DOCKETED

Docket Number:	15-AFC-01
Project Title:	Puente Power Project
TN #:	215432-1
Document Title:	Opening Testimony of Matthew Vespa
Description:	Testimony
Filer:	Matthew A. Smith
Organization:	Environmental Defense Center
Submitter Role:	Intervenor
Submission Date:	1/18/2017 3:10:37 PM
Docketed Date:	1/18/2017

Exhibit 4000

STATE OF CALIFORNIA

Energy Resources Conservation and Development Commission

In the Matter of: APPLICATION FOR CERTIFICATION FOR THE PUENTE POWER PROJECT	Docket No. 15-AFC-01

INTERVENOR SIERRA CLUB, ENVIROMENTAL DEFENSE CENTER, ENVIRONMENTAL COALITION OF VENTURA COUNTY

Exhibit 4000

Opening Testimony of Matthew Vespa

Summary of Testimony

I am a senior attorney at the Sierra Club with a focus on investor owned utility procurement in Southern California. This testimony addresses conclusions in the Final Staff Assessment ("FSA") regarding the feasibility of preferred resource alternatives to Puente. For the following reasons, much, if not all, of the reliability needs in the Moorpark sub-area can be feasibly met without resorting to long-term commitments to new gas-fired generation such as the proposed Puente project.

- Because the Moorpark Request for Offers ("RFO") originally conducted by Southern California Edison ("SCE") was overshadowed by the much larger concurrent LA Basin RFO, the preferred resource contracts resulting from the Moorpark solicitation do not reflect the potential of feasible and cost-effective preferred resource opportunities in the Moorpark sub-area.

- SCE intends to solicit up to 50 megawatts ("MW") of additional distributed resources in the Moorpark sub-area through its planned Goleta RFO.

- The recent success of SCE's Second Preferred Resource Pilot ("PRP 2") solicitation and addition of hybrid preferred resource bids reflects a growing and more mature market capable of providing distributed resource solutions to smaller geographic areas.

- Based on my review of bid evaluations of the in-front-of-meter ("IFOM") energy storage offers SCE selected in its LA Basin and PRP 2 RFOs, utility scale storage can provide superior value compared to new gas fired peaking generation like Puente.

- The FSA's unsubstantiated assertion that behind-the-meter ("BTM") energy storage cannot meet local capacity needs is inconsistent with the many BTM storage contracts approved in SCE's LA Basin Application and recent FERC-approved modifications to the California Independent System Operator ("CAISO") Open Access Transmission Tariff that allow aggregated BTM resources to participate in CAISO energy and ancillary markets.

- The near-term need for additional resource procurement to meet Moorpark reliability needs is limited. In its most recent Transmission Plan ("TPP"), CAISO identified a 234 megawatt ("MW") deficiency in the event of a Category C (multiple) contingency to address voltage collapse. The 234 MW deficiency accounts for neither Puente nor the 12 MW of preferred resources contracts approved by the California Public Utilities Commission ("PUC"). The identified Category C deficiency finding also assumes the retirement of the 130 MW Mandalay Unit 3. However, NRG has admitted that the 130 MW non-OTC Mandalay Unit 3 is "capable of operating well into the future." The combination of 12 MW of new preferred resources approved by the PUC in SCE's Moorpark Application and the up to 50 MW of additional preferred resources SCE intends to procure in Goleta, plus the ability of Mandalay Unit 3 to continue operating until replacement resources are deployed reduces residual reliability need to as little as 42 MW.

Qualifications

My qualifications are provided on my Curriculum Vitae attached to this Testimony and as discussed below.

I have practiced law in the State of California for the past 15 years. Over five years ago, my practice has focused almost exclusively on energy law and policy in California, and in particular in proceedings before the PUC. One emphasis of that work is investor owned utility procurement. I have overseen Sierra Club's work in the PUC's bi-annual Long-Term Procurement Plan ("LTPP") proceeding and have been lead attorney in a number of utility procurement applications, including SDG&E's Application for Approval of the PPTA for the Carlsbad Energy Center (A.14-07-009), SCE's LA Basin Application (A.14-11-012) and SCE's Moorpark Application (A.14-11-016). I am also a member of the Procurement Review Group ("PRG") for both SDG&E and SCE. Participation in the PRG is open to non-market participants upon approval of the PUC's Energy Division and provides the right to consult and review details of the respective investor owned utility's overall procurement strategy, proposed procurement contracts and proposed procurement processes. Participation in the PRG provides a more in-

depth understanding of utility resource valuation processes over a range of utility procurement and the factors that contribute to resource selection.

