

Application of San Diego Gas & Electric
Company (U-902-M) for Approval of
Demand Response Programs and Budgets
for the Years 2012 through 2014.

Application 11-03-002

CHAPTER IV

SUPPLEMENTAL PLS TESTIMONY OF KEVIN McKINLEY IN

RESPONSE TO ALJ RULING DATED APRIL 29, 2011

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

The ALJ Ruling dated April 29, 2011 for Application 11-03-001, et al (“Ruling”) provided guidance to the Joint Utilities¹ to revise their estimates of the cost effectiveness of proposed Permanent Load Shifting (“PLS”) activities in their 2012-2014 Demand Response Applications, which were filed on March 1, 2011. Specifically, the Joint Utilities were directed to:

- 1) Use the Demand Response Reporting Template (Template), including the long-run avoided capacity costs provided with the template, to calculate the cost effectiveness of PLS;
- 2) Agree on and consistently use an appropriate project lifetime and period of amortization of capital costs in the analyses;
- 3) Provide two additional sensitivity analyses for PLS in addition to those provided in the Template: project lifetime and installation cost; and
- 4) Revise the PLS portion of their 2012-2014 Demand Response Applications.

As directed by the Ruling, the Joint Utilities met and discussed appropriate technology costs and project lifetimes to use in the analysis. During that discussion, the PLS Study² was identified as the best documented source for these values. Specifically, the study reported installation costs per kW by technology type (Table 18, page 108) and an assumed project lifetime (page 50). As the study reported ranges for the technology installation costs, the midpoint of the range was used. The assumptions taken from the study and used by SDG&E as a result of this discussion with the Joint Utilities include the following:

- Average cost of technology for small thermal storage: \$2,730 per kW
- Average cost of technology for medium to large thermal storage: \$2,225 per kW
- Project lifetime: 15 years

In addition to the consensus assumptions, SDG&E used other assumptions for completing the analysis, and these are shown in Table 1 below. These assumptions are consistent with SDG&E’s March 1, 2011 application filing and SDG&E’s March 25, 2011 amendment filing.

¹ San Diego Gas & Electric Company, Pacific Gas and Electric Company and Southern California Edison Company

² Energy+Environmental Economics and StrateGen, Statewide Joint IOU Study of Permanent Load Shifting, November 29, 2010.

Table 1: Analysis Assumptions

	2012	2013	2014
Technology mix	Thermal Storage: 6% small; 94% med to large	Thermal Storage: 4% small; 96% med to large	Thermal Storage: 4% small; 96% med to large
Incentives (not to exceed \$500 per kW)	500,000	910,000	825,000
Expected peak capacity reduction (MW)	2.1	3.6	4.9
Length of shift time	6 hours		
Days per year (summer weekdays)	106		
Shift efficiency	100%		

SDG&E provided updated ex ante load impacts in SDG&E's April 1st filing of Executive Summary and Summary Tables.³ The updated load impacts are included in the cost effectiveness analysis.

The results for the PLS activities are shown below in Table 2. As shown, the TRC for PLS using the assumptions as required in the April 29, 2011 memo is 0.45.

Table 2: Analysis Results

	PLS
TRC	0.45
PAC	1.48
RIM	0.92
PCT	0.26
TRC Benefits*	\$2.1
TRC Costs*	\$4.7
TRC Net Benefits*	(\$2.6)

* In millions

An updated portfolio cost effectiveness which will include PLS will be included in the submittal of May 27th as specified in the May 13, 2011 Scoping Memo. To the extent other witnesses' testimony is impacted, SDG&E will include any changes as part of the May 27th submittal, as appropriate.

The results of the sensitivity analysis on the TRC is provided in Figure 1 and in Figure 2 below. Figure 1 presents the results for the sensitivity analysis provided with the Template. Figure 2 presents the results for the additional analyses requested by the Ruling. Note that for

³ San Diego Gas & Electric Company's (U 902 M) Executive Summary and Summary Tables Pursuant to Decision to Modifying Demand Response Load Impact Report Annual Filing Requirements (R.07-01-041), April 1, 2011.

the sensitivity analysis, the assumption was made that a change in the project life or in the total project costs did not change the incentive amount.

Figure 1: Sensitivity Analysis for PLS Part 1

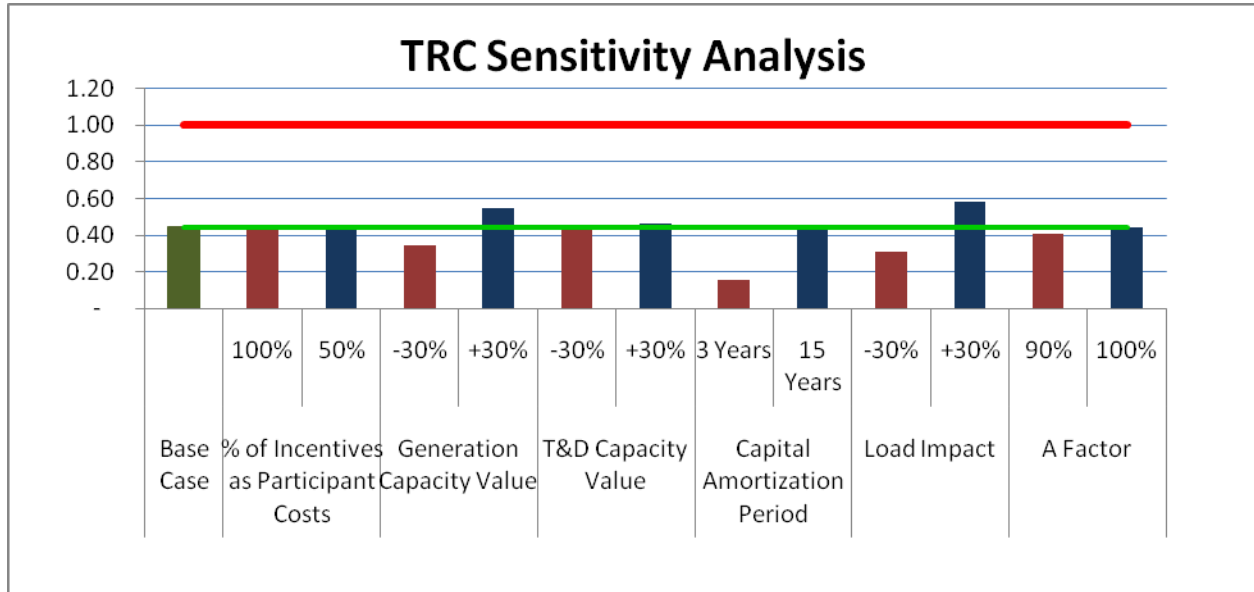


Figure 2: Sensitivity Analysis for PLS Part 2

