

**Staff Supplemental Testimony On:  
MUNICIPAL UTILITIES: STRATEGIES TO DEAL  
WITH RESTRUCTURING AND COMPETITION**

Directed by the *ER 96* Committee at the  
June 11, 1996 Committee Hearing

**Prepared by:**

Linda Kelly  
Ruben Tavares

Electricity Resource Assessment Office  
Energy Forecasting and Resource Assessments Division  
CALIFORNIA ENERGY COMMISSION

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## INTRODUCTION

As directed by the *ER 96* Committee at a the Hearing on Municipal Utilities: Strategies to Deal with Restructuring and Competition on June 11, 1996, Staff hereby provides Supplemental Testimony responding to questions and requests posed by the Committee.

The Committee asked that the following question be addressed:

**What is the rationale for the conclusion by Staff in Testimony filed on May 14, 1996, that the California electricity system would be more economically efficient if Publicly Owned Utilities (POUs) transfer control of their transmission facilities to the Independent System Operator (ISO)?**

### STAFF RESPONSE:

Currently, loading of transmission lines is determined by utility-specific scheduling rights or contract rights which are based on a contract path model. Under this system, an entity could reach the limit of its contract or scheduling rights even though the actual transmission paths still had unused capacity available. As an example, Utility A could find that it is constrained because it has fully booked its contract or scheduling rights on the Pacific Intertie while at the same time Utility B has unused scheduling rights.

Once the ISO is created and begins operation, the scheduling rights of all participants will be aggregated and the ISO will operate the transmission network in an integrated fashion eliminating the inefficient situation described above. Therefore, Staff concludes that if transmission owning POUs join the ISO and aggregate their scheduling rights with all other participants, increased economic efficiency will result as transmission paths are fully utilized when constrained conditions occur<sup>1</sup>.

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<sup>1</sup> See Supplement of Southern California Edison Company and San Diego Gas & Electric Company to Application for Authority to Sell Electric Energy at Market-Based Rates Using a Power Exchange, Docket No. ER 96-1663-000, pp. II 11 - 20 for discussion and detailed transmission usage analyses.

The Committee had two general requests on the quantification of stranded commitments:

**COMMITTEE REQUEST #1:**

**Provide a revised estimate of stranded commitments for the municipal utilities taking into account the latest information provided by utility officials.**

**STAFF RESPONSE #1:**

Of the three municipal utilities considered for stranded commitment by the Commission Staff, Los Angeles Department of Water and Power (LADWP), Imperial Irrigation District (IID), and Sacramento Municipal Utility District (SMUD), only IID recommended additional information to modify the June 11, 1996, estimates. IID considered that a 7 percent discount rate should be more in line with its actual cost of debt instead of the 9.7 percent opportunity cost of capital used by Staff. In addition, IID also asked Staff to include IID's share of San Juan Unit 3 in the estimates. We agree with IID and the following results reflect these changes.

At an assumed forecast of 4¢/kWh market price, the LADWP and SMUD estimates remain unchanged as in tables 4 and 6 of the Staff report on: *Municipal Utilities Strategies to Deal with Restructuring and Competition*. However IID estimates have changed as indicated in **Table 5 (Revised)**. Although, IID's steam, nuclear and El Paso resources remain uneconomical, these are greatly compensated over the long run by the hydro from the All American Canal, the contract with Western Area Power Administration (Western) and the inclusion of San Juan Unit 3 (coal). With these changes, the break even year moves from 2007 up to the year 2003.

**Table 5 (Revised)**  
**Net Present Value (1996-2022) Electricity Assets for IID**  
**BASE Case Gas Scenario (40.0 mills/kWh)**

	Revenue Requirements (\$mm)	Market Revenues (\$mm)	Difference (\$mm)
Steam Plants	\$718.63	\$709.64	\$8.99
Hydro (AAC)	\$74.48	\$183.14	-\$108.65
Nuclear	\$123.83	\$70.30	\$53.53
Western	\$28.13	\$120.16	-\$92.03
El Paso	\$260.79	\$133.97	\$126.83
<u>San Juan</u>	<u>\$370.26</u>	<u>\$589.40</u>	<u>-\$219.13</u>
<b>Total</b>	<b>\$1,576.12</b>	<b>\$1,806.59</b>	<b>-\$230.47</b>

**Note:** This table uses 40.0 mills/kWh market price starting in 1996 and increases using the growth rate in BASE case natural gas scenario. In the third column, negative values indicate economic assets; positive, uneconomic ones.