I have a J.D. from the University of California, Berkeley, an M.A. in Conservation Biology and a B.A. in Biology from the University of Pennsylvania.

Testimony

For the reasons set forth below, I believe there are feasible, timely and cost-effective alternatives to meet much, if not all, of the reliability need in the Moorpark area without resorting to new long-term commitments to gas-fired generation like the proposed Puente project.

1. At the Time the Moorpark RFO Was Issued, the Concurrent and Much Larger LA Basin RFO Was the Focus of Market Attention.

SCE launched its Moorpark local capacity RFO at the same time as its Western LA Basin RFO. The Moorpark RFO sought 215-290 MW of any resource to meet need identified in the PUC's Track 1 Decision in the 2012 LTPP proceeding.[1] The Moorpark area need finding did not require a minimum level of preferred resource procurement. In contrast, the LA Basin RFO was roughly ten times larger, seeking 1,800 to 2,500 MW of resources, of which at least 600 MW was required to come from preferred resources and energy storage.[2] As SCE testified in Phase 1 of the Moorpark proceeding at the PUC, because of the much larger total procurement and preferred resource minimums, "the market was focusing their efforts on the Western LA Basin."[3] Because the market was not as focused on the Moorpark area at the time the Moorpark RFO was issued, the preferred resource procurement in the Moorpark RFO is not indicative of the extent of its preferred resource potential.

2. SCE is in the Process of Soliciting Additional Distributed Resources in the Goleta Region of the Moorpark Sub-Area.

As SCE testified in Phase 1 of the Moorpark proceeding, "[i]f we were to launch another RFO for preferred resources, I would expect to receive offers."[4] SCE recently announced it

[1] D.13-02-015, *Decision Authorizing Long-Term Procurement for Local Capacity Resources* (R. 12-03-014) (Feb. 13, 2013).
[2] D.14-03-004, *Decision Authorizing Long-Term Procurement for Local Capacity Requirements Due to Permanent Retirement of the San Onofre Nuclear Generation Stations* (R. 12-03-014) (March 14, 2013), p. 3.
[3] Exh. 4001, A.14-11-016, *Application of SCE for Approval of Results of 2013 Moorpark RFO,* Evidentiary Hearing Transcript (May 27, 2015), Tr. 80:23-24 (SCE, Bryson).
[4] Exh. 4001, Tr. 144:23-25 (SCE, Bryson).

intends to launch a distributed resource RFO in the Goleta area in the first quarter of 2017 and has already held a workshop for interested market participants.[5] SCE is also targeting Goleta in its 2016 energy storage solicitation.[6] SCE's contemplated Goleta-area procurement is to address a reliability need in the Goleta/Santa Barbara area arising from the risk of losing both Goleta-Santa Clara 230 kV transmission lines in the event of an extreme weather event or earthquake.[7] SCE has testified it is highly likely it will require resources procurement under these solicitations to meet local capacity requirements. Because Goleta is in the Moorpark subarea, resources procured through the Goleta RFO would contribute to meeting local capacity need.[8]

3. SCE's Recent Preferred Resource Pilot 2 Application Suggests an Increasingly Robust and Innovative Distributed Energy Resource Provider Market.

The Moorpark RFO was issued over three years ago.[9] Since then, the preferred resource market has rapidly matured, new participants have entered the market, and product offerings have diversified. SCE has also gained experience and further refined its preferred resource RFOs. In November 2016, SCE filed an Application for Approval of Results of its Second Preferred Resources Pilot Request for Offers ("PRP 2 Application").[10] The PRP 2 Application seeks approval of 125 MW of preferred resources in an area of Orange County that includes the lower level substations and circuits that interconnect to the Johanna A-bank or Santiago A-bank substations.[11] The PRP 2 solicitation also allowed hybrid energy storage offers, such as BTM solar paired with BTM storage, to participate in the RFO.[12] These types of hybrid products, which the FSA does not consider, can provide both energy generation and dispatchability.

