

CALIFORNIA
ENERGY
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ERRATA FOR INVESTOR-OWNED UTILITY RESOURCE PLAN SUMMARY ASSESSMENT

Prepared for the
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STAFF REPORT

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ERRATA



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The following are replacement pages for the correspondingly numbered pages of the Staff Report, *Investor-Owned Utility Resource Plan Summary Assessment*, which was posted on the Energy Commission Website on June 17, 2005. The version of the Staff Report now posted on the Website has incorporated these changes.

CPUC Regulation of IOU Procurement

Assembly Bill 57 (Chapter 835, Statutes of 2002, Wright) directs the CPUC to review and approve electric utility plans to procure electrical generation capacity, energy services and generation fuel supplies. The procurement plans are to include at least one of the following: (1) a competitive procurement process; (2) a procurement incentive mechanism; or (3) upfront standards and criteria. The CPUC's approval eliminates the need for "after-the-fact" reasonableness reviews of individual procurement transactions. When implementing their procurement plans, the CPUC has required the IOUs to consult a Procurement Review Group (PRG), which is comprised of CPUC and Energy Commission representatives, various consumer representatives, and other non-market participant parties. The IOUs then demonstrate that they have conducted their procurement activities in compliance with the CPUC-approved procurement plan by filing quarterly compliance advice letter filings, which are reviewed by the CPUC's Energy Division. This process ensures that the utility can recover from its customers the costs of procurement activities that comply with the CPUC-approved procurement plan. This mechanism also allows some measure of public review of IOU procurement without revealing the IOUs' sensitive information to other market participants.

Electricity resource procurement by PG&E, SCE and SDG&E, as overseen by the CPUC, is broadly characterized by two key features. First, the IOU must meet electricity generation and transmission system constraints and a variety of energy policy constraints. These constraints include:

- Individual generation resource operation constraints,
- Transmission system reliability requirements that require control area operators to maintain a minimum level of operating reserves,
- Resource adequacy requirements of Load Serving Entities (LSEs),
- Energy efficiency resource procurement requirements,
- Electricity retailers' Renewable Portfolio Standard obligations,
- Environmental regulations governing power plant emissions, and
- CPUC-approved upfront procurement standards or specific requirements.

Second, the IOUs have been given limited discretion by the CPUC to select resources based on least-cost, best-fit selection criteria. The CPUC's decisions help define the criteria and impose specific requirements, such as including an "adder" representing the financial risk of a future greenhouse gas emissions costs. Least-cost, best-fit criteria include market valuation, portfolio fit, technology risk, credit risk, and transmission and environmental factors. Specific details of the least-cost, best-fit decision criteria vary by IOU and are considered confidential. ~~Achieving the long-term policy goals take precedence over least-cost, best-fit decisions, which take more social and strategic factors into account. Some specific policy requirements can make least cost, best fit decisions in favor of expected social and strategic~~

~~benefits, such as the minimum renewables energy procurement obligation of the Renewables Portfolio Standard Program. Some policy requirements give the least-cost best-fit criteria precedence; for example, once loading-order obligations have been fulfilled, the IOUs must conduct open all-source solicitations and select resources using the least-cost, best-fit criteria. Sometimes, least-cost best-fit decisions may be subordinated to long-term policy decisions that take more social and strategic factors into account. A specific example is the policy requirement for the minimum renewables energy procurement obligation of the Renewables Portfolio Standard Program. Other times, policy requirements give the least-cost best-fit criteria precedence; for example, once the minimum RPS obligation has been fulfilled, the IOUs must select resources using the least-cost best-fit criteria.~~

Resource Plan Conventions

The Electricity Resources Forms and Instructions¹ (or Forms and Instructions) direct the three large IOUs to submit long-term electricity resource plans to the Energy Commission. The Forms and Instructions organize the IOUs' plans to present trends, uncertainties and issues of ongoing interest to parties monitoring the IOUs' long-term electricity resource procurement activities.

