have access to this data to the same extent, if any, that non-market participants have access to historic and forecast load data pursuant to ALJ ruling in this or successor RAR proceeding. Since these data represent an important improvement in the quantity and quality of data about future load and resource balances, we will authorize public disclosure by the CEC of aggregations of these data in making overall control area and statewide assessments.

8.4. Review of Year-Ahead Compliance Filings

D.04-10-035 established a September 30 compliance filing requirement each year (beginning in 2006 for procurement in 2007) for the year-ahead forward commitments for May-September of the following year. LSEs are to use the final, CEC-adjusted load forecast as the basis for resource commitments that total to 90% of peak load plus 15%-17% planning reserves. The year-ahead compliance filing review process will enable the Commission to confirm that all LSEs have met their RA obligations by having acquired qualifying capacity for each of the five summer months of the following year. As described in the workshop report, participants developed the following list of review activities.

Verify use of the “final” load forecast as issued by the CEC.

Ascertain that qualifying capacity rules applicable to the resources nominated for each month were followed.

Verify that the LSE used appropriate limitations on some categories of resources (e.g., limits on certain kinds of DR resources based on percentage of peak load or hourly load).

Verify that the resources are consistent with the CAISO’s qualified capacity listing which accounts for deliverability, generator performance, etc.

Ensure that local capacity requirements were secured by resources within each load pocket.

Determine that no double-counting of generator capacity by more than one LSE was submitted unless explicitly recognized and called out in documentation.

These steps appear to represent a reasonably complete summary of the process that we will need to follow in reviewing LSE compliance filings. While our Energy Division will have primary responsibility for the administration of the filing process as well as the review process, we expect that the Energy Division will work closely with, and rely on the expertise of, the CAISO and the CEC in carrying out its responsibilities.

8.5. Month-Ahead Reporting

Definition of "Month-Ahead" - In addition to the 90% year-ahead obligation, D.04-10-035 requires that LSEs make month-ahead filings demonstrating they have acquired 100% of their obligation for a "compliance month." The decision left open for Phase 2 the definition of the month-ahead obligation. The workshops addressed two alternatives in which LSEs' monthly compliance filings would either be due the middle of the month prior to the compliance month (e.g., April 15 for May) or the last day of the second month prior to the compliance month (e.g., March 31 for May).

As the workshop report observes, Option 1 would allow for economic opportunities that may occur closer to real-time. On the other hand, Option 2 would facilitate analysis and enforcement. D.04-10-035 noted the CAISO's position that there are market power mitigation as well as operational benefits to a confirmation that LSEs are resource adequate a month ahead. Option 2 is more consistent with the objectives of the month-ahead requirement and will therefore be adopted.

Adjustment to Forecasts - Even though additional direct access has been suspended, there can be considerable migration of existing DA load among ESPs. ESPs maintain that they should be allowed to incorporate adjustments to their year-ahead load forecasts in their month-ahead filings to account for customer migration. This is consistent with D.04-10-035, which observed that a benefit of month-ahead filings "is the ability to update load forecasts … [which] can recognize changes in customers served by a specific LSE as DA customers shift, community choice aggregation takes place, etc." (D.04-10-035, p. 38.)

With respect to month-ahead RAR filings, it would be unreasonable to require an LSE that has lost a significant portion of its customer base to procure capacity commitments for load it no longer has. Similarly, it would be unreasonable to allow an LSE that has gained substantial load from customer migration to acquire only the capacity needed for the load that it forecast a year ahead, before it acquired the new load.

Since load that is lost by one LSE is likely to migrate to another LSE, allowing a voluntary forecast true-up in month-ahead compliance filings could create incentives for under-forecasting that leads to socialization of costs. Accordingly we require that month-ahead compliance filings include adjustments for positive and for negative load growth due to migration. Apart from load changes due to load migration, load forecasts should not be updated from the LSE's year-ahead filing.

We are adopting this limited provision for load forecast updates to prevent the imposition of unreasonable capacity acquisition obligations on LSEs that have lost substantial load due to customer migration. We recognize that this may create additional need for review of load forecasts for which the CEC has particular expertise.

Waivers for Fully Resourced LSEs - SCE suggests that if the LSE chooses to meet it full 100% peak load plus reserves in the year-ahead timeframe, there should be no additional month-ahead reporting requirement. We will not grant a waiver for such circumstances, primarily because we are requiring migration-based load forecast updates in month-ahead filings. However, a month-ahead compliance filing for a fully-resourced LSE that experienced no load migration affecting its year-ahead load forecast would be a simple showing to that effect.