[5] Exh. 4002, SCE, Goleta-Area RFO Announcement, Nov. 30, 2017.
[6] Exh. 4003, A.14-11-016, *Application of SCE for Approval of Results of 2013 Moorpark RFO*, Data Request Sierra Club-SCE-3, Q.5; Exh. 4004, A.14-11-016, *Application of SCE for Approval of Results of 2013 Moorpark RFO*, Data Request ORA-SCE-4, Q.7.
[7] Exh. 4005, A.14-11-016, *Application of SCE for Approval of Results of 2013 Moorpark RFO*, SCE Phase 2 Opening Testimony (Public Version) pp. 1-2.
[8] Exh. 4006, A.14-11-016, *Application of SCE for Approval of Results of 2013 Moorpark RFO*, Phase 2 Transcript, Nov. 1, 2016, p. 980:4-20 (SCE, Sekhon); p. 981:9-17 (SCE, Sekhon).
[9] The RFO launched on September 12, 2013. *See* LA Basin Application (A.14-11-012), SCE Testimony, Appendix D, Independent Evaluator's Report, p. D-4.
[10] Exh. 4007, A.16-11-002, Exh. SCE 1 (Public Version), Testimony of SCE in Support of Application for Approval of the Results of its Second Preferred Resources Pilot Request for Offers, Nov. 4, 2016.
[11] *Id.* p. 1.
[12] *Id.* p. 25.

4. Large Scale Energy Storage Can Provide Superior Value Compared to New Gas-Fired Peaking Resources Like Puente.

In the FSA, staff "agrees that multi-hour energy storage can provide many of the capacity and ancillary services provided by NGFG [natural gas-fired generation]."[13] The FSA further acknowledges that "[i]f located in a transmission-constrained area, storage can replace generation capacity needed for local reliability in the Moorpark sub-area."[14] Yet the FSA then concludes that large scale energy storage "cannot currently do so cost-effectively."[15] The FSA provides no support for this assertion.

To the extent the FSA is concluding that IFOM energy storage is not a cost-effective resource when compared to new gas fired peaking generation, I disagree. IFOM energy storage can provide superior value to gas-fired peaking generation. I base this conclusion on my review of SCE's evaluation of the IFOM energy storage bids SCE selected in the LA Basin and PRP 2 RFOs using the following methodology to compare Puente with IFOM energy storage offers.

With the transition to all-source RFOs or RFOs for a range of potential preferred resource solutions, SCE compares value among resource types by determining the Net Present Value ("NPV") of each resource. NPV is the present value of the forecasted monetary benefits (or inflows) minus the present value of the forecasted monetary costs (or outflows) for the offer. Cost and benefits included in SCE's resource valuation include day-ahead energy benefit, resource adequacy benefit, ancillary services and real time energy benefit, capacity cost, cost to produce energy or charging cost, transmission upgrade cost, debt equivalence cost, renewable integration cost and put option cost.[16] The higher (more positive) the NPV, the greater its value.

SCE follows a "very consistent NPV analysis approach to all of [its] procurement activities."[17] To evaluate the FSA's assertion that large scale energy storage was not cost-effective, I compared the NPV SCE calculated for the IFOM energy storage bids it accepted in its PRP 2 and LA Basin solicitations with the NPV SCE calculated for Puente. SCE provided the NPV, expressed in millions of dollars, in each of its confidential filings for the Moorpark, LA Basin, and PRP 2 Applications.[18] Because capacity contracts can be of varying size and

