



**KENNETH KALISKI, PE,  
INCE BD. CERT**

Senior Director

**EXPERIENCE** | 35 Years

**EDUCATION** | BE, Engineering, Dartmouth College  
AB, Biological Sciences & Envir. Studies, Dartmouth College

**LICENSES/CERTIFICATIONS** | Board Certified, INCE; PE in NH, VT,  
IL, MA, and MI

## BIO

Ken Kaliski has 35 years of experience, having worked in all of RSG's market areas with a focus on engineering and advanced analytics. His technical specialty is in noise control engineering, where he works on projects such as community noise monitoring and modeling, architectural acoustics, transportation noise, and industrial noise control. He also works on complex modeling projects in the fields of market and energy research. Ken is the co-holder of Patent 7,092,853 for an Environmental Noise Monitoring System.

## PROJECT EXPERIENCE

**South Ripley Solar.** Project manager for a 270 MW solar project in South Ripley NY. In addition to photovoltaics, the project includes 20 MW of energy storage. RSG conducted the background sound monitoring for the project, as well as sound propagation modeling for permitting under both New York State's Article 10 and upcoming Section 94-c process.

**Fabius Solar.** Managed the sound propagation modeling for Fabius Solar, a 180 MW photovoltaic project in St. Joseph County, Michigan. The sound model included 7,429 solar tracking motors, 59 array transformer-inverter pairs, and one substation transformer. Sound modeling was done using the ISO 9613-2 standard and found that the local property line noise standard was met at all locations with no additional mitigation required.

**Microgrid Energy Storage.** Project manager noise studies of two Green Mountain Power microgrids at Ferrisburgh and Milton. The projects involved solar energy generation combined with energy storage. We conducted both pre- and postconstruction sound monitoring, and preconstruction sound propagation modeling.

**VELCO Northwest Reliability Project, VT** – directed the noise studies required for the VELCO Northwest Reliability Project. This project involved sound monitoring and/or sound propagation modeling at 12 substations. Measurement protocols were developed to meet IEC/IEEE standards for transformer and other noise-generating equipment. Modeling was conducted using the Cadna A sound propagation software to determine impacts at the nearest residences for several of the substations. Many different types of equipment were modeled, including transformers, a shunt reactor, synchronous condensers, and a phase angle regulator transformer. Design detail testimony was prepared and submitted to the Vermont Public Service Board.

**Kingdom Community Wind** – Prepared a noise assessment of a 63 MW wind project in Lowell, Vermont. The project included background sound monitoring at six locations, detailed sound modeling to assessment annualized impacts, testimony before the Public Service Board, and post-construction sound monitoring

**National Survey of Attitudes of Wind Power Project Neighbors.** Project manager for a study of the of the factors that affect audibility and annoyance from wind turbines. This study is based on a national survey of

people or live around wind power projects, which was conducted by the Lawrence Berkeley National Laboratory and funded by the U.S. Department of Energy. The result of the study was published as a peer-reviewed paper in the Journal of the Acoustical Society of America (see publications, below).

**Massachusetts Research Study on Wind Turbine Acoustics.** Leading a study on wind turbine sound to help the State of Massachusetts Clean Energy Center and Department of Environmental Protection improve the regulation of wind turbines in the State. The study includes detailed data collection around five wind projects in New England, support to the Wind Turbine Technical Advisor Committee of the MassDEP, and quantitative analysis of factors such as infrasound, amplitude modulation, sound levels, and sound propagation modeling.

### SELECT PUBLICATIONS

Kaliski, K., Duncan, E., Old, I., "An overview of sound from commercial photovoltaic facilities," Proceedings of InterNoise 220, New Orleans, Louisiana, 2020

Haac, R., Kaliski, K., Landis, M., Hoen, B., Rand, J., Firestone, J., Elliott, D., Hübner, G., and Pohl, J. "Wind turbine audibility and noise annoyance in a national U.S. survey: Individual perception and influencing factors." The Journal of the Acoustical Society of America 146.1124 (2019).

Kaliski, K., Bastasch, M., and O'Neal, R., "Regulating and predicting wind turbine sound in the U.S.," Proceedings of Inter-Noise 2018, Chicago, IL, August 2018.

Old, I., Kaliski, K., "Wind turbine noise dose response – Comparison of recent studies," 7th International Conference on Wind Turbine Noise, May 2017

Kaliski, K, and Duncan, D. "The Challenges of Modeling Percentile Sound Levels from Mining and Other Environmental Noise," National Council of Acoustical Consultants Newsletter, Fall 2015

McCunney, R., Mundt, K., Colby, D., Dobie, R., Kaliski, K., and Blais, M., "Wind Turbines and Health; A Critical Review of the Scientific Literature," Journal of Occupational and Environmental Medicine 56(11) 2014.

Kaliski, K.; Duncan, E.; McPhee, P; West, C.R.; O'Neal, R.; Zimmerman, J.; Snyder, J., "The Massachusetts research study on wind turbine acoustics - Methods and goals", Proceedings of NoiseCon14, Fort Lauderdale, Florida, 2014.

