1	DOCK	XET NO.: A.18-03-009		
2	EXHI	BIT NO.: A4NR-1		
3	DATE	:		
4	WITN	ESS: John Geesman		
5				
6	В	EFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF	CALIFOF	RNIA
7				
8		PREPARED TESTIMONY OF JOHN GEESMA	N	
9	0	N BEHALF OF THE ALLIANCE FOR NUCLEAR RESPO	ONSIBI	LITY
10		("A4NR")		
11				
12		TABLE OF CONTENTS		
13				
14				
15	I.	INTRODUCTION.	page	2
16				
17	II.	18-YEAR DELAY IN REMOVAL OF ONSHORE SUBSTRUCTURES.	page	3
18				
19 20	III.	INADEQUATE AWARENESS OF SITE'S RECREATIONAL VALUE.	page	6
21	N7			0
22 23	IV.	RADIOLOGICAL STANDARD EQUIVOCATION.	page	8
24	v.	MECHANICAL PROJECTION OF SNF REMOVAL TIMING.	page	12
25		APPENDIX	page	15

1 I. INTRODUCTION.

2	Q01:	Please state your name and business address for the record.
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- 3 A01: My name is John Geesman, and my business address is: Dickson Geesman LLP, 1970
- 4 Broadway, Suite 1070, Oakland, CA 94612.
- 5 Q02: Are your professional qualifications included in your testimony?
- 6 A02: Yes, my professional qualifications are contained as an Appendix to my testimony.
- 7 Q03: Was your testimony prepared by you or under your direction?
- 8 A03: Yes, it was.
- 9 Q04: Insofar as your testimony contains material that is factual in nature, do you believe it to
- 10 be correct?
- 11 A04: Yes, I do.
- 12 Q05: Insofar as your testimony contains matters of opinion or judgment, does it represent
- 13 your best judgment?
- 14 A05: Yes, it does.
- 15 Q06: Does this written submittal complete your prepared testimony and professional
- 16 qualifications?
- 17 A06: Yes, it does.
- 18 Q07: What is the purpose of your testimony?

The purpose of my testimony is to provide evidence of certain deficiencies in the 2017 A07: 1 2 Decommissioning Cost Estimate ("DCE") for San Onofre Nuclear Generating Station Units 2&3 ("SONGS 2&3") and to educate the Commission of the need for somewhat greater policy 3 direction to Southern California Edison Company ("SCE") regarding the content of the DCE to be 4 submitted in the 2021 Nuclear Decommissioning Cost Triennial Proceeding ("NDCTP"). The 5 delegation of review of an "updated" SONGS 2&3 DCE from A.16-03-004 to this proceeding¹ 6 means that the evolving SONGS 2&3 DCE has enjoyed an extended holiday from Commission 7 8 oversight since A.14-12-007. On the issue of greatest concern to A4NR, removal of the onshore substructures, SCE has floundered in this vacuum and made several inadequately considered 9 choices that will likely increase decommissioning costs. 10

11 II. 18-YEAR DELAY IN REMOVAL OF ONSHORE SUBSTRUCTURES.

12 Q08: Can you provide an example of one of these "inadequately considered choices"?

The primary one is SCE's decision in November 2017 to delay commencement of 13 A08: removal of the onshore substructures by 18 years to 2046, thereby (1) severing such work by 14 nearly two decades from the dismantlement of the above-ground structures; (2) requiring a 15 16 separate contractor solicitation and mobilization at highly uncertain costs; and (3) delaying the time when the public can regain access to coastal resources as guaranteed by the Public Trust 17 Doctrine, the Coastal Act, and the California Constitution, until all spent nuclear fuel is removed 18 19 from the ISFSI. Additionally, the slippage in state permitting, which has pushed the start of 20 above-ground dismantlement from early 2018 to early 2020, was triggered by SCE's

¹ D.18-11-034, p. 9.