**COMMITTEE REQUEST #2:**

**Calculate a Competitive Transition Charge (CTC) on a per/kilowatt hour basis for the three municipal utilities assuming a wholesale market of four and three cents per kilowatt hour.**

**STAFF RESPONSE #2:**

Assuming a wholesale market price of three cents per kilowatt hour in 1996, which increases at the same rate as the BASE case gas price scenario through the year 2022, the three utilities face serious reserve shortfalls in such a market. As can be seen in **Table 8**, LADWP, IID and SMUD will not break even until the years 2016, 2013 and 2009 respectively. As indicated in **Table 9**, such an outcome could potentially translate into a competitive transition charge (CTC) of 15.23, 18.30 and 8.84 mills/kWh for LADWP, IID and SMUD customers starting in 1996.

As indicated in the Staff Testimony on *Municipal Utilities: Strategies to Deal with Restructuring and Competition*, these calculations only include potential stranded commitments derived from generation resources and energy purchase contracts. Other stranded costs such as nuclear decommissioning could increase the amount of CTCs. For example, as of December 1995, SMUD estimated its remaining decommissioning liability for Rancho Seco at \$308.6 million, which is recovered in electricity tariffs at the rate of \$15 million a year. Adding this amount to the shortfall in **Table 9** could increase the CTC for SMUD from 3.69 and 8.84 mills/kWh (40 and 30 mills/kWh respective market rate) to 5.36 and 10.5 mills/kWh in 1996.

**Table 8**  
**BASE Case Natural Gas Scenario**  
**Break Even Years**  
**(mm)**

YEAR	LADWP			3 cents/kWh IID			SMUD		
	Revenue Requirements	Market Revenues	Shortfall / Surplus	Revenue Requirements	Market Revenues	Shortfall / Surplus	Revenue Requirements	Market Revenues	Shortfall / Surplus
1996	1060.11	677.04	383.07	126.83	82.00	44.82	222.28	141.39	80.89
1997	1077.44	677.73	399.71	134.09	85.93	48.16	226.60	146.08	80.51
1998	1089.59	660.15	429.44	136.99	88.85	48.15	228.43	148.12	80.31
1999	1150.56	722.32	428.24	144.07	94.45	49.62	235.22	161.57	73.65
2000	1167.58	732.95	434.62	147.48	97.89	49.59	197.35	156.07	41.28
2001	1203.09	760.45	442.65	169.20	104.26	64.94	199.18	159.19	39.99
2002	1243.67	810.21	433.46	140.42	86.79	53.63	200.86	164.95	35.91
2003	1302.54	873.99	428.54	97.06	82.81	14.24	204.54	174.51	30.03
2004	1351.23	932.87	418.37	107.83	90.57	17.26	209.14	187.78	21.36
2005	1402.51	1001.37	401.14	101.62	91.03	10.59	191.94	157.09	34.85
2006	1461.31	1070.49	390.82	103.81	90.31	13.50	194.26	164.89	29.37
2007	1527.95	1145.25	382.71	112.95	98.78	14.16	197.91	174.61	23.30
2008	1591.37	1223.13	368.24	116.10	109.38	6.72	188.66	181.67	7.00
2009	1664.80	1312.45	352.35	115.81	106.79	9.03	<b>191.25</b>	<b>192.84</b>	<b>-1.59</b>
2010	1747.41	1410.65	336.76	123.65	121.81	1.85	195.58	206.45	-10.87
2011	1854.81	1557.39	297.42	128.01	124.31	3.70	199.46	220.73	-21.27
2012	1962.68	1699.56	263.12	142.62	138.89	3.73	204.91	237.74	-32.83
2013	2053.25	1825.98	227.27	<b>135.16</b>	<b>145.91</b>	<b>-10.75</b>	211.86	255.92	-44.06
2014	2105.11	1952.80	152.30	138.54	151.03	-12.49	217.26	274.60	-57.34
2015	2158.35	2085.04	73.31	139.90	161.66	-21.75	214.23	289.24	-75.01
2016	<b>2220.23</b>	<b>2229.17</b>	<b>-8.94</b>	142.04	172.78	-30.74	219.96	309.90	-89.94
2017	2256.60	2383.27	-126.67	143.23	184.67	-41.43	225.99	332.03	-106.05
2018	2326.72	2548.02	-221.30	145.71	197.37	-51.66	229.76	355.75	-125.99
2019	2400.27	2724.16	-323.89	148.33	210.96	-62.62	236.64	381.16	-144.52
2020	2477.43	2912.48	-435.06	151.10	225.47	-74.37	243.87	408.39	-164.51
2021	2558.39	3113.82	-555.43	154.01	240.98	-86.97	250.81	437.56	-186.75
2022	2643.36	3329.08	-685.71	157.09	257.57	-100.48	258.87	468.81	-209.94
<b>Net Prsn</b>	<b>18585.59</b>	<b>14939.50</b>	<b>3646.10</b>	<b>1576.12</b>	<b>1354.94</b>	<b>221.18</b>	<b>2519.62</b>	<b>2363.01</b>	<b>156.60</b>