[13] FSA p. 4.2-141.
[14] FSA p. 4.2-14.
[15] FSA p. 4.2-141.
[16] Exh. 4008, A.14-11-016, SCE Data Request Response Sierra Club-SCE-04, Q.1 (Oct. 10, 2016).
[17] Exh. 4006, Tr. 946:28 – 947:2 (SCE, Sekhon).
[18] I executed a Non-Disclosure Agreement ("NDA") with SCE in order to review its bid evaluation. The terms of the NDA do not allow confidential submission of this data outside of PUC proceedings. The relative (percent) difference in contract valuation may also not be publicly disclosed. Should Commission Staff wish to confirm NPV values for IFOM energy storage and Puente, it may request this information from SCE. The specific citations for NPV bid valuation in each proceeding are: For the LA Basin RFO, see A.14-11-012, Exh. SCE-2C, SCE Appendices A-D to Testimony of SCE on Results of

duration, I converted the NPV as expressed in $Millions ("$M") in SCE's respective applications to $/kw-month to allow for a side by side comparison among resources using the following formula:

$$\text{NPV (\$/kW-mo)} = \frac{(NPV\ (\$M) \times 1{,}000{,}000\ [\$M\ to\ dollars\ conversion])}{((LCR\ MW * 1{,}000\ [MW\ to\ kW\ conversion]) \times (contract\ duration\ (months)))}$$

To confirm this conversion formula was correct, I checked it against instances where SCE provided NPV information on the same resource in both ($M) and ($/kW-mo) metrics.[19]

5. The FSA Incorrectly States that Multi-Hour BTM Storage Cannot Serve to Meet Local Capacity Needs.

The FSA improperly dismisses BTM storage as a potential local capacity resource in stating that "multi-hour behind the meter storage cannot currently serve to meet local capacity needs as it cannot be dispatched by the California ISO."[20] In June 2016, the Federal Energy Regulatory Commission ("FERC") approved revisions to CAISO's Open Access Transmission Tariff to facilitate participation of aggregations of distribution-connected or distributed energy resources in CAISO's energy and ancillary services markets.[21] The distributed energy resources that could participate "could be in front of or behind a customer meter."[22]

Even before this tariff was approved, behind-the-meter energy storage could be procured to meet local capacity requirements. In the LA Basin Application, for example, SCE contracted for 164 MW of BTM battery storage and other permanent load shifting products.[23] These BTM resources were used to meet the LCR need identified in the underlying procurement authorization.

6. Reliability Needs for the Moorpark Area are Substantially Reduced When Accounting for the Potential for Continued Contracting with Mandalay Unit

---

2013 LCR RFO for the Western LA Basin, Confidential Appendix C, LCR Summary of Selected Offers; for the Moorpark RFO, see A.14-11-016, Exh. SCE-2C, SCE Appendices A-D to Testimony of SCE on Results of 2013 LCR RFO for the Moorpark Sub-Area, Confidential Appendix C, LCR Summary of Selected Offers; for the Preferred Resource Pilot 2 RFO, see A.16-11-002, Exh, SCE-1C, Testimony of SCE in Support of Application for Approval of Results of its Second PRP RFO, p.61.

[19] For example, SCE provided the NPV of Puente in both ($M) and ($/kW-mo) on p. 15 of its Confidential Phase 2 Opening Testimony in the Moorpark proceeding.

[20] FSA p. 4.2-141.

[21] 155 FERC ¶ 61,229 (June 2, 2016). *See also* California ISO News Release, "*California ISO leads historic push for distributed energy resources*," June 7, 2016, http://www.caiso.com/Documents/CaliforniaISOLeadsHistoricPushForDistributedEnergyResources.pdf.

[22] 155 FERC ¶ 61,229, para. 3.

[23] Exh. 4009, A.14-11-012, *Testimony of SCE on the Results of its 2013 LCR RFO for the Western Los Angeles Basin* (Public Version) (Nov. 21, 2014), Table VII-20, pp. 64, 75-76.

3, Approved Preferred Resource Contracts from the Moorpark RFO, and SCE's Intended Solicitation for Additional Distributed Resources for the Goleta Area.

If Puente is not approved, the immediate necessity for additional resource procurement to meet Moorpark area need by the end of 2020 would be limited, as significant need could be served by continued contracting with Mandalay Unit 3, already-approved preferred resource contracts, and SCE's planned procurement of additional distributed resources in the Goleta area.

a. Accounting for the 12 MW of Preferred Resources Approved in the Moorpark Decision, the Resource Need in the Moorpark Sub-Area is 222 MW for a Category C Contingency.