1	modification of the CEQA project description 22 months into the process – a modification SCE
2	says "was primarily related to SCE's decision to defer substructure removal to a future time
3	closer to when SCE would return the property to the U.S. Department of the Navy." ²
4	Q09: Why do you believe this decision to have been inadequately considered?
5	A09: For three reasons: First, SCE has offered two different non sequiturs as explanation,
6	indicating an absence of coherent analysis. On the one hand, SCE says that its August 2017
7	study of coastal processes "predicted greater erosion than expected, causing SCE to re-evaluate
8	certain assumptions about the timing of substructure removal." ³ While briefing materials
9	prepared by SCE on the study results are emphatic ("Based on these results, extensive removal
10	of subsurface structures will likely be required to avoid future exposure." ⁴), SCE has not been
11	able to explain why (or how) delay would avoid or mitigate this future exposure.
12	On the other hand, SCE also justifies the 18-year delay in removal of the SONGS 2&3
13	substructures as enabling a consolidated dewatering scheme with the removal of SONGS 1
14	substructures that will take place after the ISFSI has been decommissioned. This consolidation
15	would consequently subordinate removal of the SONGS 2&3 substructures (and restoration of
16	public access to coastal resources) to the removal of all spent nuclear fuel from the ISFSI –
17	assuming that eventually happens. The DCE estimates this future consolidated dewatering cost
18	at \$45 million (2017 dollars) ⁵ and attributes some \$18 million (2014 dollars) in savings to the

² SCE-01, p. 7, lines 4 – 5.

³ *Id.,* p. 8, lines 14 – 16.

⁴ "Briefing on SONGS Coastal Processes Study Prepared by Southern California Edison," October 16, 2017, p. 7. SCE has indicated this briefing paper was used to inform the SONGS participants (i.e., owners), the State Lands Commission, the Coastal Commission, the Energy Commission, the SONGS Community Engagement Panel chair, and CPUC staff. A.18-03-009 A4NR-SCE-02, Response to Q.41.

⁵ A.18-03-009 A4NR-SCE-02, Response to Q.34.

1	consolidation. ⁶ But the savings claim is undermined by the fact that dewatering was expressly
2	removed from the scope of work for the substructures removal cost estimate prepared for the
3	DCE. As SCE explained in response to a data request from A4NR:
4	As the planning for a detailed dewatering estimate (to be prepared by High Bridge
5	Associates) was initiated, it became evident that SCE did not have (nor could have)
6	detailed, information regarding environmental regulations, dewatering techniques, etc.,
7	that would be in place in the 2050 time frame. This information/assumptions would be
8	needed to prepare a more refined estimate than the conceptual estimate previously
9	prepared by EnergySolutions as part of the 2014 SONGS 2&3 DCE. Accordingly, SCE
10	decided to not incur the expense to prepare a new conceptual estimate. ⁷
11	
12	Second, without explanation, the substructures removal cost estimate prepared for the
13	DCE emphasized that no potential savings or economies of scale were considered under a
14	scenario where the removal of substructures more than 3 feet beneath the surface would be
15	performed in concert with the removal of substructures in the first 3 feet beneath the surface
16	included in the existing Decommissioning General Contract. SCE also indicated in response to a
17	data request from A4NR that it has not evaluated such a scenario since development of the
18	DCE. ⁸
19	Third, SCE's general insensitivity to assuring prompt public access to the fully
20	decontaminated SONGS 2&3 site after release by the Nuclear Regulatory Commission ("NRC")
21	for unrestricted use caused a myopic focus on the Navy as sole arbiter of the extent to which
22	SONGS 2&3 substructures must be removed. That premise was predictably upended by the
23	Coastal Commission's required Special Conditions 3 and 4 in the recently issued Coastal
24	Development Permit 9-19-0194 authorizing the onshore decommissioning work to begin. To its

 ⁶ A.18-03-009 A4NR-SCE-02, Response to Q.42.
⁷ A.18-03-009 A4NR-SCE-02, Response to Q.39.
⁸ A.18-03-009 A4NR-SCE-02, Response to Q.35.

- 1 credit, SCE agreed to Special Conditions 3 and 4 and, in the course of doing so, likely shredded
- 2 the DCE's relaxed timeframe for substructure removal.
- 3 Q10: Can you elaborate on Special Conditions 3 and 4?
- 4 A10: Yes. As summarized in the Coastal Commission staff report prepared for the
- 5 consideration of Coastal Development Permit 9-19-0194 (which was subsequently approved
- 6 October 17, 2019 by unanimous vote):