Reporting Mechanism - The workshop report invited comment on reporting protocols for the month-ahead compliance filings. Workshop participants felt it was appropriate that LSEs report to both this Commission and

CAISO, although they expected that the CAISO would be the principal entity with the resources and need to track Month-Ahead compliance. This is because the CAISO not only needs assurance that each LSE has acquired 100% of their forward commitment obligations, it also needs to know the specific resources that the LSE has nominated for that month.

To comply with the month-ahead obligation, LSEs would show that they met their capacity obligation from the list of qualifying capacity maintained by the CAISO. This could be accomplished by the LSE providing a contract reference number or a generator ID number. The LSE would make available the amount of capacity purchased and the capacity provider information (but no price information) to the CAISO as well as the Commission. The reviewing entity would then verify that the LSE's filing satisfied all general and local capacity requirements.

As with year-ahead compliance review, this Commission will maintain ultimate authority for administration of month-ahead filings as well as compliance. As a practical matter, the month-ahead requirement involves the transition from a planning environment to an operational environment, and the CAISO may have the greatest need for the information provided in the month-ahead compliance filings. We require that month-ahead compliance filings be made through the advice letter process, and that they be concurrently served on the CAISO as well as the CEC.

8.6. Compliance Issues

Some parties have urged that the RAR program be implemented on a trial run basis, or as an educational opportunity, without threat of penalties for the first year. However, a regulatory program that imposes significant procurement obligations upon LSEs cannot be expected to succeed unless those LSEs have reason to believe there are consequences for noncompliance that outweigh the costs of compliance. Accordingly, we will not institute the program with the first year amounting to little more than a data gathering exercise. We note that parties have been on notice since the issuance of D.04-01-050 in January 2004 that we intend to hold LSE's responsible for procurement obligations, and that they have been on notice since D.04-10-035 was signed in October 2004 that those obligations would commence as early as fall 2005 for resource adequacy for June 2006.

We are encouraged that, in general, LSEs are willing to be accountable for showing they have purchased the sufficient reserves to meet their RA requirement. The workshop participants suggested a penalty equal to three times the cost for new capacity as an appropriate sanction for an LSE's failure to acquire the capacity needed to meet its RA obligation. As a general proposition we believe this is appropriate to induce compliance with the RA obligation, and we hereby adopt it as our policy. In deference to the concerns raised by many parties regarding the uncertainties of compliance with a new program, we adopt TURN's suggestion for establishing a baseline penalty of 150% of the monthly cost of new capacity for 2006 only. For 2007 and beyond, a penalty of 300% should apply. As noted earlier, this Commission retains authority and responsibility for administration of its own programs. This applies to compliance and enforcement as well.

The essence of the RAR program is mandatory LSE acquisition of capacity to meet load and reserves. As discussed above, failure of an LSE to meet that obligation can result in the LSE having to pay, as a sanction for that failure, a multiple of the cost of that capacity. However, there are additional dimensions to RAR program compliance, such as requirements to make timely filings and responding to data requests from the Commission or the CEC, for which sanctions in the form of capacity costs may not be appropriate. We will hold LSE's accountable for compliance with all aspects of the program through the exercise of our existing authority and process.

To provide guidance in setting fines, the Commission has distilled the principles that it has historically relied upon in assessing fines and restated them such that they may form the basis for future decisions. (Rulemaking to Establish Rules for Enforcement of the Standards of Conduct Governing Relationships between Energy Utilities and Their Affiliates Adopted by the Commission in Decision 97-12-088, 84 CPUC 2d 155, 188 (D.98-12-075, App. A.) Those principles begin by stating that the purpose of fines is to deter further violations. In determining whether to impose a fine and, if so, at what level, the Commission will consider five factors, namely, the severity of the offense, the entity's conduct, the financial resources of the entity, the role of precedent, and the totality of circumstances in furtherance of the public interest.

8.7. After-The Fact Review

The Phase 2 workshop report included a discussion of several possible ways that the Commission and other agencies could perform "after-the-fact reviews" of LSE compliance filings. These reviews would consist of comparisons of load forecasts with actual loads and review of the performance of nominated resources. The discussion included the possibility of sanctions based on the reviews.

We have already addressed our findings on the need for accuracy in load forecasts and the degree to which LSEs will be held accountable for their forecasts. Similarly, we have discussed the importance of oversight of resource performance and have asked our staff to work with the CAISO in the development of protocols aimed at resource accountability. Additionally, we expect that all parties, including LSEs, resource providers, and oversight agencies, will engage in ongoing monitoring and evaluation of the RAR program. Nevertheless, at this time we do not find it necessary to specify the details of a formal after-the-fact review program.