As the FSA notes, in its LTPP Track 1 Decision, the PUC authorized SCE to procure between 215 and 290 MW of capacity to meet local capacity need in the Moorpark sub-area of the Big Creek/Ventura local reliability area resulting from the planned retirement of the Ormond Beach and Mandalay Units 1 and 2 once-through-cooling facilities.[24] In D.16-06-050, the PUC approved contracts for 274 MW of resources to meet the need identified in the Track 1 Decision (D.13-02-015): the 262 MW Puente gas plant and approximately 12 MW of preferred resources. D.16-06-050 also determined that SCE's request for approval of a long-term contract for the existing 54 MW Ellwood gas plant paired with 0.5 MW of energy storage should be further evaluated in a subsequent phase. A PUC decision on the Ellwood and paired energy storage contract is pending.

Since the Track 1 Decision (D.13-02-015), CAISO has continued to assess local reliability needs for the Moorpark sub-area. CAISO's Transmission Plan ("TPP") is updated on an annual basis to evaluate grid reliability needs and to identify upgrades to the transmission system needed to meet California's policy goals. The 2015-2016 TPP was approved by the CAISO Board in March 2016.[25] Appendix D to the 2015-2016 TPP provides CAISO's most recent local capacity technical analysis for the Los Angeles Basin (LA Basin), Big Creek/Ventura and San Diego Local Capacity Requirement Areas.[26] Table D18 of Appendix D summarizes local capacity need for the Moorpark sub-area. In determining local capacity need, CAISO uses the California Energy Commission's 1-in-10 year summer peak load forecast under the mid-demand baseline and low-mid levels of additional achievable energy efficiency ("AAEE").[27]

---

[24] FSA p. 4-2-10.
[25] CAISO 2015-2016 Transmission Plan, *available at* *https://www.caiso.com/Documents/Board-Approved2015-2016TransmissionPlan.pdf*.
[26] Exh. 4010, Appendix D to CAISO 2015-2016 Transmission Plan.
[27] *Id.*, pp. 2 (Table D3), 5 (Executive Summary). AAEE is intended to account for energy savings due to efficiency measures and standards "that are neither finalized nor funded but are reasonably expected to

Table D18: Summary of LCR Needs for the Long-Term Planning Horizon (2025)

2025 LCR Requirements	Total MW Requirement	Existing Resource Need (MW)	Deficiency without LTPP T1 & T4 (MW)	Total SCE Selected Procurement for LTPP Tracks 1 & 4 for the Moorpark sub-area(MW)
Category B (Single)[36]	2,111	2,111	0	274
Category C (Multiple)[37]	2,689	2,455	234[38]	274

As seen in the table above,[28] CAISO's analysis in Appendix D to the 2015-2016 TPP shows no deficiency for a Category B (single) contingency – even without accounting for the 274 MW of resources approved by the PUC in D.16-06-050, the underlying procurement decision for Puente. In other words, none of the resources approved by the PUC in D.16-05-060 are needed to meet reliability needs in the event of loss of a major transmission pathway into the Moorpark sub-area when demand is at a 10-year high. Under a Category C (multiple) contingency, the resource deficiency is 234 MW, not including the 274 MW of resources approved in D.16-06-050. Accounting for the 12 MW of preferred resources approved by the PUC in D.16-06-050, were Puente not constructed, the remaining resource deficiency for the Moorpark sub-area for a multiple contingency would be 222 MW.[29]

b. Continued Operation of Mandalay 3 Reduces Local Capacity Needs to Under 100 MW.

The 234 MW Category C deficiency identified by CAISO in its 2015-2016 TPP for the Moorpark sub-area assumes the retirement of the 130 MW Mandalay Unit 3. As shown in this screenshot from Appendix D, CAISO assumed Mandalay 3 was retired and assigned it a zero Net Qualifying Capacity ("NQC") for purposes of updating the local area need assessment.[30]

---

occur." (California Energy Commission, *California Energy Demand 2014-2024 Final Forecast* (Jan. 2014), p. 88. http://www.energy.ca.gov/2013publications/CEC-200-2013-004/CEC-200-2013-004-V1-CMF.pdf). The CEC prepares a range of five estimates incorporating different assumptions. The low-mid estimate is more conservative than the mid estimate, and combines the "pessimistic" assumptions about efficiency measure adoption and standards implementation with the economic growth and energy prices of the more likely mid scenario. (*Id.*, p. 89). Despite incorporating some assumptions of the mid estimate, the low-mid scenario predicts efficiency levels that are almost indistinguishably higher than the low estimate, and at levels less than half that of the mid estimate. (*See, e.g., id.*, Figure 43, p. 90.). The low-mid AAEE assumptions used in CAISO's analysis do not account for the doubling of energy efficiency savings required under SB 350 (2015).