SCE proposes to remove large portions of the above- and below-grade elements of Units 7 8 2 and 3 and associated infrastructure. However, the proposed project would leave 9 significant amounts of foundation, footings, and other existing material in place and would cover them with backfill. Over time, coastal processes, exacerbated by sea level 10 rise, could cause portions of remaining structures to become exposed, which would 11 cause potential risk to public safety and marine life, as well as impacts to visual 12 resources and public access. Staff is recommending several conditions to address these 13 concerns. Special Condition 3 would require the applicant to return within six months of 14 15 completion of the proposed project [and not later than June 1, 2028] with a permit amendment application that includes the proposed removal, to the extent feasible, of 16 all remaining onshore structures at SONGS that may be exposed in the future due to 17 coastal processes or that otherwise would have coastal impacts if they were to remain. 18 Special Condition 4 would require a revised site grading plan that specifies that any 19 backfill needed for decommissioning-construction related activities will come from the 20 SONGS site.⁹ 21

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23 III. INADEQUATE AWARENESS OF SITE'S RECREATIONAL VALUE.

- Q11: You mentioned "SCE's general insensitivity to assuring prompt public access to the fully
- decontaminated SONGS 2&3 site after release by the NRC for unrestricted use." What do you
- 27 mean by that?
- 28 A11: SCE seems to have assembled the DCE which contemplates a continued quarantine of
- the SONGS 2&3 site thru 2051 despite NRC release for unrestricted use in 2028¹⁰ as if

⁹ California Coastal Commission staff report on Application 9-19-0194, September 26, 2019.

¹⁰ A.18-03-009 A4NR-SCE-02, Response to Q.28.

1	unaware that the site lies in the middle of one of the five most-visited state parks in California, one
2	that attracts nearly 2.5 million guests per year. ¹¹ The San Onofre State Beach was the first product
3	of the Nixon Administration's widely praised Legacy of Parks initiative converting surplus
4	government property to public recreational use, and was described at the announcement by
5	Nixon as "the best beach in the world." ¹² When Congress blocked an outright fee transfer of
6	title to the State of California, Governor Reagan's Director of Parks, the legendary William Penn
7	Mott Jr., adroitly executed a 50-year lease at \$1 per year. Referred to often as the Yosemite of
8	surfing, San Onofre has been considered hallowed ground in Southern California's beach
9	culture since the 1930s.
10	According to the state Department of Finance, California's population has grown from
11	20,346,000 in July 1971 to 39,927,000 in January 2019—a rough doubling since the San Onofre
12	State Beach was established. The pressing need for enhanced recreational access was
13	recognized by the California State Lands Commission in March 2019 when it certified the
14	Environmental Impact Report for the SONGS 2&3 Decommissioning Project and added the
15	following language to SCE's new lease for the offshore conduits:
16 17 18 19 20 21 22	32. At the conclusion of the transfer of the SONGS spent nuclear fuel to the Approved Independent Spent Fuel Storage Installation (Approved ISFSI), the Lessee shall seek approval from the NRC to decrease the size of the Exclusion Area Boundary to the minimum required by law. Lessee and Lessor shall jointly consult with the California Coastal Commission (CCC) to ensure that such an approval, if granted, will not interfere with Lessee's compliance with CCC permit conditions. ¹³

 ¹¹ SONGS 2&3 Decommissioning Project FEIR, Vol. II, p. 4.12-4, lines 4 – 5.
¹²https://www.nixonfoundation.org/2009/08/8-18-71/

¹³ California State Lands Commission Lease No. PRC 6785.1, p. 14 of 14.

1	With NRC approval, the Exclusion Area Boundary will shrink to the 100-meter minimum
2	buffer permitted by 10 CFR 72.106. Despite initial resistance, SCE ultimately assented to the
3	new language added to Lease No. 6785.1 just as it would subsequently agree to Special
4	Conditions 3 and 4 attached to Coastal Development Permit 9-19-0194. What is significant
5	about both experiences is the degree to which the DCE was fundamentally out-of-step with the
6	public access expectations of two significant land use agencies and the well-established values
7	governing coastal resources that stem from the Public Trust Doctrine, the Coastal Act, and the
8	California Constitution. For a regulated public utility that proclaims stewardship and
9	engagement as two of the three "core principles and fundamental values" ¹⁴ guiding its
10	decommissioning process, such clear misalignment with prevailing views of the recreational
11	significance of the SONGS 2&3 site should serve as an important wakeup call.
12	IV. RADIOLOGICAL STANDARD EQUIVOCATION.
13	Q12: What is another example of the "inadequately considered choices" you believe SCE
14	made in preparing the DCE?
15	A12: I don't think SCE sufficiently thought through its decision to specify for its