8.8. Timing Issues: The First RAR Cycle

In determining that annual year-ahead compliance filing should be made on September 30 of each year, the Commission adopted an exception for the first year whereby filings should be made 90 days after the date of this decision in the event of delay in issuance of the decision. Accordingly, the first year compliance filings (for compliance year 2006) are due January 27, 2006. Also, while the year-ahead filings will cover the summer period months of May through September in future years, D.04-10-035 determined that the 15-17% planning reserve margin requirement will become operative beginning with June 1, 2006. Therefore, for 2006 only, the year-ahead filings and the "90% year-ahead" RA obligation shall apply to the period June through September. Finally, we specify that the month-ahead filing requirement and the "100% month-ahead" RA obligation shall begin with the June 2006 compliance period. Thus, the first month-ahead filings are due May 1, 2006 (the first business day after the due date of April 30, 2006).

9. Next Steps

As determined earlier in this opinion, important elements of the comprehensive RAR program that we envision for California require consideration in further proceedings. These include topics that were identified in D.04-10-035 as "second generation" RAR topics as well as matters such as local RAR that were considered but not fully developed in Phase 2 of the RAR portion of this rulemaking.

However, R.04-04-003 has been open since April 1, 2004. Long-term IOU procurement plans for 2005 were considered in this proceeding and were addressed in D.04-12-048. Issues pertaining to procurement incentives, QF policy, and allocation of DWR contracts are being addressed currently and will be resolved in the near future. Instead of keeping this docket open for consideration of additional RAR issues, when the outstanding non-RAR issues in R.04-04-003 are completed we will close this docket.

We note that our staff has already taken significant steps towards initiation of a rulemaking to consider the development of a centralized capacity market, and we direct staff to continue those efforts. (*See* Footnote 7, *supra.*) In addition, we ask that our staff present us with a proposal to initiate a new, focused rulemaking proceeding that would complete our efforts to establish a comprehensive RAR program. This proposal should include a recommendation on whether a single rulemaking should address both capacity markets and other unfinished business for RAR, or whether separate, parallel proceedings should be initiated. As part of this effort, we believe it would be helpful for our staff to present a general order that compiles into a single source document the elements of the RAR program.

10. Comments on Draft Decision

On September 27, 2005, the draft decision was filed and served on parties in accordance with Pub. Util. Code § 311(g)(1) and Rule 77.7 of the Commission's Rules of Practice and Procedure. Comments were filed on ___________________.

11. Assignment of Proceeding

Michael R. Peevey is the Assigned Commissioner. Mark S. Wetzell is the assigned ALJ for the resource adequacy portion of this proceeding.

Findings of Fact

1. Through RAR, the Commission intends to promote investment in the resources needed to reliably serve demand for electricity and ensure that those resources are available to the CAISO, while effectively and fairly allocating procurement and reliability responsibilities among market participants and oversight agencies.

2. Achieving reliability through infrastructure development requires consideration of revenue adequacy for suppliers of resources.

3. The Commission seeks to promote the LSEs' procurement responsibility and reduce reliance on CAISO procurement.

4. Substantial and immediate progress toward the achievement of RAR goals is imperative to the development of the infrastructure needed for reliability.

5. The obligation of suppliers to be available and perform is established through their contracts with LSEs.

6. A coordinated CPUC/CAISO RAR program that includes CAISO-enforced generator obligations would enhance achievement of RAR goals.

7. If LSEs were not required to replace the capacity that becomes unavailable due to a derating determination by the CAISO, they would in effect socialize the costs of the derated capacity.

8. Eliminating the MOO and the associated waiver process before the CAISO's MRTU program is implemented could jeopardize day-ahead commitment of RA resources to the CAISO.

9. It is neither necessary nor desirable to require that specific language be adopted as a mandatory component of qualifying contracts.

10. The RAR program is being established pursuant to the Commission's broad jurisdiction over IOUs as well as its narrower jurisdiction with respect to ESPs and CCAs.

11. This Commission should enforce the RAR requirements that are applicable to LSEs.

12. The CAISO is the appropriate entity to administer a program of performance standards for resources.

13. TURN's petition for modification seeking to vacate adoption of the best estimate approach does not refer to particular impacts on LSE load forecasts or point to specific new facts or arguments, and is therefore procedurally deficient.