These resource plans demonstrate that the IOUs plan to meet the constraints imposed on their future procurement activities. They do not predict the specific resources IOUs will procure as a result of those activities. The mix of specific resources that will ultimately result from competitive all-source solicitations depends on what projects are bid into the solicitations, and how well they meet the least-cost, best-fit selection criteria. Since these resource plans are not predictions of what specific resources will actually be procured, they cannot provide estimates of resource-specific impacts, such as environmental attributes. Least-cost, best-fit procurement creates an opportunity for the widest menu of resource options to compete in the solicitations. Therefore, the results of competitive all-source solicitations will not be predictable today.

In general, the resource plans directed by the Forms and Instructions describe potential future portfolios of dependable capacity and energy resources that the IOUs estimate would meet their forecasted peak demand and energy requirements, but only for their bundled-service customers. The IOUs' resource plans do not include resources that would serve the peak demand and energy requirements of customers who choose energy service providers—customers choosing direct access, community choice aggregation, non-core energy service, or municipalization. As a result, these plans do not identify the amount of additional resources that might be required by the IOU to meet the peak demand and energy requirements for any customers returning to the IOU as their power provider of last resort.

than 3,000 GWh, it is unclear why SCE reports these values.¹⁵ They are the sum of the uncommitted values shown on Line 1 in Tables 2-13 and 2-14, however, these values are already accumulations of annual GWh savings.

SCE reports its efficiency goals as the sum of baseline savings projected from the continuation of committed PGC-funded energy efficiency programs through 2011 and an uncommitted increment above that baseline. In its Comments, SCE reports that it has “included the required levels of energy efficiency and demand response in its Reference Case.”¹⁶ SCE expresses doubt about meeting the adopted beyond 2011. “There is significant uncertainty, however, concerning whether these levels of EE and DR can be attained within the current cost-effectiveness guidelines.”¹⁷ SCE believes there is no credible analysis to support levels of efficiency beyond what it terms “Maximum Reliably Achievable Potential.” Maximum Reliably Achievable Potential is defined as the portion of Maximum Achievable Potential that can be realistically and reliably attained for procurement planning purposes. This is the level used in the 2004 Long-Term Procurement Plan and the Alternate Case. SCE further comments that “directing SCE to implement a procurement plan based on the levels of EE and DR assumed by the Energy Commission could unnecessarily and unreasonably expose ratepayers to significant reliability and cost risk”¹⁸

The adopted goals, shown in Table 2-12 do require SCE to achieve a larger percentage of the remaining potential than either of the other utilities.

**Table 2-12
SCE Total Electricity Program Savings Goals**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total Annual Electricity Savings GWh/yr	826	826	922	1,046	1,167	1,189	1,176	1,164	1,151	1,139
Total Cumulative Savings GWh/yr	826	1,653	2,575	3,621	4,788	5,977	7,153	8,317	9,468	10,608
Total Peak Savings (MW)	167	334	541	760	1,006	1,255	1,502	1,747	1,988	2,228

Notes:

(1) Total savings = all savings from energy efficiency programs funded by public goods charge and procurement funding. This total includes savings from Energy efficiency programs already in the Energy Commission forecast. For incremental savings above the levels included in the Energy Commission forecast, see Attachment 9.

(2) GWh Savings converted to MW by multiplying by .21, average of utility GWh to peak savings for 2004/5 applications. This is an estimate of average peak savings not coincident peak = GWh savings in peak period/ 560 hours in period.

Energy Savings

In comparing what is reported on Supply Form S-2 line 6 for the Reference Case with the adopted goals, however, the savings do not at first appear to match up to

the goals. Two adjustments must be made. First, the goals have to be adjusted up from sales level to generation level to match SCE's reported values. Second, committed savings from Demand Form 3.1a must be added to the annual uncommitted efficiency savings shown on the Supply forms.¹⁹ These are added through 2011, which matches the PGC authorization period. The total of the uncommitted and committed energy savings are shown in Table 2-13 on Line 3. Comparing Line 3 to the generation level goals on Line 5b, SCE meets the adopted goals in its Reference Case as indicated on Line 10.