[28] Exh. 4010, Appendix D to CAISO 2015-2016 Transmission Plan, p. 20.

[29] According to CAISO, the 234 MW deficiency in the Moorpark subarea "implies that in order to comply with the criteria, at summer peak, load may be curtailed immediately after the first contingency (to prepare for the next contingency) if there is no resource procurement to replace the retirement of Mandalay and Ormond Beach generation." Exh. 4010, Appendix D to 2015-2016 TPP, p. 20 n. 38.

[30] Exh. 4010, Appendix D to CAISO 2015-2016 Transmission Plan, p. 11. *See also* Exh. 4011, Appendix E to CAISO 2014-2015 Transmission Plan, p. 86.

MKT/SCHED RESOURCE ID	BUS #	BUS NAME	kV	NQC	UNIT ID	LCR SUB-AREA NAME	NQC Comments	CAISO Tag
MNDALY_7_UNIT 3	24222	MANDLY3G	16	0.00	3	Ventura, S.Clara, Moorpark	Retired over 40 year	Market

Unlike Units 1 and 2, Mandalay Unit 3 is not a once-through-cooling facility and is therefore not subject to a retirement schedule. In a data request response in this proceeding, NRG stated "it intends to continue operation of this unit as future market conditions allow. There is no looming regulation that affects MGS Unit 3's permitted operations. With continued maintenance, MGS Unit 3 will be capable of operating well into the future."[31] Were Mandalay 3 continued to be contracted with until replacement resources could be deployed, the resource deficiency for the Moorpark sub-area under a Category C contingency is reduced to 92 MW. While Mandalay 3 is not a long-term solution to the Moorpark area need, its continued use on a shorter-term basis would allow additional time for deployment of alternative resource solutions.

c. SCE is Proposing Up to 50 MW of Additional Resource Procurement in the Goleta Area.

As set forth above in Section I.2, SCE intends to launch a distributed resource RFO in Goleta. In the event of loss of both Goleta/Santa Barbara transmission lines, SCE identified a 105 MW shortfall of the Goleta/Santa Barbara area that it proposed to meet through a long-term contract with the existing 54 MW Ellwood facility, additional procurement of distributed energy resources ("DERs"), and potential transmission improvements.[32] SCE further stated it is highly likely it will require any procured distributed energy resources to also meet local capacity requirements to increase their value.[33]

Assuming SCE's proposed long-term contract with the 54 MW Ellwood peaking facility is approved or SCE continues to contract with Ellwood on a shorter-term basis, SCE's remaining identified shortfall for the Goleta/Santa Barbara area is approximately 50 MW. Depending on the bids SCE receives in the Goleta RFO, procurement could further reduce local area need up to an additional 50 MW. Combined with the 12 MW of preferred resources approved in D.16-06-050 and continued operation of the 130 MW Mandalay 3 facility, reliability need in the Moorpark area is reduced to as low as 42 MW.

[31] TN #214303, Applicant's Responses to Robert Sarvey's Data Request, Set 2, Q 2.
[32] *Id.* Ellwood's continued operation is assumed in the 2015/2016 TPP and therefore would not further reduce LCR need.
[33] Exh. 4006, Tr. 980:4-20 (SCE, Sekhon); Tr. 981:9-17 (SCE, Sekhon).

