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January 14, 2005

To All Parties of Record in A.04-02-026

Re: SONGS 2 & 3 Steam Generator Replacement Application; SDG&E Errata

Please find enclosed San Diego Gas & Electric Company's errata to the direct testimony of SDG&E's Mr. Michael Schneider together with workpapers. Copies of this errata and workpapers are being electronically delivered to all parties of record and ALJ O'Donnell today. Hard copies will be mailed on January 18th because of the special printing requirements applicable to the workpapers that preclude mailing today.

Sincerely,

James F. Walsh Attorney for

San Diego Gas & Electric Company

Enclosures

JFW:cj

Application of Southern California Edison)
Company (U 338-E) for Authorization:)
(1) to replace San Onofre Nuclear)
(SONGS 2 & 3) steam generators; (2))
establish ratemaking for cost recovery; and)
(3) address other related steam generator)
replacement issues.)
)

Application No. 04-02-026 Exhibit No.: (SDG&E-4)

Witness: Michael M. Schneider

ERRATA TO

PREPARED DIRECT TESTIMONY OF MICHAEL M. SCHNEIDER ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

January 14, 2005

SCE in 2004, and SCE would accept responsibility for all future decommissioning costs associated with SDG&E's current 20% ownership share. Finally, SDG&E would enter into a PPA with SCE in 2004 to provide SDG&E's customers a fixed amount of energy each year through 2022.

Analysis for Alternative 3 includes all costs identified under Alternative 1, including SDG&E's 20% share of SONGS O&M and fuel, as well as SDG&E's projected SONGS depreciation, return, and NDT contributions. However under Alternative 3 these costs would be paid by SCE and recovered from SDG&E through the PPA. Therefore the cost of the PPA expressed in 2004 present value dollars, is equal to the 2004 present value of all costs associated with Alternative 1.

Under the PPA, SCE would provide to SDG&E a fixed amount of energy equivalent to SDG&E's current 430 MW entitlement in SONGS at a capacity factor of 91.8%. That capacity factor was chosen because it is equal to the historic average of SONGS 2&3 capacity factors over the past 5 years (1999-2003). Since this capacity factor is greater than the capacity factor projected by SCE in their cost-effectiveness study (88%), Alternative 3 would result in somewhat more energy being delivered to SDG&E than Alternative 1. Therefore, while the total 2004\$ cost of the PPA would equal the total 2004\$ cost of Alternative 1, the total 2004\$ cost of Alternative 3 is somewhat less than the total 2004\$ cost of Alternative 1 because it includes the value of this increased energy. As shown in Attachment 1 the value of this increased energy is estimated to be \$102.3 million (2004\$).

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power plant. However, as indicated from the sensitivity analysis conducted in Section VI-D and Figure 2 below, the Geothermal PPA would be cost-effective only if SDG&E's ownership share of SONGS remains above 15%. The Geothermal PPA option has added benefits of providing continued fuel diversity to SDG&E's generation portfolio as well as supporting the State's energy policy of requiring higher levels of renewable resources for future energy and capacity supply. These benefits should be considered in addition to the cost-effective analysis and provide a premium such that even if SDG&E's ownership in SONGS falls below 15%, a Geothermal PPA would be preferred over participation in the SGRP.

Alternative 1 is SDG&E's third preference. Under Alternative 1, SDG&E would continue to keep its 20% ownership percentage in SONGS, while SCE goes forward with the SGRP.

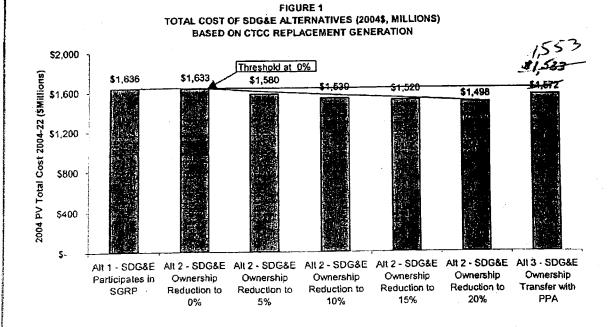
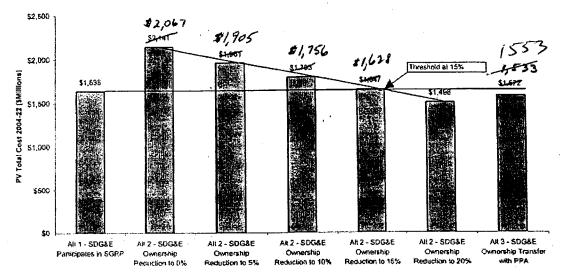


FIGURE 2
TOTAL COST OF SDG&E ALTERNATIVES (2004\$, MILLIONS)
BASED ON GEOTHERMAL REPLACEMENT GENERATION



1 2 3

VIII. DIFFERENCES BETWEEN SCE'S AND SDG&E'S ANALYSES

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This section compares SDG&E's Economic Analysis to SCE's Cost-Effectiveness Study (SCE-4) by highlighting the key differences between the two studies in terms of purpose, methodology, assumptions, and results.