SCE proposes an Alternate Case based on its 2004 Long-Term Procurement Plan that uses utility-specific analysis of its "Maximum Reliably Achievable Potential (MRAP) for energy efficiency. This is the level that SCE believes can be attained reliably, and is, therefore, the appropriate level to include for procurement planning purposes."²⁰ SCE cites concerns of exposing customers to undue cost and reliability risks if the higher magnitudes of savings are used. The major reason for the difference in projected savings in this case is a steep decline in the annual increments of uncommitted savings ~~coupled with the end of committed funding in 2011 as the market for some existing energy efficiency technologies becomes saturated toward the latter years of the forecast.~~

As shown below in Table 2-14, SCE's Alternate Case will fall below the adopted goals (adjusted to generation level) by approximately 1,448 GWh by 2013. SCE's annual GWh projections are shown on Line 2 and the annual goals on Line 5b of Table 2-14. With the combination of committed and uncommitted savings, SCE projects to be ahead of the goal at the end of 2008 by 497 GWh. This marks a much more aggressive effort over 2006-2008 than required by the goals. Post-2008, however, the projections of uncommitted savings exhibit a steady decline. When committed savings end in 2011, the decline becomes over 500 GWh per year.

~~**Note: SCE supplied subsequent information just before publication that may change the magnitude of the GWh shortfall in the Alternate Case from what is published here. An errata version will published prior to the June 29 workshop.**~~

SCE's assumption that it will be possible to add 970 new GWh in the first year of a new program cycle seems implausible based on the analysis of historic IOU savings and spending trends used to develop the goals. Coupled with the committed savings, the total will be 380 GWh above an already aggressive annual goal. Post-2011, SCE is adding half of the annual GWh needed to meet the goals. SCE's assumption that PGC funding will not be available after 2011 also seems unlikely.

Since both SCE's projections and the adopted goals relied on the same potential data, it is unclear why this difference of opinion about what is achievable is so large. The work papers for D.04-09-060 indicate that the cumulative goals in 2013 would represent approximately 89 percent of SCE's GWh maximum achievable potential and 99 percent of the MW maximum achievable potential.²¹ An update to the

previous potential study is due to be completed by September 2005. It is not yet clear whether the potential for SCE will increase or decrease.

Peak Savings

Peak savings in the Reference Case match the adopted goals. This is shown in Table 2-15 by comparing Line 3 with Line 6. Committed demand is added from Demand Form 3.1a through 2011. Adjustments are made for generation level projections.

In the Alternate Case, SCE will exceed the goals over the near term, but after 2009 the shortfalls grow steadily larger. This is shown in Table 2-16 on Line 7. Just as with the energy savings, the Alternate Case exceeds the Reference case over the near-term period. This would be consistent with the need for additional peak capacity in Southern California. Like the energy savings, once the committed savings end in 2011, the decline becomes steady as the incremental megawatt additions fail to keep pace with the goals.

~~**Note: SCE supplied subsequent information just before publication that may change the magnitude of the MW shortfall in the Alternate Case from what is published here. An errata version will published prior to the June 29 workshop.**~~

**Table 2-13
Southern California Edison, Comparison of Supply Filings to
Adopted Energy Efficiency Goals - Energy GWh - IEPR Reference Case**

		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	Uncommitted Energy Efficiency, 2006-2016 GWh From Form S-2	0	0	591	1,323	2,189	3,096	4,013	4,939	6,186	7,421	8,656	9,890	11,125
2a	Annual Increment	0	0	591	732	907	866	917	925	1,248	1,235			
2b	Annual Committed Incremental Energy Efficiency from Form 3.1a			408	402	399	382	387	337					
3	Total Annual Incremental EE (2a+2b)			999	1,134	1,265	1,289	1,274	1,262	1,248	1,235			
4	CPUC Energy Efficiency Goals													
5a	Annual GWh Goal as Adopted (sales level)	826	826	922	1,046	1,167	1,189	1,176	1,164	1,151	1,139			
5b	Annual GWh Goals as Adopted (generation level @ 1.084)	895	895	922	1,134	1,265	1,289	1,274	1,282	1,248	1,235			
6	Baseline Savings in Energy Commission Forecast	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
7	Incremental Savings Needed	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
8														
9	S-2 Annual Increment + Baseline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
10	Difference From Goal (3-5b)			0	0	0	0	0	0	0	0			
11	Difference of Annual Increment and Incremental Savings Needed for Goal	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			