16 Decommissioning General Contract ("DGC") "a radiological release criteria [sic] that does not

17 exceed 15 millirem per year."¹⁵ SCE's response to an A4NR data request explains:

At the time the DCE was prepared, SCE assumed the Navy would impose a release standard lower than the NRC standard. SCE's bid specification to the decommissioning general contract (DGC) bidders was based on an assumed standard of 15 millirem per year. The 2017 DCE was therefore based on a 15 millirem per year standard with the expectation that this standard would be likely to meet the requirements of all stakeholders.¹⁶

¹⁴ SCE-01, p. 4, lines 18 – 19.

¹⁵ SCE-03, p. B-27.

¹⁶ A.18-03-009 A4NR-SCE-01, Response to Q.14.

- 1 However, the minutes of the June 9, 2016 meeting of the SONGS Executive Committee
- 2 record the following discussion:
- Nino continued with a detailed review of the radiological release criteria being 3 4 negotiated with the U.S. Navy for return of the site easement. Discussion ensued regarding the varying radiological-release criteria between the standard 12 mrem 5 (currently used by the Navy) and the NRC's 25 mrem. Concerns were raised regarding 6 7 the cost impact of using one mrem value compared to another and two action items were taken for: 8 • Nino Mascolo - Provide an analysis on the release criteria of the plant site easement 9 pertaining to the difference in cost between 12-15 MREM and the potential for 15 10 MREM to be surpassed 11 • Tom Palmisano - Provide a summary of release criteria used at other U.S. 12 13 decommissioning sites to the Participants for awareness 14 SCE's response to an A4NR data request indicated that SCE knew as early as August 15 2015 the basis for expecting a 12 mrem standard to be required by the Navy: 16 17 The Navy's 12 mrem/year release criteria described by Nino Mascolo was established in the Navy's August 20, 2015 letter, provided in response to Question No. 21, in which the 18 Navy directed SCE to show that the Mesa lease parcels 5, 6, and 7 met certain cleanup 19 criteria, including "The Mesa Site (OR PARCELS 5, 6, and 7) achieve a release criteria of 20 no more than 12 mrem/year...." Mr. Mascolo's discussion identified the August 20th 21 letter's Mesa release criteria as a Navy position that possibly could be applied to the 22 SONGS site in the future.¹⁷ 23 24 A4NR also requested a copy of the analysis which had been assigned to Mr. Mascolo by 25 the SONGS Executive Committee at its June 9, 2016 meeting. SCE's response: 26 No formal analysis was prepared. Instead, discussions occurred between the DGC 27 bidders and SCE regarding the difference in costs associated with meeting a 12 mrem 28 criteria versus a 15 mrem criteria. The bidders considered the cost difference between 29 30 the criteria values to be immaterial. No further inquiries were conducted and the SONGS Executive Committee was informed accordingly.¹⁸ 31 32

¹⁷ A.18-03-009 A4NR-SCE-02, Response to Q.36.

¹⁸ A.18-03-009 A4NR-SCE-02, Response to Q.37.

1	SCE's response to an A4NR data request regarding the mrem release criteria established
2	at other decommissioned plants, the list compilation assigned to Chief Nuclear Officer Tom
3	Palmisano at the June 9, 2016 meeting of the SONGS Executive Committee, indicated that a 10
4	mrem/year standard had been set at two plants in the Northeast:
5	The lower dose criteria at these plants was required by the state regulator where
6	they were located. The NRC criteria was still 25 mrem/yr. How this was handled was
7	different at the different sites. As Maine Yankee put these lower criteria in their LTP, the
8	NRC enforced the lower limits. As Connecticut Yankee did not put the lower dose limits
9	in the LTP and stated the lower values as administrative limits in documents prepared
10 11	for the NRC, the NRC did not enforce the lower limits. ¹⁹
12	Similar to SCE's curious insensitivity to foreseeable coastal access issues, the choice of a
13	15 mrem/year standard in the SONGS DGC in the face of tighter requirements by the Navy and
14	other states may trigger future controversy and upward pressure on costs. General dialogue at
15	the DGC bidders conference about an "immaterial" difference in cost between a 15 vs. 12
16	mrem/year standard (especially when precedent might ultimately demand 10 mrem) seems an
17	inferior protection against cost increase than a tighter contractual specification.
18	D.14-02-024 provides instructive guidance. The Commission approved a \$401 million
19	increase in decommissioning costs at the Humboldt Bay Nuclear Power Plant based in part
20	upon meeting a newly intensified cleanup standard recommended by PG&E's Community
21	Advisory Board. As D.14-02-024 observed:
22	In 2009, PG&E based its remediation estimates on earlier studies of likely land
23	use and residual radiological contamination levels currently set by the NRC in agreement
24	with the U.S. Environmental Protection Agency (EPA). However, the current federal
25	regulatory framework provides for future EPA involvement at decommissioned NRC-
26	licensed sites upon finding residual presence of certain contamination levels (e.g., in groundwater) in excess of EBA limits. The NBC also requires enperturbities for various
27 28	groundwater) in excess of EPA limits. The NRC also requires opportunities for various state and local authorities and the public to weigh in on end-state site conditions.
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¹⁹ A.18-03-009 A4NR-SCE-02, Response to Q.38.