**Table 9**  
**Municipal Utilities**  
**Potential CTC Charge**

Year	LADWP					IID					SMUD				
	Sales	Net Rev.	CTC	Net Rev.	CTC	Sales	Net Rev.	CTC	Net Rev.	CTC	Sales	Net Rev.	CTC	Net Rev.	CTC
Gwh	(\$mm)	mills/kWh	(\$mm)	mills/kWh	GWh	(\$mm)	mills/kWh	(\$mm)	mills/kWh	Gwh	(\$mm)	mills/kWh	(\$mm)	mills/kWh	
1996	25,145	147	5.86	383	15.23	2,449	17	7.14	44.82	18.30	9149	34	3.69	81	8.84
1997	25,530	164	6.41	400	15.66	2,524	20	7.73	48.16	19.08	9359	32	3.40	81	8.60
1998	26,165	199	7.61	429	16.41	2,599	19	7.13	48.15	18.53	9556	31	3.24	80	8.40
1999	26,655	177	6.64	428	16.07	2,668	18	6.80	49.62	18.60	9768	20	2.03	74	7.54
2000	27,129	180	6.62	435	16.02	2,738	17	6.19	49.59	18.11	9982	-11	-1.08	41	4.14
2001	27,567	178	6.46	443	16.06	2,805	30	10.76	64.94	23.15	10218	-13	-1.28	40	3.91
2002	28,029	152	5.41	433	15.46	2,872	25	8.60	53.63	18.67	10458	-19	-1.82	36	3.43
2003	28,497	125	4.38	429	15.04	2,940	-13	-4.54	14.24	4.85	10712	-28	-2.63	30	2.80
2004	29,001	94	3.25	418	14.43	3,008	-13	-4.30	17.26	5.74	10965	-41	-3.76	21	1.95
2005	29,490	53	1.81	401	13.60	3,077	-20	-6.42	10.59	3.44	11135	-18	-1.57	35	3.13
2006	29,953	19	0.64	391	13.05	3,144	-17	-5.28	13.50	4.29	11401	-26	-2.24	29	2.58
2007	30,318	-15	-0.48	383	12.62	3,211	-19	-5.84	14.16	4.41	11669	-35	-2.99	23	2.00
2008	30,707	-56	-1.83	368	11.99	3,278	-30	-9.07	6.72	2.05	11928	-54	-4.49	7	0.59
2009	31,078	-103	-3.31	352	11.34	3,346	-27	-7.94	9.03	2.70	12186	-66	-5.41	-2	-0.13
2010	31,392	-152	-4.85	337	10.73	3,414	-39	-11.35	1.85	0.54	12450	-80	-6.40	-11	-0.87
2011	31,694	-242	-7.64	297	9.38	3,482	-38	-10.84	3.70	1.06	12745	-95	-7.44	-21	-1.67
2012	32,143	-325	-10.12	263	8.19	3,551	-43	-11.99	3.73	1.05	13041	-112	-8.59	-33	-2.52
2013	32,482	-405	-12.46	227	7.00	3,619	-59	-16.41	-10.75	-2.97	13345	-129	-9.69	-44	-3.30
2014	32,825	-524	-15.95	152	4.64	3,688	-63	-17.04	-12.49	-3.39	13656	-149	-10.90	-57	-4.20
2015	33,171	-648	-19.55	73	2.21	3,759	-76	-20.12	-21.75	-5.79	13974	-171	-12.27	-75	-5.37
2016	33,521	-780	-23.28	-9	-0.27	3,831	-88	-23.06	-30.74	-8.02	14300	-193	-13.51	-90	-6.29
2017	33,874	-952	-28.09	-127	-3.74	3,904	-103	-26.38	-41.43	-10.61	14634	-217	-14.81	-106	-7.25
2018	34,231	-1103	-32.23	-221	-6.46	3,979	-117	-29.52	-51.66	-12.98	14975	-245	-16.33	-126	-8.41
2019	34,592	-1267	-36.62	-324	-9.36	4,055	-133	-32.78	-62.62	-15.44	15324	-272	-17.72	-145	-9.43
2020	34,957	-1443	-41.28	-435	-12.45	4,133	-150	-36.18	-74.37	-18.00	15681	-301	-19.17	-165	-10.49
2021	35,326	-1633	-46.23	-555	-15.72	4,212	-167	-39.72	-86.97	-20.65	16046	-333	-20.73	-187	-11.64
2022	35,698	-1838	-51.48	-686	-19.21	4,293	-186	-43.41	*****	-23.41	16421	-366	-22.30	-210	-12.78