Table 2-14
Southern California Edison, Comparison of Supply Filings
to Adopted Energy Efficiency Goals - Energy GWh - Alternate Case

		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	Uncommitted Energy Efficiency, 2006-2016 GWh on Form S-2, Line 6			970	1,821	2,687	3,466	4,107	4,544	5,285	5,974	6,629	7,283	7,938
2a	Annual Increment			970	850	866	779	641	437	741	688			
2b	Annual Committed Incremental Energy Efficiency from Form 3.1a			408	402	399	382	357	337					
3	Total Annual Incremental EE (2a+2b)			1,379 8	1,252	1,265	1,161	1,176	1,164	741	688			
4	CPUC Energy Efficiency Goals													
5a	Annual GWh Goal as Adopted	826	826	922	1,046	1,167	1,189	1,176	1,164	1,151	1,139			
5b	Annual GWh Goal as Adopted (generation level @1.084)	895	895	999	1,134	1,265	1,289	1,274	1,262	1,248	1,235			
6	Baseline Savings in Energy Commission Forecast	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
7	Incremental Savings Needed	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
8														
9	S-2 Annual Increment + Baseline (2+6)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10	Difference From Goal (3-5b)			38079	118	0	(128)	(98277)	(98487)	(507)	(547)			
11	Difference of Annual Increment and Incremental Savings Needed for Goal	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			

Table 2-15
Southern California Edison, Comparison of Supply Filings
to Adopted Energy Efficiency Goals - Peak MW - IEPR Reference Case

		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	Uncommitted Energy Efficiency, 2006-2016, Highest MW on Form S-1 Line 7	0	0	149	311	502	698	895	1,093	1,354	1,614	1,874	2,134	2,395
2	Committed Peak Demand from Form 3.1a			75	150	226	300	371	439	439	439			
3	Total Annual MW (1+2)			224	461	728	998	1,266	1,532	1,793	2,053			
4	Total MW Goal as Adopted	167	334	541	760	1,006	1,255	1,502	1,747	1,988	2,228			
5	Adjusted Goal (2004-2005 MW Removed to Make Base Year Comparable)			207	426	672	921	1,168	1,413	1,654	1,894			
6	Adjusted Goal (generation level @1.084)			224	462	728	998	1,266	1,532	1,793	2,053			
7	Difference From Adjusted Goal (3-6)			0	0	0	0	0	0	0	0			

Table 2-16
Southern California Edison, Comparison of Supply Filings
to Adopted Energy Efficiency Goals - Peak MW - Alternate Case

		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	Uncommitted Energy Efficiency, 2006-2016, Highest MW on Form S-1 Line 7			197	377	569	711	844	959	1,141	1,325	1,504	1,682	1,861
2	Committed Peak Demand from Form 3.1a			75	150	226	300	371	439	439	439			
3	Total Annual MW (1+2)			272	527	795	1,011	1,215	1,398	1,580	1,764			
4	MW Goal as Adopted	167	334	541	760	1,006	1,255	1,502	1,747	1,988	2,228			
5	Adjusted Goal (2004-2005 MW Removed to Make Base Year Comparable)			207	426	672	921	1,168	1,413	1,654	1,894			
6	Adjusted Goal (generation level)			224	462	728	998	1,266	1,532	1,793	2,053			
7	Difference From Adjusted Goal (3-6)			48	65	67	13	(51)	(14334)	(213)	(289)			

Comparison of Supply Forms and Demand Forms

~~Unlike the other utilities, SCE's demand forms align neither with the goals nor with the other cases. Most of the variance occurs with peak savings. SCE filed their Demand Forms several months prior to the Supply Forms. Subsequent to their submission, an impact of 35 MW from additional funding for summer 2005 was incorporated into the Supply Forms as a one year adjustment in 2006.~~ The values reported in Table 2-17 as uncommitted megawatts differ from the uncommitted megawatts shown on the Supply Forms across the entire period for that reason. For a comparison, refer to Line 1 on Table 2-15 for the Reference Case and Table 2-16 for the Alternate Case. The uncommitted energy savings vary from the Alternate Case only in 2006. Demand Form 3.1a projects 761 GWh for 2006 instead of 970 GWh shown on Line 2a of Table 2-14. This is also the result of the 2006 adjustment made for the added 209 GWh of summer 2005 activities. Aside from this adjustment and any rounding differences, the Demand Forms align with the Alternate Case Supply Forms.