14. The historic approach to coincidence analysis eliminates the problem of "forecast noise" and would permit the coincident adjustment factor to be identified earlier.

15. The working group proposal in Appendix C of the Phase 2 workshop report regarding the allocation of EE and DR impacts is reasonable and should be adopted.

16. There is a need for improved M&E efforts to support the quantification of the EE/DR impacts.

17. There is a need for the three IOUs to prepare and document the hourly impacts of EE, DR and DG programs within their service areas and to provide these impacts to the CEC for use in the adjustment of LSE load forecasts.

18. It is reasonable to calculate losses using hourly DLFs and an upward adjustment of three percentage points applicable in all hours for both transmission losses and UFE.

19. The TD method recognizes that many of the qualifying resources will not be available in all hours of the month.

20. Under the TD approach resources are available to the CAISO by rule.

21. The TD approach is likely to be more effective than the BU method in terms of ensuring that resources are available to the CAISO.

22. Moving toward a rational pricing approach for capacity, where the true market value of capacity is revealed, should provide the appropriate incentives for needed investment to occur.

23. To the extent that use of a resource duration curve to define RA obligations promotes the development of differentiated capacity products, the BU approach may hinder development of a capacity market.

24. To the extent that the TD approach entails greater costs than the BU approach, it is likely because the TD approach provides a mechanism for fixed costs being paid to suppliers providing needed capacity.

25. Both the TD and the BU methods have to address the fact that not all resources are available 100% of the time.

26. It is appropriate to plan to use dispatchable DR programs up to the limits now established for each such programs.

27. CAISO's May 2005 deliverability analysis found that (1) historical imports were deliverable and (2) while certain generation within generation pockets is not deliverable, that deficiency can likely be mitigated with transmission upgrades.

28. The third option for allocating to LSEs the CAISO-determined level of import capacity, which uses each LSE's share of CAISO system peak load and includes an evergreen (grandfather) priority, is reasonable and should be adopted.

29. Basing the allocation of the import capability of the DWR contracts on historic usage of the paths to deliver such supplies is consistent with

grandfathering non-DWR contracts as well as our prior determination that DWR contracts should be subject to deliverability screens.

30. It is reasonable to count all the generation as deliverable assuming that the transmission upgrades will be completed by the PTOs.

31. LD contracts could undermine the integrity of the RAR program because they are not subject to deliverability screens and they allow the possibility of double-counting resources that are nominated by LSEs in fulfillment of their RA obligations.

32. LD contracts cannot meet the needs of local RAR due to their inherent deliverability and dispatchability constraints.

33. Terminating the eligibility of LD contracts to count for RAR showings too rapidly would be unnecessarily disruptive and costly to LSEs.

34. The declining share of RAR portfolio approach proposed by PG&E gives consideration to the LSEs' need for time to rebalance their RAR portfolios away from LD contracts.

35. Firm import LD contracts do not raise issues of double counting and deliverability, and should be exempted from the sunset/phase-out provisions applicable to other LD contracts.

36. It is not reasonable to craft remedies for possible cost shifting related to the DA CRS and the CTC in this proceeding because only a portion of the cost shifting issue is reviewed.

37. A three-year rolling average of performance history is appropriate to assess the qualifying capacity of wind and solar resources.

38. Using the SO1 summer peak hours of noon to 6:00 p.m. on a year-round basis is a reasonable compromise for defining peak hours for wind and solar resources.

39. For 2006, SCE's proposal for a 3% adder for newer wind technologies is appropriate to give effect to the principle that the use of renewables should not be disadvantaged in or by the RAR program.

40. Load shapes are less peaked in the non-summer months, with the result that the number of hours with loads in excess of 90% of the peak could be as much as 300 hours in some months.

41. The CAISO/CEC proposal for determining and reporting the CODs for resources nominated for RAR is reasonable and should be adopted.

42. An adjustment that reconciles the LSEs' load forecasts to the State's official load forecasts provides an appropriate reality check on the integrity of the RAR program, and has the effect of better integrating the RAR program with the state's resource planning efforts.

43. The essence of an LSE's year-ahead compliance filing is a demonstration that it has acquired sufficient resources to satisfy the 90% forward commitment obligation for loads plus reserve requirements for each of the five summer months May - September.

44. With the corrections noted in the foregoing discussion, the resource tabulation template and instructions set forth in Appendix I to the Phase 2 Workshop is reasonable and should be adopted.

45. Requiring that LSEs' monthly compliance filings be due the last day of the second month prior to the compliance month is consistent with the objectives of the month-ahead requirement and should therefore be adopted.

