

May 6, 2015

## **Via Electronic Filing**

Public Utility Commission Attn: Filing Center 3930 Fairview Industrial Drive SE Salem, OR 97308 puc.filingcenter@state.or.us

Re: Docket No. LC 62: Sierra Club's Signatory Page to Protective Order

Please find enclosed Sierra Club's Signatory Page to Appendix B of Protective Order 14-416 of Nidhi Santen in the above-referenced docket. This document has been e-filed with the Commission and served on parties via email.

Please let me know if you have any questions. Thank you.

Respectfully submitted,

/s/ Derek Nelson

Derek Nelson Legal Assistant Sierra Club Environmental Law Program 85 Second St., 2nd Floor San Francisco, CA 94105 (415) 977-5595 derek.nelson@sierraclub.org

cc: Service List

# SIGNATORY PAGE DOCKET NO. LC 62

# III. Persons Qualified under Paragraph 3(e):

		al protective order, agree to be bound by the terms of the order, and mation identified in paragraph 10.	
Ву:	Signature:	Date: 5/1/15	
•	Printed Name:	Nidhi Santen	
	Address:	Nidhi Santen 485 Massachusetts Ave #2, Cambridge, MA 0213	39
		Synapse Energy Economics	
	Job Title:	Principal Associate	
	Paragraph 10	O(e) information also provided.	
By:	Signature:	Date:	
	Printed Name:		
	Address:		
	Employer:		
	Job Title:		
	Paragraph 10	O(e) information also provided.	
By:	Signature:	Date:	
	Printed Name:		
	Address:		
	Employer:		
	Job Title:	<u> </u>	
	Paragraph 10	O(e) information also provided.	
By:	Signature:	Date:	
	Printed Name:		
	Address:		
	Employer:		
	Job Title:		
	Dorgaranh 10	(A) information also provided	



## Nidhi R. Santen, PhD, Principal Associate

Synapse Energy Economics I 485 Massachusetts Avenue, Suite 2 I Cambridge, MA 02139 I 617 453-7064 nrsanten@synapse-energy.com

#### PROFESSIONAL EXPERIENCE

Synapse Energy Economics Inc., Cambridge, MA. Principal Associate, 2015 – present.

Consults on issues of energy and electricity systems modeling; climate policy analysis; and computational methods for investment planning, decision-making under uncertainty, and risk analysis.

**Harvard Kennedy School**, Cambridge, MA. *Project Manager, Energy Technology Innovation Policy research group*, 2014 – 2015; *Postdoctoral Research Fellow*, 2012-2014

Pursued research in electricity technology investment planning and policy design, with an emphasis on methods for making decisions under uncertainty and managing risk; developed a modeling tool to numerically evaluate optimal generation capacity and R&D policy portfolios for the U.S. electric power sector under uncertainty; examined policy options for integrating emerging distributed energy resources and required cyber-security on the grid.

CPS Energy, San Antonio, TX. Environmental Analyst, Air Permits Section, 2006 – 2008.

Analyzed federal, state, and local air pollution and energy regulation and policy impacting the utility's environmental planning and power plant operations; managed and obtained regulatory air pollution and operating permits for existing and proposed coal and natural gas plants; prepared EPA and state regulatory reports and emissions inventories; participated in local council of governments' air quality planning committees.

Environmental Defense Fund, Austin, TX. Intern, Climate and Air Program, Summer 2005.

Examined local air pollution impacts from urban construction projects in Houston utilizing EPA atmospheric dispersion modeling tools and emissions inventories.

City of Bloomington Planning Department, Bloomington, IN. Intern, 2003 - 2005.

Proposed areas to update local zoning ordinances to reflect green building incentives; developed a community-benchmarking scheme to help the city meet its green growth goals; researched and briefed planning staff on new sustainable development program possibilities.

Restore America's Estuaries, Arlington, VA. Program Assistant, 2002.

Wrote grant proposals and project progress reports to support a partnership with NOAA to fund coastal restoration projects across the U.S.; assisted with research to develop a new field guide to coastal habitat restoration; maintained a public database of funding opportunities for costal restoration projects; developed and coordinated the organization's communications, marketing, and public outreach efforts.

**Indiana University-Bloomington,** Hutton Honors College Academic Advisor, Undergraduate Programs in Math and Science, 2005-2006

**Indiana University-Bloomington,** School of Public and Environmental Affairs Teaching Assistant, Graduate Student Math Camp, Summer 2005

#### **PUBLICATIONS**

Takahashi, K., J. Fisher, T. Vitolo, N. R. Santen. 2015. *Review of TVA's Draft 2015 Integrated Resource Plan*. Synapse Energy Economics for Sierra Club.

Popp, D., Santen, N.R., Fisher-Vanden, K., and Webster, M. 2013. "Technology variation vs. R&D uncertainty: what matters most for energy patent success?" *Resource and Energy Economics* 35(4): 505-533.

Webster, M., Santen, N.R., and Parpas, P. 2011. "An approximate dynamic programming framework for modeling global climate policy under decision-dependent uncertainty." *Computational Management Science* 9: 339-362.

Santen, N.R. and Diaz Anadon, L. 2014. "Electricity technology investments under solar RD&D uncertainty: how interim learning and adaptation affect the optimal strategy." (submitted) Available as a Harvard Belfer Center discussion paper here: http://belfercenter.hks.harvard.edu/publication/24874.

Santen, N.R., Webster, M.D., Popp, D., and Perez-Arriaga, I. 2014. "Inter-temporal R&D and capital investment portfolios for the electricity industry's low carbon future." (invited to revise and re-submit). Available as a National Bureau of Economic Research working paper here: http://www.nber.org/papers/w20783.

Webster, M., Fisher-Vanden, K., Popp, D., and Santen, N. 2014. "Should we give up after Solyndra? Optimal technology R&D portfolios under uncertainty." (in preparation)

#### **PRESENTATIONS**

Santen, N.R. and Diaz Anadon, L. "Electricity technology investments under solar RD&D uncertainty: How interim learning and adaptation affects the optimal decision strategy." II International Academic Symposium: R&D on Energy, Chair of Energy Sustainability, University of Barcelona, Barcelona, January 2014. (Presented by Diaz Anadon)

Santen, N.R. and Diaz Anadon, L. "A stochastic model for power generation RD&D and capital investment planning under decision dependent uncertainty." 10th International Conference on Computational Management Science, Montreal, Quebec, May 2013.

Santen, N.R. "Power Sector Technology Investment Planning under Uncertainty." Harvard Consortium for Energy Policy Research Seminar Series, Cambridge, MA, April 2013.

## CERTIFICATE OF SERVICE

I hereby certify that on this 6<sup>th</sup> day of May, 2015, I caused to be served the foregoing SIERRA

## CLUB'S SIGNATORY PAGE TO APPENDIX B OF PROTECTIVE ORDER 14-416 OF NIDHI

SANTEN upon all party representatives on the official service list for this proceeding via electronic mail.

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Dated this 6<sup>th</sup> day of May, 2015 at San Francisco, CA.

#### /s/ Derek Nelson

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