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Attachment 3

Energy Division Proposal: Standardized Load and Resource Tables for Bundled LTPP Filings

This attachment provides standardized tables for presentation of loads and resources for bundled energy and capacity needs. These tables were developed by the Energy Division and IOUs, and were supported by other parties to R.08-02-007.

Electricity Resource Planning Form S-1
[Utility Name's] Capacity Resource Accounting Table
Bundled Customer Need - Scenario: xx

Line	IEPR Table Line		MW											
			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		
PEAK LSE LOAD CALCULATIONS:														
1	1	Forecast Total Peak-Hour 1-in-2 Demand	10,000											
2	2	CCA & Departing/Arriving-New Municipal Loads (-/+)	(100)											
3	3	Uncommitted Energy Efficiency (-)	(100)											
4	4	Demand Response/Interruptible Programs (-)	(100)											
5	5	Self Generation (Total, Non-CSI) (-)	(100)											
6	6	California Solar Initiative (-)	(10)											
7	7	Direct Access Loads (-/+)	(1,000)											
8	8	<i>Subtotal: Adjustments to Peak-Hour Demand (Lines 2 thru 7)</i>	<i>(1,410)</i>											
9	9	Adjusted Peak-Hour Demand for End-Use Customers (Sum Line 1 + Line 8)	8,590											
10	10	Coincidence Adjustment (-)	(50)											
11	11	Net Peak-Hour Demand (Sum Line 9 + Line 10)	8,540											
12	12	Specified Planning Reserve Margin (such as 15%) (Line 11 * 15%)	1,281											
13	13	Firm Sales Obligations (+)	0											
14	14	Firm LSE Peak-Hour Resource Requirement (Sum Lines 11 thru 13)	9,821											
EXISTING & PLANNED RESOURCES:														
15	15	LSE-Owned Fossil Resources	2,000											
16	16	LSE-Owned Nuclear Resources	1,000											
17	17	LSE-Owned Hydroelectric Resources (1 in 5)	1,000											
18	18	LSE-Owned Renewable Resources	100											
19	19	DWR Contractual Resources	1,000											
20	20	Qualifying Facility (QF) Contractual Resources	1,000											
21	21	Renewable Energy Contractual Resources	1,000											
22	22	Other Bilateral Contractual Resources	500											
23	23	Total Existing and Planned Resources (Sum Lines 15 thru 22)	7,600											
24	24	(Resource Need) or Surplus (Line 23 - Line 14)	(2,221)											
25	25	Specified Planning Reserve Margin (Percentage)	15%											

Electricity Resource Planning Form S-2
[Utility Name's] Energy Balance Resource Accounting Table
Bundled Customer Need - Scenario: xx

Line	IEPR Table Line		GWh											
			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		
		PEAK LSE LOAD CALCULATIONS:												
1	1	Forecast Total Energy Demand/Consumption	50,000											
2	2	CCA & Departing/Arriving-New Municipal Loads (-/+)	(500)											
3	3	Uncommitted Energy Efficiency (-)	(500)											
4	4	Demand Response/Interruptible Programs (-)	(500)											
5	5	Self Generation (Non-CSI) (-)	(500)											
6	6	California Solar Initiative (-)	(25)											
7	7	Direct Access Loads (-/+)	(5,000)											
8	8	<i>Subtotal: Adjustments to Energy Demand (Lines 2 thru 7)</i>	<i>(7,025)</i>											
9	9	Adjusted Energy Demand/Consumption (Line 1 + Line 8)	42,975											
10	10	Firm Sales Obligations (+)	0											
11	11	Firm LSE Energy Requirement (Sum Lines 9 thru 10)	42,975											
		EXISTING & PLANNED RESOURCES:												
12	12	LSE-Owned Fossil Resources	8,000											
13	13	LSE-Owned Nuclear Resources	8,000											
14	14	LSE-Owned Hydroelectric Resources (1 in 2)	1,000											
15	15	LSE-Owned Renewable Resources	1,000											
16	16	DWR Contractual Resources	1,000											
17	17	Qualifying Facility (QF) Contractual Resources	4,000											
18	18	Renewable Energy Contractual Resources	6,000											
19	19	Other Bilateral Contractual Resources	500											
20	20	Spot Market Purchases	2,500											
21	21	Short Term Sales (-)	(1,000)											
22	22	Total Existing and Planned Resources (Sum Lines 12 thru 21)	31,000											
23	23	(Energy Need) or Surplus (Line 22 - Line 11)	(11,975)											
		Generic Energy Resource Needs:												
24	24	Renewable Energy	3,000											
25	25	Non-Renewable Baseloaded Energy	6,000											
26	26	Non-Renewable Peaking Energy	2,975											
27	27	Total Generic Energy Resource Needs	11,975											

(End of Attachment 3)