Notably, preferred resources are capable of rapid deployment. In the wake of the Aliso Canyon disaster the PUC ordered Sothern California Edison to hold an expedited competitive procurement and have IFOM energy storage resources deployed in a seven-month timeframe resulting in contracts for 27 MW of storage.[34] The PUC also ordered SCE to intensify procurement of demand response in specific geographic areas.[35]

[34] Exh. 4012, CPUC Resolution E-4791 (May, 26, 2016). *See also* Exh. 4013, SCE Advice Letter 3454-E (Submission of Santa Paula 1 Contract for Expedited Review and Approval by September 15, 2016); Exh. 4014, SCE Advice Letter 3455-E (Submission of Pomona Battery Storage 1Contract for Expedited Review and Approval by September 15, 2016); and Exh. 4015, SCE Advice Letter 3456-E (Submission of the Grand Johanna Contract for Expedited Review and Approval by September 15, 2016).

[35] Exh. 4016, R.13-09-011, *Assigned Commissioner's Ruling Directing Activities In Response to Natural Gas Leak at Aliso Canyon* (Mar. 23, 2016).

MATTHEW VESPA

2101 Webster St., Suite 1300 • Oakland, CA 94612 • (415) 977-5753 matt.vespa@sierrclub.org

EDUCATION

Berkeley Law (Boalt Hall), University of California

Juris Doctor, May 2002 with Certificate in Environmental Law
Member, Order of the Coif
Awards: American Jurisprudence Award (Highest Grade): Legislation; Environment & Culture; Fed. Indian Law
Prosser Prize (Second Highest Grade): International Civil Litigation; Envtl. Law Writing Workshop
Activities: *Ecology Law Quarterly*: Articles Editor 2001, Executive Editor 2000-2001; Central American Refugee Clinic; Berkeley Law Foundation; LGBT Caucus

University of Pennsylvania

Master of Arts, Conservation Biology, May 1995 (received concurrently with B.A.)
Bachelor of Arts, Biology, *magna cum laude*, May 1995
Awards: Dean's List 1994-1995

EMPLOYMENT

Sierra Club — Oakland, CA

Senior Attorney, Clean Energy — September 2011 to Present

Manage Sierra Club's energy-related advocacy before California Public Utilities Commission. In depth knowledge of energy and climate policy, including utility procurement, long-term energy planning, rooftop solar tariffs, rate design, energy storage and renewable integration. Member of Procurement Review Group (PRG) for San Diego Gas & Electric and Southern California Edison. Identify opportunities for strategic engagement, supervise junior attorneys and outside counsel, work with experts, conduct cross-examination in evidentiary hearings and draft briefs to build case for environmentally superior outcomes.

Center for Biological Diversity — San Francisco, CA

Senior Attorney — July 2007 to August 2011

Advocated for reductions in greenhouse gas emissions under existing law through impact litigation, petitions, comments on proposed projects and regulations, and development of position papers. Focus included use of California Environmental Quality Act (CEQA) to require analysis and mitigation of greenhouse gas impacts of new projects and development of city and county Climate Action Plans. Developed argument and legal theory resulting in California Supreme Court rejection of greenhouse gas significance thresholds proposed by building industry in *Center for Biological Diversity v. Cal. Dept. Fish & Game*, 62 Cal.4th 204 (2016).

Sher Leff — San Francisco, CA

Associate Attorney — Fall 2005 to Spring 2007

Researched and drafted motions and memoranda on behalf of water utilities and public agencies related to groundwater contamination actions against refiners, manufacturers, and distributors of contaminants. Significant experience with discovery and pre-trial preparation.

United States District Court, Eastern District of New York — Brooklyn, NY

Judicial Clerk, Chambers of the Honorable Nicholas Garaufis — Fall 2004 to Fall 2005

Researched and drafted opinions on diverse areas of federal procedural and substantive law. Prepared Judge Garaufis for law and motion calendar. Supervised judicial interns.

Shute, Mihaly & Weinberger — San Francisco, CA

Fellow — Fall 2002 to Fall 2004

Researched and drafted briefs, motions, and legal memoranda related to land use, takings and federal and state environmental law. Drafted CEQA comments on proposed development projects on behalf of public agencies and citizen groups including extensive NEPA/CEQA comments on proposed toll-road in Southern California.

MATTHEW VESPA

2101 Webster St., Suite 1300 • Oakland, CA 94612 • (415) 977-5753 matt.vespa@sierrclub.org

Arnold & Porter Washington, D.C.
Summer Associate (offer received) Summer 2001
Drafted legal memoranda on general corporate litigation matters.