46. It would be unreasonable to either require an LSE that has lost a significant portion of its customer base to procure capacity commitments for load it no longer has, or to allow an LSE that has gained substantial load from customer

migration to acquire only the capacity needed for the load that it forecast a year ahead, before it acquired the new load.

Conclusions of Law

1. The Commission intends that RAR should consist of a physical, capacity-based program whereby a significant portion of the capacity needed by the CAISO is committed at least a year ahead as defined in D.04-10-035.

2. The Commission should not delay the start of the RAR program until the details of all possible program elements are more fully vetted, and it should not implement program elements that have not been fully and fairly considered.

3. Because we are implementing a physical capacity-based RAR program, resources should only count to the extent that their capacity can be relied upon to perform.

4. LSEs' preliminary load data should be submitted to this Commission's Energy Division, which will promptly transmit the data to the CEC for review and analysis.

5. LSE procurement obligations should be determined by CEC-determined adjustments to LSE forecasts, subject to dispute resolution administered by this Commission.

6. The confidentiality rules adopted by this Commission should govern the load forecast submission and review process.

7. LSEs should be held accountable for knowingly using false or unreasonable assumptions in load forecasts.

8. Generating units should not be considered qualifying resources for purposes of the RAR program unless the owner has submitted its qualified capacity value and supporting documentation to the CAISO.

9. Modification of D.04-10-035 to vacate the best estimate approach to load forecasting should be denied.

10. The IOUs should support the analysis of EE, DR, and DG impacts and provide timely data regarding these impacts to the CEC in accordance with the foregoing discussion.

11. LSEs should be required to acquire capacity to meet their peak day load for each month, measured in megawatts (MW), plus 15%, for all hours of the month.

12. The eligibility of in-area LD contracts to qualify for the LSEs' RAR showings should be phased out in a manner that fairly and effectively balances the needs of the RAR program and the interests of LSEs that rely on LD contracts.

13. LD contracts executed on or before the September 27, 2005 should count for RAR showings, provided, however, that (a) LD contracts should not count for purposes of RAR showings after December 31, 2008, and (b) the portfolio limiations set forth in the foregoing discussion should apply.

14. The Commission's determination in D.04-10-035 that to qualify for RAR, a resource must (1) be able to operate for a minimum of four hours per day for three consecutive days and (2) be able to run a minimum aggregate number of hours per month based on the number of hours that loads in the CAISO control area exceed 90% of peak demand in that month is affirmed as to the summer months; for the non-summer months, the second prong of that test is waived.

15. We reaffirm our intention to establish a local capacity component of our RAR program as we determined in D.04-10-035, and intend to implement this program component beginning with year-ahead compliance filings made in 2006 for compliance year 2007.

16. LSEs should be required to submit documented hourly load forecasts for all twelve months of the year as part of the year-ahead preliminary load forecasts

they submit each spring and to make year-ahead and month-ahead compliance filings as set forth in the foregoing discussion.

17. CEC should make load forecast adjustments if the sum of the adjusted LSE load forecasts is 99% or less, or 101% or more, of the reference case forecast as described in the foregoing discussion.

18. In their month-ahead filings, LSEs should be required to incorporate adjustments to their year-ahead load forecasts to account for customer migration.

19. A penalty equal to three times the monthly cost for new capacity is an appropriate sanction for an LSE's failure to acquire the capacity needed to meet its RA obligation; for 2006 only, a penalty of one-half that amount is reasonable.

O R D E R

IT IS ORDERED that:

1. The resource adequacy requirements (RAR) policy framework adopted in Decision (D.) 04-01-050 and D.04-10-035 shall be implemented in accordance with the foregoing discussion, findings of fact, and conclusions of law.

2. The following load-serving entities are subject to the requirements of the RAR program adopted herein and shall comply with all decisions, rulings, and directives pertaining to the program:

   a. Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), and Southern California Edison Company (SCE) (collectively, investor-owned utilities or IOUS); and

   b. Electric service providers (ESPs) and community choice aggregators (CCAs) that serve retail customers within the service territory of one or more of the IOUs through direct access or CCA transactions.

3. The March 10, 2005 petition of The Utility Reform Network for modification of Decision 04-10-035 is denied.

4. The Executive Director shall ensure that Commission staff undertake the activities identified for staff in the foregoing discussion, findings, and conclusions.

5. This proceeding remains open; however, the RAR portion of this proceeding is concluded.

This order is effective today.

Dated ____________________________, at San Francisco, California.