The purpose of SDG&E's analysis is not to determine if the SGRP is costeffective, but whether it is cost-effective for SDG&E to participate in the SGRP.

SDG&E's study is based on an assumption that the SGRP will go forward. The purpose of SCE's study on the other hand is to establish that the SGRP is cost-effective overall, and cost-effective to SCE's and SDG&E's customer groups individually.

SDG&E evaluated the following three alternatives:

- Alternative 1: "SDG&E Participates in SGRP"
- Alternative 2: "SDG&E Ownership Reduction"
- Alternative 3: "SDG&E Ownership Transfer with PPA"

Attachment - 1

Total Cost of SDG&E Alternatives (2004\$, Thousands)
Based on CTCC Replacement Generation

SDG&E Participates SDG SDG <t< th=""><th></th><th>A)(</th><th>Alternative I</th><th></th><th></th><th></th><th>- ₹</th><th>Iten</th><th>Alternative 2</th><th></th><th></th><th></th><th></th><th>Alte</th><th>Alternative 3</th><th></th></t<>		A)(Alternative I				- ₹	Iten	Alternative 2					Alte	Alternative 3	
Description in SGRP 0% 5% 10% 15% 20% Transfer with PPA		SDC&	E Participates			S	DG&EO	Ę	ship Red	og	n to:			SDC&	E Ownership	
& Maintenance S 180,602 S 708,147 S 576,261 S 444,375 S 312,489 S 180,602 S 190,612 S 190,62422 S 190,72422 S 1,002,422	Description		n SGRP		0%		5%	-	%01		5%	']	%0;	Transf	er with PPA	
\$ 510,775 \$ 633,687 \$ 756,598 \$ 879,510 \$ 1,002,422 \$ 1,002,422 \$ - \$ 12,439 \$ 45,636 \$ 76,763 \$ 76,763 \$ 76,763 \$ 127,075 \$ 155,490 \$ 183,005 \$ 210,520 \$ 238,035 \$ 238,035 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 137,796 \$ 286,014 \$ 143,007 \$ 71,503 \$ - \$ 137,796 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ \$ (63,492) \$ 1,539,424 \$ 1,519,658 \$ 1,497,822 \$ 1,532,135	Puel Costs	и	180,602	65	708,147	ب	576,261	٠,	444,375	m M	12,489	4/3	180,602	₩	180,6072	200,000
\$ 76,763 \$. \$. \$ 12,439 \$ 45,636 \$ 76,763 \$ 76,763 on-SGRP) \$ 238,035 \$ 127,975 \$ 155,490 \$ 183,005 \$ 210,520 \$ 238,035 \$ 238,035 s 137,796 \$. \$. \$. \$. \$. \$. \$ 137,796 on Miligation \$. \$. \$. \$. \$. \$. \$. \$. \$. \$	perating & Maintenance	v.	1,002,422	S	510,775	€7	633,687	₩.	756,598	₽.	379,510		002,422	s,	1,002,422	
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Total Cost of SDG&E Alternatives (2004S, Thousands)
Based on Geothermal Replacement Generation