Kaliski, K., Neeraj, G., Prevalence of complaints related to wind turbine noise in northern New England," Proceedings of Meetings on Acoustics, Vol 19, 2013

Kaliski, K., Old, I., Blomberg, L., "Sound emissions from a plug-in electric vehicle," Proceedings of the 2012 Institute of Noise Control Engineers InterNoise 2012

Kaliski, K., "Winning Community Acceptance: Dispelling Myths and Promoting the Realities about Wind Power – Noise Impacts," AWEA New England Regional Wind Energy Summit, 2012, and AWEA Community Wind Working Group webinar, 2012

Kaliski, K., Wilson, D.K., Vecherin, S., Duncan, E., "Improving Predictions of Wind Turbine Noise Using PE Modeling," Proceedings of the 2011 Institute of Noise Control Engineers NOISECON 2011

Kaliski, K., and Duncan, E. "Calculating Annualized Sound Levels for a Wind Farm," Acoustical Society of America, Proceedings of Meetings on Acoustics, Vol. 9, 2010.

Park, L, Lawson, S, Kaliski, K., Newman, P. and Gibson, A. "Modeling and Mapping Hiker's Exposure to Transportation Noise in Rocky Mountain National Park," Park Science Vol. 26 No 3, Winter 2009-2010.

Collier, R., and Kaliski, K. "Design of a Quiet Space with an Acoustic Canopy within a Large Reverberant Room," Proceedings of the 2008 Institute of Noise Control Engineers NOISECON 2008.

Kaliski, K., Hathaway, K., and Adler, T. "Assessing the prevalence of mining noise in a community using dichotomous correlation," Proceedings of the 2008 Institute of Noise Control Engineers NOISECON 2008.

Kaliski, K. and Duncan, E. "Propagation modeling Parameters for Wind Power Projects," Sound & Vibration Magazine, Vol. 24 no. 12, December 2008.

Duncan, E. and Kaliski, K. "Improving Sound Propagation Modeling for Wind Turbines," Acoustics 08, Paris 2008.

Kaliski, K. "Sound Advice: Evaluating Noise Impacts in a Changing Landscape," American Wind Energy Association Fall Symposium, November 2008.

Kaliski, K., and Duncan, E. "Propagation Modeling Parameters for Wind Turbines," Proceedings of the 2007 Institute of Noise Control Engineers NOISECON 2007.

Kaliski, K., Duncan, E., and Cowan, J. "Community and Regional Noise Mapping in the United States," Sound & Vibration Magazine, Vol. 41 No. 9, September 2007.

Collier, R. and Kaliski, K. "A Low-Complexity Environmental Noise Monitoring System for Unattended Operation in Remote Locations," Presented at the Acoustical Society of America conference, Salt Lake City, 2007.

Cowan, J. and Kaliski, K. "Tools for Expedited Regional Transportation Noise Mapping," Presented at the Transportation Research Board Summer Meeting, 2006.

Hathaway, K, and Kaliski, K. "Assessing Wind Turbines using Relative Noise Standards," Proceedings of the 2006 Institute of Noise Control Engineers INTERNOISE 2006.

Kaliski, K. "Using Transportation Demand Models to Assess Regional Noise Exposure," Proceedings of the 2005 Institute of Noise Control Engineers NOISECON 2005.

Collier, R. D., and Kaliski, K. H., and Ray, R. R. "Experimental Techniques for Evaluation of Active Noise Reduction Communication Headsets with the Thayer Low Frequency Acoustic Test Cell," Proceedings of the 2003 Institute of Noise Control Engineers NOISECON 2003.

Ray, R. R., Collier, R. D., and Kaliski, K. H. "Optimization of Stability and Performance of LMS Filters for Feedforward Active Noise Reduction in Communications Headsets," ACTIVE 02, The 2002 International Symposium on Active Control of Sound and Vibration, July 2002.

Kaliski, K. H., Mills-Tettey, A., Seitaridou, E., Collier, R. "Low-Complexity Continuous Noise Monitoring System for Communities, Small Airports, and Remote Areas," Proceedings of the 2001 Institute of Noise Control Engineers NOISECON 2001.

Marshal, N.L., Kaliski, K.H., Rimmer, L.L., Lawe, J.C. "Estimating Network Model Parameters from Mail Survey Data," Proceedings of ASCE 4th International Conf. on Microcomputers in Transportation, Baltimore MD, July, 1992.

Kaliski, K. "Integrating Network Modeling and Air Pollution Modeling to Determine NO2 Contributions from Motor Vehicles," Proceedings of the 3rd National Conference on Transportation Solutions for Small and Medium-Sized Areas, Transportation Research Board, October, 1991.

#### LICENSES, CERTIFICATIONS, MEMBERSHIPS, AND AFFILIATIONS

- Licensed Professional Engineer (PE), States of Vermont, New Hampshire, Illinois, Massachusetts, and Michigan
- Board Certified, Institute of Noise Control Engineering
- Co-chair Wind Turbine Noise Technical Activity Committee, Institute of Noise Control Engineering
- Acoustical Society of America, Technical Committee on Noise
- Qualified Environmental Professional, Institute of Professional Environmental Practice
- Tau Beta Pi Engineering Society
- William W Lang Distinguished Noise Control Engineer Award, awarded by the Institute of Noise Control Engineering, 2020