To 'anticipate the direction' expected of it, PG&E states it initiated 1 2 communications with these governmental entities and helped form a Citizens Advisory 3 Board (CAB). After discussions with stakeholders and review of lessons learned at other remediated facilities, PG&E concluded it was more prudent to assume end-state 4 Residential use and the lower EPA limits in the 2012 DPR. 5 6 7 DRA argues that PG&E is merely speculating that higher standards will apply in the future. However, the Commission acknowledges uncertainty, and finds some merit 8 in PG&E's effort to assess and incorporate an expectation of regulatory and public 9 tendency towards higher standards of site clean-up. As more nuclear facilities begin 10 decommissioning, we anticipate efforts to reduce the confusion and to improve 11 12 coordination of state and federal requirements. Following the tragic and broad failure of radiological containment at the Fukushima nuclear facilities, we also think that public 13 and regulatory interest is heightened and reasonably likely to lead to lower acceptable 14 15 limits for residual radiological contamination in the future.²⁰ 16 But SCE has harbored a contrary view of radiation hazards. Taking particular exception 17 to the conclusion in the Environmental Impact Report for the SONGS 2&3 Decommissioning 18 19 Project that "there is an inherent risk of radiological exposure at any facility where hazardous radiological materials are present that can never be fully eliminated; therefore, impacts HAZ-1, 20 HAZ-2, and HAZ-3 would remain significant and unavoidable,"²¹ SCE unsuccessfully sought to 21 22 replace it with a considerably different perspective: As documented in NRC's comprehensive 'Generic Environmental Impact 23 Statement on Decommissioning of Nuclear Facilities,' NUREG-0586, doses to individual 24 workers and members of the public during decommissioning activities are expected to 25 be well below the regulatory dose standards in 10 CFR Part 20 and Part 50. Therefore, 26 the NRC has made the generic conclusion, applicable to all decommissioning reactors, 27 that the radiological impacts of nuclear plant decommissioning activities are deemed to 28 be 'SMALL.' SMALL is defined by the NRC as 'not detectable' or very minor. 29 30 Based on this extensive analysis by the NRC, as well as SCE's compliance with its 31 NRC license and applicable regulations, the impacts attributable to radiological hazards 32 will be less than significant. Accordingly, the Participants request that the FEIR adopt the 33

²⁰ D.14-02-024, pp. 23 – 24, footnotes omitted.

²¹ SCE, SONGS Units 2 & 3 Decommissioning Project DEIR Comments, August 29, 2018, p. 8, footnote omitted, citing DEIR p. 4.1-35.

NRC's conclusion that impacts attributable to radiological hazards would be less than significant.²²

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V. MECHANICAL PROJECTION OF SNF REMOVAL TIMING.