Both MW and GWh savings are projected to exceed the goals over the near-term, but in 2009 a decline begins, as shown in Table 2-17.

Table 2-17
MW and GWh Projected Savings Compared to Goals from SCE Demand Forms

	2006	2007	2008	2009	2010	2011	2012	2013
Committed MW Form 3.1a	75	150	226	300	371	439	439	439
Uncommitted MW Form 3.1a	162	342	534	676	809	925	1108	1290
Total MW	237	492	760	976	1180	1364	1547	1729
Adopted Goal (generation level @1.084)	224	462	728	998	1266	1532	1793	2053
Difference	13	30	32	-22	-86	-168	-246	-324
Committed Annual GWh Form 3.1a	408	402	399	382	357	337		
Uncommitted GWh Form 3.1a	761	850	866	789	641	437	741	688
Total Annual GWh	1169	1252	1265	1171	998	774	741	688
Adopted Goal (generation level @1.084)	999	1,134	1265	1289	1274	1262	1248	1235
Difference	170	118	0	(118)	(276)	(488)	(507)	(547)

Preliminary 2006-2008 Programs

Over the three year period, SCE projects 4,071 GWh in savings, 130 percent of the CPUC goals and 784 MW, or about 108 percent of the peak savings goal. These projections are considerably higher than the efficiency forecasts in either the Reference Case or the Alternate Case.

SCE has put together a highly diversified portfolio of programs; only one program accounts for more than 10 percent of the portfolio savings. The CPUC consultants found too little information in the preliminary information to judge its either the cost-effectiveness or the reasonableness of the savings associated with proposed program measures.²² The vast majority of the kW and kWh savings estimates result from measures that are not included in the Database of Energy Efficient Resources, which is the source of the deemed cost and savings estimates used in calculating cost-effectiveness. This could indicate that SCE is including new or emerging technologies in their portfolio as a means of capturing additional savings.

ENDNOTES

¹ This report uses the phrases “Electricity Resources Forms and Instructions” or “Forms and Instructions” to refer to two separate Commission documents that together comprise the filing requirements for long-term resource plans. These reports are the *Forms And Instructions For The Electricity Resources And Bulk Transmission Data Submittal*, Commission report CEC-100-2005-002-CMF, January 2005, and the *Supplemental Instructions and Errata to the Forms and Instructions for the Electricity Resources and Bulk Transmission Data Submittal*, Commission Report CEC-100-2005-002-AD, March 2005.

¹⁵ *Comments of Southern California Edison Company to the Scenarios Filed with the California Energy Commission for the 2005 Integrated Energy Policy Report*, April 1, 2005., p.3

¹⁶ *Comments of Southern California Edison Company to the Scenarios Filed with the California Energy Commission for the 2005 Integrated Energy Policy Report*, April 1, 2005., p.6.

¹⁷ *Comments of Southern California Edison Company to the Scenarios Filed with the California Energy Commission for the 2005 Integrated Energy Policy Report*, April 1, 2005., p.6.

¹⁸ *Comments of Southern California Edison Company to the Scenarios Filed with the California Energy Commission for the 2005 Integrated Energy Policy Report*, April 1, 2005., p.7

¹⁹ Frank Schultz, Southern California Edison, June 10, 2005, personal communication.

²⁰ *Comments of Southern California Edison Company to the Scenarios Filed with the California Energy Commission for the 2005 Integrated Energy Policy Report*, April 1, 2005., p.7

²¹ D.04-09-060, Attachment 9, p.5.

²² *The California Portfolio 2006-2008*, p. 59.