U.S. Peace Corps Portero Ybate, Paraguay
Agroforestry Extentionist 1995 – 1997
Trained rural Paraguayans in sustainable farming with emphasis on soil conservation and reforestation. Promoted environmental and health awareness through weekly radio program in Guarani language. Editor of *Kautia Ne'e*, a bimonthly magazine for Peace Corps Volunteers.

AWARDS

2016 Environmental Leadership Award, *Ecology Law Quarterly*, Berkeley Law
Awarded to individual who has made outstanding contributions to the development of environmental law and policy.

PUBLICATIONS

K. Bundy, V. Pardee, K. Siegel & M. Vespa, Center for Biological Diversity, *The Clean Air Act Works: How the Landmark Pollution Law Can Benefit Our Climate, Health and Economy* (Feb. 2011).

B. Collins-Burgard, A. Crockett & M. Vespa, *Another Hot Year: Analyzing Greenhouse Gas Impacts Under CEQA*, ENVTL. LAW NEWS (Spring 2010).

M. Vespa, *Why 350: Climate Policy Must Aim to Stabilize Greenhouse Gases at the Level Necessary to Minimize the Risk of Catastrophic Outcomes*, 36 ECOLOGY LAW CURRENTS 185 (2009).

J. Brawer & M. Vespa, *Thinking Globally, Acting Locally: The Role of Local Government in Minimizing Greenhouse Gas Emissions from New Development*, 44 IDAHO LAW REV. 589 (2008).

K. Siegel & M. Vespa, *Combating Global Warming Through the California Environmental Quality Act*, CAL. LAND USE REPORTER (Oct. 2007).

M. Vespa, *PCA: Arbitration Rules for the Environment*, 2 LAW & PRACTICE INT'L CTS. & TRIBUNALS 295 (2003).

M. Vespa, *Climate Change 2001: Kyoto at Bonn and Marrakech*, 29 ECOLOGY LAW QUARTERLY 395 (2002).

SELECTED PRESENTATIONS

Conference of California Public Utility Counsel, *Evolving Role of Representing the Public Interest* (Napa, CA, Oct. 2016).

Utah Associated Municipal Power Systems (UAMPS), *Decarbonizing the Energy System* (Utah, Aug. 2016).

Yosemite Envtl. Law Conf., *Effective Advocacy Before Administrative Agencies* (Yosemite, Oct. 2015).

Law Seminars Int'l, CEQA Conference, *Climate Change and Significance Thresholds: Discussion of 'Break from Business as Usual,' AB 32, and Gov. Brown's Executive Order* (Santa Monica, Sept. 2015).

3rd Annual California Energy Summit, *Procuring Preferred Resources in California* (San Francisco, May 2015).

2nd Annual California Energy Summit, *The Joint Reliability Plan and Other Emerging Programs to Assure Resource Adequacy* (San Francisco, May 2014).

CLE Int'l, Greenhouse Gas Emissions Conference, *GHG Litigation Update* (San Francisco, Apr. 2014).

PROFESSIONAL ACTIVITIES

State Bar of California Environmental Section, Executive Committee Member 2010-2013.
2013 Co-Chair of Environmental Law Conference at Yosemite, nationally recognized as the largest and most prestigious gathering in California of leaders in environmental, land use, and natural resources law. 2013 Conference brochure available at http://environmental.calbar.ca.gov/Portals/15/documents/2013-10-24_yosemite.pdf

DECLARATION OF
Matthew D. Vespa

I, **Matthew D. Vespa**, declare as follows:

1. I am a senior attorney at the Sierra Club with over five years of experience with investor owned utility procurement in Southern California. .

2. A copy of my professional qualifications and experience is attached hereto and incorporated by reference.

3. I prepared the testimony of Matthew D. Vespa submitted by intervenors the Los Padres Chapter of the Sierra Club, the Environmental Coalition of Ventura County, and the Environmental Defense Center. The basis for my testimony is set forth in the testimony itself and is incorporated by reference.

4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.

5. I am personally familiar with the facts and conclusions related in the testimony and, if called as a witness, could testify competently thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: Jan. 17. 2017 Signed: Matthew Vespa

At: Oakland, California