Q13: What other aspects of the DCE do you consider to be materially deficient? 6 7 8 A13: A4NR continues to be troubled by the approach taken to the uncertain timing of when SNF will be finally removed from the SONGS site. SCE's approach has been to simply roll 9 forward whatever assumption was made in the previous NDCTP about the number of years 10 until the Department of Energy ("DOE") will begin to take delivery of SNF nationally, and then 11 back into a SONGS-specific assumption from that posited date. As noted in the A4NR Protest, 12 which I incorporate herein by reference, this DCE is less than fastidious about the arithmetic 13 and covers its imprecision with the unsupported assumption that schedule-trading 14 opportunities with other plants will enable the 2049 end date assumed in the prior DCE to be 15 maintained. 16 To the extent that DOE continues to reimburse certain SNF storage costs, some of the 17 financial risk to the SONGS decommissioning trusts is mitigated. However, reliance on a 18 19 sequential litigation of claims over an extended period of time is inherently uncertain. SCE only recovered 77.5% of its most recent claim against DOE (\$45.3 million of \$58.4 million). To the 20 extent SNF storage costs are paid from the decommissioning trusts funded by prior ratepayers, 21 but DOE reimbursements are distributed to current ratepayers, all risk of insufficiency in 22

23 projected trust balances is transferred to future ratepayers -- who may have never received

electricity from SONGS.

²² *Id.*, pp. 8 – 9, footnotes omitted.

The potential for such disfavored intergenerational transfers increases over time, and is exacerbated by the reliance SCE's current approach places on speculative forecasts of imminent legislative enactments; implausible assumptions about cost-free schedule swaps despite any evidence of willing counterparties; and credulous rollover of past inaccurate timelines in order to declare the trusts adequately funded. DOE's extended breach of contract creates an undeniable conundrum, but SCE's opaque response fosters a complacency that conceals risk and should concern the Commission.

8 The DCE includes \$5.1 million (nominal dollars) for settlement of litigation over the Coastal Development Permit issued to SCE for expansion of the SONGS ISFSI, whereby SCE is 9 obligated to spend up to \$4 million "on commercially reasonable efforts to identify an offsite 10 location for SONGS spent fuel storage." ²³ SCE has assembled an impressive Experts Team, 11 chaired by Tom Isaacs – a primary architect of U.S. and Canadian nuclear waste policy over 12 13 more than three decades - and including Dr. Allison Macfarlane, past NRC chair and member of the Obama Administration's Blue Ribbon Commission on America's Nuclear Future, and several 14 other distinguished and experienced members. In June 2019, SCE retained North Wind, Inc. to 15 work in concert with the Experts Team and "develop a strategic plan that will assess the 16 feasibility of relocating spent nuclear fuel at the San Onofre nuclear plant to a commercially 17 reasonable, off-site facility."²⁴ The effort is intended to wrap up in December 2020 with 18 19 publication of the strategic plan.

²³ SCE-03, p. 27, lines 12 – 19.

²⁴ https://www.songscommunity.com/used-nuclear-fuel/long-term-storage/strategic-plan-for-relocating-songs-spent-nuclear-fuel

1		The Commission should closely monitor this effort, and SCE's 2021 NDCTP filing should
2	be exp	pected to contain a detailed discussion and evaluation of the recommendations of its
3	Expert	s Team and the strategic plan, particularly regarding any potential impact on the DCE.
4	Q16:	Does this conclude your testimony?
5	A16:	Yes, it does. After reviewing the parties' rebuttal testimony and participating in the
6	evider	ntiary hearings, A4NR will make formal recommendations to the Commission in its
7	Openi	ng Brief.
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1	Appendix
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1 QUALIFICATIONS OF JOHN GEESMAN

2	John Geesman is an attorney with the Oakland law firm, Dickson Geesman LLP, and a
3	member in good standing of the California State Bar.
4	Mr. Geesman served as a member of the California Energy Commission from 2002 to
5	2008, and was the agency's Executive Director from 1979 to 1983. Between his two tours at the
6	Energy Commission, Mr. Geesman spent nineteen years as an investment banker focused on
7	the U.S. bond markets and served as a financial advisor to municipal electric utilities throughout
8	the West.
9	Mr. Geesman has a long history of providing leadership on issues related to resource
10	planning, environmental policy, financial management, and risk practices. This is demonstrated
11	by his service in numerous executive capacities, including stints as:
12	Co-Chair of the American Council on Renewable Energy;
13	Chairman of the California Power Exchange;
14	• President of the Board of Directors of The Utility Reform Network (nee Toward Utility
15	Rate Normalization);
16	• Member of the Governing Board of the California Independent System Operator; and,
17	Chairman of the California Managed Risk Medical Insurance Board.
18	Mr. Geesman has previously testified as an expert witness before the California Public
19	Utilities Commission.
20	Mr. Geesman is a graduate of Yale College and the University of California Berkeley
21	School of Law.