Attachment 4

**Energy Division Proposal:
Planning Standards for Bundled LTPPs**

Planning Standards for Bundled Long-Term Procurement Plans

Background

In R.08-02-007, the Commission considered proposals to standardize the IOUs’ resource planning practices, assumptions and analytical techniques (cumulatively referred to as “planning standards”). The July 1, 2009 Staff Proposal¹ contained specific recommendations related to standardization of bundled LTPP filings. In August 2009, workshops were held and parties filed comments in response to the Staff Proposal, as well as alternative party proposals.²

Based on the record in R.08-02-007, Commission staff developed the following proposed planning standards. Standardization of RPS and other policy-driven resource assumptions in the bundled LTPP is intended to provide consistent approaches to the IOUs’ showing of bundled need and estimated cost of their procurement plans. We find this is necessary to verify that procurement plans first meet unmet resource needs through energy efficiency, demand-side resources and eligible renewable energy resources, pursuant to P.U.C. § 454.5(b)(9) et seq. This level of standardization will also facilitate comparison among the IOUs’ bundled plans and to maintain consistency with Commission policy in other procurement-related proceedings.

Unless otherwise directed by the assigned Commissioner or ALJ in the course of this proceeding, the IOUs’ shall use the evaluation criteria, base case assumptions, and sensitivity analysis requirements specified below.

I. Portfolio Evaluation Criteria

The IOUs’ bundled LTPPs shall evaluate and document the performance of each portfolio in terms of cost, risk and GHG emissions metrics. These three metrics are summarized in Table 5, and preliminary instructions for their calculation are provided in more detail below.

Table 5: Required Evaluation Criteria for Bundled LTPPs

Metrics	Requirement
Cost	(a) Net Present Value Revenue Requirement (utility cost) (b) Utility average rate

¹ *Energy Division Straw Proposal on LTPP Planning Standards*, Attachment 2 to the July 1, 2009 *Amended Assigned Commissioner’s Ruling and Scoping Memo on the 2008 Long-term Procurement Proceeding, Phase I*.

² On August 21, 2009, Southern California Edison (SCE) and San Diego Gas & Electric (SDG&E) jointly filed an alternative proposal, which Pacific Gas and Electric (PG&E) subsequently supported, with modifications. L. Jan Reid also filed an alternative proposal.

Metrics	Requirement
Risk	TEVaR and robust sensitivity analysis
GHG Emissions	Total GHG emissions in each year of the planning horizon

1. Cost

Requirement: *Portfolios shall be evaluated on the basis of the net present value revenue requirement (PVRR) and utility average rate (cents/kWh).*

The PVRR includes all costs required to meet bundled customer demand that are expected to enter into utility rates. The PVRR includes generation costs as well as transmission, distribution, and all other utility costs. To calculate PVRR, the total, utility revenue requirements are summed for each year of the planning horizon, and then discounted back to base year dollars using an appropriate discount rate.

A forecast of CO₂ allowance costs must be included in the PVRR calculation. (See Table 6 and discussion below for CO₂ price forecast methodology and GHG policy assumptions for calculation of the effect of CO₂ prices on generation costs and costs to utilities.)

The utility average rate should be calculated for each year of the model period as the revenue requirement of each portfolio divided by total sales in that year. A present value of the average rate should also be calculated (present value of the revenue requirement divided by the present value of the total sales).

2. Risk

Requirement: *The IOUs shall conduct robust sensitivity analysis to test the ratepayer risk associated with each portfolio. IOUs shall also measure and report on portfolio risk using a formal metric such as Time-to-Expiration Value-at-Risk (TeVAR) for each portfolio.*

Risk metrics shall measure the sensitivity of each portfolio’s average cost to changes in key cost parameters such as natural gas and CO₂ allowance prices. (See discussion below on sensitivity analysis.) In addition, the IOUs should continue, as they have in past LTTPs, to calculate formal risk metrics such as TeVAR.

3. Greenhouse Gas Emissions

Requirement: *IOUs shall calculate the GHG emissions associated with serving their bundled load during each year of the planning period.*

Estimates of GHG emission from the IOUs’ bundled portfolios shall be informational in nature. Established reporting protocols may be used to estimate GHG emissions from purchases from third-party in cases where this information is not provided explicitly by the seller.

II. Required Assumptions for the Base Case Portfolio

We anticipate that, unlike the system track, multiple scenarios will not be necessary in the bundled LTTPs, because resource policy choices will be considered in the system track. In this track, we expect each IOU to file a base case portfolio that is consistent with current Commission policy and any preferred resource portfolio or procurement strategy adopted in the system track.

Table 2 below summarizes the inputs and assumptions the IOUs shall use for the “base-case” portfolio evaluated in the bundled LTTP. In general, these assumptions address inputs related to the bundled need determination, as well as cost assumptions. See below for more detailed discussions of these assumptions and the expected sources of the data inputs (or preliminary instructions for their calculation, if necessary).

We note that preferred resources not identified in Table 6 (e.g., CHP and renewable DG) shall be reflected in the IOUs’ LTTPs, as specified in the Scoping Memo.