	¥	Alternative 1				•	ılter	Alternative 2			-		Alter	Alternative 3	
Description	SDGS	SDG&E Participates in SGRP		%0		SDG&E Ownership Reduction to: 5% 10% 15%	wner.	rship Red 10%	retio 1	on to: 15%		20%	SDG&E Transfe	SDG&E Ownership Transfer with PPA	
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Fuel Costs	(V)	180,602	69	77,246	·»	77,246 \$ 103,085 \$ 128,924 \$ 154,763 \$ 180,602	S	128,924		54,763	is	180,602	∽	180-602	102/02/2009
Operating & Maintenance	.	1,002,422	S	413,942	₩	\$ 413,942 \$ 561,062 \$ 708,182 \$ 855,302 \$ 1,002,422	- ⊌4:	708,182	S	55,302	Š	002,422	S	1,002,422	
NDT Contributions	∽	76,763	₩	٠,	6 9 .		•	12,439 \$ 45,636 \$ 76,763	٠ دم	45,636	₽ 3	76,763	۵,	76,763	
Capital - Routine (non-SGRP)	S	238,035	₩,	576,721	₩9	\$ 127,975 \$ 155,490 \$ 183,005 \$ 210,520 \$ 238,035	w.	183,005	S	110,520	44	238,035	6 4	238,035	
Capital - SGRP	S	137,796	S	١,	69	• •	₩	\$	W	•	•	,	•	137,796	
Geothermal PPA	s	•	- 4	1,447,645 1,521,188 5	~ <u>~</u> ~	1,447,640 54,521,180 S4,141,035 S	' 1 •••	7 23,820 768,596 S 380,345 24, 94,	~ ~	380,345	· ·	•	G	,	1
Capital - Transmission Mitigation	Vя		G	•	S	057 (550)	sa	•	` •	2//19	69	•	S	•	
Value of Additional Energy	V		6 9	•	· w	•	Į,		2		w	.	₩.	(564,693)	(357,201) (352,
Total 2004 NPV &		1 635.618		140.54	> 05	2,04,804 52,40,544 \$ +960,673 \$ +799,240 \$1.646,566 \$ 1.497.822	,+ s	1,756,370	, ¥	46.566	~	497.822	· v	1.572.125	1.533 323
\$ \ 151 +0337 [PIO])					1,905,368	83	•	ė	16182011					1552,91

Attachment - 2.

Total Cost of SDG&E Alternatives (2004\$/MWh)

Based on CTCC Replacement Generation

	Alternative 1	ve í				₹	Alternative 2	7				Alternative 3	
Description	SDG&E Participates in SGRP	ficipates {P		%0	S	SDG&E Ownership Reduction to: 5% 10% 15%	nership R 10%	edu	tion to: 15%	İ	20%	SDG&E Ownership Transfer with PPA	۔ ≘ا
Fuel Costs	ب ر ن	2.92	من	11.45	→	9.32	7.18	80	5.05	5	2.92	8	795 3.24
Operating & Maintenance	€4	16.20	v	8.26	\$ 9	10.24	12.23	بر ان	14.22	\$ 7	16.20	\$ 16.20	. 0
NDT Contributions	64	1.24	٠	1	νę		0.20	2	0.74	•	1.24	\$ 1.24	
Capital - Routine (non-SGRP)	S	3.85	ų,	2.07	. ∽	2.51	3 2.96	20	3.40	8	3.85	\$ 3.85	ć.
Capital - SGRP	₩	2.23	U)		69	,		•,		vs	,	\$ 2.23	ņ
Capital - CTCC Power Plant	₩		•>	4.62	S	3.47	3 2.31	=	91.1	S.	,	₩	
Capital - Transmission Mitigation	69.		•	•	S	,	,	•7		V 3	,	, sa	
Value of Additional Energy	S		Ų,		S		US.		'	65		s +++	(37.1) tast)
Total NPV S/MWh	S.	26.44	S	26.40 \$	٠,	25.54 S		24.89 \$	1	24.57 \$	24.21	1 152- S	北流
													25.10

Total Cost of SDG&E Alternatives (2004\$/MWh) Based on Geothermal Replacement Generation

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	39OCS	SDG&E Participates			S	SDG&E Ownership Reduction to:	nership	Redu	ction t	ä			SDG&E Ownership	nership		
Description	in S	In SGRP		0%	יא	5%	10%		15%	۵	7	20%	Transfer with PPA	th PPA		
Fuel Costs	Š	2.92	અ	1.25	.	1.67 \$		2.08	L/a	2.50 \$	٠	2.92	v	Test.	25 3.24	
Operating & Maintenance	.÷	16.20	(4)	69.9	€9	2.07	 	11.45	;; se	13.83	€4	16.20	· ·	16.20		
NDT Contributions	65	1.24	N	•	vs	,	<u>-</u>	0.20	٠	0.74	S	1.24	× ,	1.24		
Capital - Routine (non-SCiRP)	S	3.85	.	2.07	S	2.51	م	2.96	.	3.40	S	3.85	s	3,85		
Capital - SGRP	S	2.23	N	,		•	:		s		S		и	2.23		
Geothermal PPA	€\$	١.	S	24.5%	•	#5	== S	# % # # # # # # # # # # # # # # # # # #	ν. . 4	# N	(A)		·	. • '	•	
Capital - Transmission Mitigation	· •		€2	•	•	¢¢′′ /	(A	,	ري (3,	₩	•	S	•		
Value of Additional Energy	S	•	W	,	S			.]		1	N	,	8	101	(1971) (1011)	
Total NPV \$/MWh	s	26.44	N	33.41		s 07.16		28-39 28-39	ادر درون	36.42 S	ے د⊲	24.21	.s	7.7	24.79 2.	77
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