Table 6: Assumptions for use in the base case portfolio

Variable	Source for Base Case Assumptions
Bundled Need Determination	
Load forecast	Most recent 1-in-2 IEPR base case load forecast, including CEC assumptions for departing load.
Energy efficiency (EE)	Committed EE³ - Embedded utility program savings in the most recent IEPR forecast
	Uncommitted EE⁴ – Assumed levels of EE savings that are incremental to the most recent IEPR base case load forecast, as specified below.
Demand Response (DR)	Assumed levels of DR load impacts, as specified below.

³ In this OIR, we define *committed EE* as savings from IOU programs implemented in the 2006-2012 period. These are considered committed savings and are embedded in the CEC’s 2009 IEPR demand forecast.

⁴ In this OIR, we define *uncommitted EE* as savings from IOU and non-utility programs implemented in the 2013-2020 period to achieve the Commission’s EE savings goals adopted in D.08-07-047, as modified by D.09-09-047 and subsequent decisions.

Variable	Source for Base Case Assumptions
Peak capacity value	Net Qualifying Capacity (NQC) per RA proceeding. ⁵
Planning Reserve Margin	15%-17% of peak demand, or as modified in R.08-04-012.
Cost Assumptions	
Generic conventional resource cost and performance	Most recent MPR values for combined cycle gas turbines (CCGT). IOUs are encouraged to coordinate and use common assumptions for other resources and technologies.
Generic renewable resource cost and performance	Data shall be derived from the most recent RETI assumptions. IOUs are encouraged to coordinate and use common assumptions.
Natural Gas Price	Most recent MPR methodology (not actual values).
CO₂ Price	CO ₂ price forecast from the most recently adopted MPR.
GHG Policy Assumptions	Prior to evaluating the base case portfolio, the IOUs will develop a common set of GHG allowance (and/or allowance revenue) allocation scenarios based on the latest guidance from the ARB Cap and Trade policy development process (and any meaningful Federal policy developments), based on staff and parties' input.

Load Growth

Pursuant to D.07-12-052, the IOUs have been directed to use energy and peak demand forecasts based on the forecast developed for the CEC's 2009 IEPR and subsequent reports. As part of the IEPR, the CEC documents the amount of EE and other behind-the-meter resources such as solar PV, CHP and other DG that are assumed to be embedded in the forecast.

Base case assumptions for bundled need determination shall be consistent with departing load assumptions in the most recent CEC base case bundled demand forecast.

⁵ The updated NQC list is published at:
http://www.cpuc.ca.gov/PUC/energy/Procurement/RA/ra_compliance_materials.htm.

Energy Efficiency

Base Case levels of energy efficiency (EE) assumed in bundled LTPP filings shall be consistent with required Base Case EE assumptions used in the IOUs' system resource plans, pursuant to the Track I Scoping Memo.

Demand Response

Base Case levels of demand response (DR) assumed in bundled LTPP filings shall be consistent with required DR assumptions used in the IOUs' system resource plans, pursuant to the Track I Scoping Memo.

Natural Gas Fuel Price Forecast

Subject to change by the Commission in subsequent MPR decisions, the IOUs shall use the MPR gas price forecasting methodology (not actual values) for the Base Case gas price forecast in the LTPP. We direct this in order to avoid re-litigating an issue that the Commission has already decided in another procurement-related proceeding.

The IOUs shall use the same quote date, as specified in the Scoping Memo. It is expected that each IOU will have different gas forecast values due to each utility's unique basis differentials and gas delivery costs.

CO₂ Price Forecast

When the IOUs file their 2010 bundled plans neither California nor the Western Climate Initiative is expected to have a fully-functioning CO₂ market. Likewise, in the event that the federal government pursues a nation-wide cap and trade program, it is unlikely that such a program would be operational by this time. Therefore, the Commission does not expect that relevant, real price data will be available when the IOUs file their 2010 bundled plans. With this in mind, the IOUs' base case analysis shall use the CO₂ price forecast methodology applied in the most recent MPR decision.

III. Required Sensitivity Analysis

The IOUs must test the robustness of the base case portfolio against extreme changes to a limited and influential set of variables. IOUs may assume that the resource portfolio and dispatch would not change under the sensitivity analysis. For example, sensitivity analysis of cost variables would simply apply different prices to a fixed schedule of PPA (or capital) expenditures, fuel consumption, and market purchases. Table 7 below specifies the required sensitivity analyses.

Table 7: Requirements for sensitivity analysis

Variable	Requirement
1. Natural Gas Prices	The base case portfolio shall use a “High Gas Price” and “Low Gas Price” sensitivity analysis, corresponding to feasible extremes of natural gas prices.
2. CO₂ Prices	The base case portfolio shall use a “High CO ₂ Price” and “Low CO ₂ Price” sensitivity analysis, corresponding to feasible extremes of CO ₂ price.
3. Need Level	The base case portfolio shall use a “High-Need” and “Low-Need” sensitivity analysis, corresponding to the uncertainty bands due to changes in variables including but not limited to departing load assumptions.

(End of Attachment 4)