COMMONWEALTH OF KENTUCKY

BEFORE THE ELECTRIC GENERATION AND TRANSMISSION SITING BOARD

In the Matter of:

ELECTRONIC APPLICATION OF CRAB RUN SOLAR PROJECT, LLC FOR A CERTIFICATE OF CONSTRUCTION FOR AN UP TO 45 MEGAWATT MERCHANT ELECTRIC SOLAR GENERATING FACILITY IN MARION COUNTY, KENTUCKY	))))))	CASE NO. 2025-00276

APPLICANT CRAB RUN SOLAR PROJECT, LLC'S WITNESS LIST FOR APRIL 28, 2026 HEARING

Comes now Applicant Crab Run Solar Project, LLC (the "Project") by and through counsel, pursuant to 807 KRS 5:001, Section 6(2) and other applicable law, and hereby gives notice of its intent to make the following witnesses available for examination at the hearing for this matter scheduled for April 28, 2026.

(1) Jeannine Johnson, Senior Development Manager at Savion, LLC ("Savion"), and lead developer for the Project. Ms. Johnson will be available to provide testimony generally in sponsorship of the Project's Application (filed December 19, 2025), compliance with notice requirements, Motion for Deviation, and responses to the Electric Generation and Transmission Siting Board's ("Board") initial and supplemental data requests (filed February 16, 2026 and March 23, 2026).

(2) Cole Jennings, Project Delivery Engineer at Savion. Mr. Jennings will be available, if needed, to provide testimony regarding details of the Project from an engineering perspective, including Project layout, design, interconnection, and equipment, and portions of the Application and responses to Board data requests on these topics.

(3) Michael Ivy, P.E., Civil/Structural Engineering Manager at Savion. Mr. Ivy will be available, if needed, to provide testimony regarding details of the Project from an engineering perspective, including civil engineering and constructability (including but not limited to geotechnical and hydrology) and portions of the Application and responses to Board data requests on these topics.

(4) Ellen Mullins, Principal Technical Consultant at Environmental Resources Management, Inc. ("ERM") and lead consultant for the Project. Ms. Mullins will be available to provide testimony regarding impacts of the Project and ERM's role in the preparation of the Application, generally, and specifically regarding Application Tab 5, Attachment C, Cumulative Environmental Assessment ("CEA"). Ms. Mullins also participated in gathering information and preparing responses and attachments to the Project's responses to the Board's initial and supplemental data requests, as well as ERM's preparation of data/maps supporting the Motion for Deviation.

(5) Ben Sussman, Associate Partner and Lead of North American Visual Resources Group at ERM. Mr. Sussman will be available, if needed, to provide testimony regarding Application Tab 12, SAR Exhibits E (Visual Impact Illustrations), F (Landscape Plan), and G (Glare Analysis Study), and responses to Board data requests on these topics.

(6) Christina Martens, Director of Permitting and Environmental at Savion. Ms. Martens will be available, if needed, to provide additional testimony regarding environmental impacts, vegetation management and landscape, and federal, state, and local permits and coordination, as well as responses to Board data requests on these topics.

(7) Joshua Adams, Partner, Capital Project Delivery at ERM. Mr. Adams will be available, if needed, to provide testimony regarding Application Tab 12, SAR Exhibits H (Traffic Impact Study) and I (Decommissioning Plan), and responses to Board data requests on these topics.

(8) Joshua C. Pinkson, Ph.D., Associate Professor, Economics Department, College of Business, University of Louisville. Dr. Pinkston will be available, if needed, to provide testimony regarding Application Tab 10, Economic Impact Report, and responses to Board data requests on this topic.

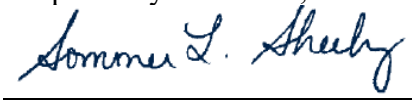
(9) Richard C. Kirkland, Jr., MAI, ARA, Kirkland Appraisals, LLC. Mr. Kirkland will be available, if needed, to provide testimony regarding Application Tab 12, SAR Exhibit B, Property Value Impact Study, and responses to Board data requests on this topic.

(10) Tony Agresti, Principal Scientist at ERM, will be available, if needed, to provide testimony regarding Application Tab 12, SAR Exhibit D, Noise Assessment Report, and responses to Board data requests on this topic.

Each of the above-listed witnesses can also provide testimony generally in their subject areas and regarding proposed mitigating measures in their subject areas.

Attached hereto are the qualifications of the Project's third-party expert witnesses, Joshua Adams, Tony Agresti, Richard Kirkland, Ellen Mullins, Joshua Pinkston, and Ben Sussman.

Respectfully submitted,



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Counsel for Crab Run Solar Project, LLC

Joshua Adams

Partner

Josh has more than 17 years of ecological and environmental services experience. Getting his start in Section 7 (endangered species consultation). He holds a federal collection permit for all listed bat species and has conducted mist netting and habitat assessment surveys for hundreds of miles of linear projects in West Virginia. Josh has assisted clients in multiple industry sectors to move projects from planning, through the permitting process, to construction. Over the past decade he has been involved in hundreds of development, transportation, traditional and renewable energy projects around the country. His knowledge of Environmental Regulations as well as relationships with many agency staff enables him to provide clients with the advice needed to move through the regulatory process efficiently.

Experience: 17 years' experience in the energy and power sectors.

Email: Joshua.adams@erm.com

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Education

- BS. Natural Resource Conservation and Management, University of Kentucky, May 2008

Professional Affiliations and Registrations

- North East Bat Working Group
- South East Bat Working Group

Languages

- English, native speaker

Fields of Competence

- Section 7 consultation
- Endangered bat surveys
- Project management
- Field surveys
- Energy Permitting

Key Industry Sectors

- Renewable Energy
- Electric Transmission
- Oil and Gas

Publications

- Success ff Brandenbark™, An Artificial Roost Structure Designed For Use By Indiana Bats (Myotis Sodalis) Journal of The American Society of Mining and Reclamation (JASMR) · Aug 15, 2015

Lynn Bark Energy Center, KY
As Partner in Charge, Josh oversaw the KYPSC application efforts, field studies and agency coordination for a proposed 200MW solar facility in eastern KY.

Pike County Solar Project, KY
As Partner in Charge, Josh oversaw the KYPSC application efforts, field studies and agency coordination for a proposed 100MW solar facility in eastern KY.

Confidential Solar Project, IN
As Partner in Charge, Josh oversaw the local permitting, agency coordination, and field efforts for a proposed 200MW solar facility in central IN.

Confidential Solar Project, IN
As Partner in Charge, Josh oversaw the local permitting, agency coordination, and field efforts for a proposed combined solar and BESS project with up to 1000MW capacity in central IN.

Nicholas County Solar Project
Josh was Project Manager for a proposed 250MW solar facility, associated 2-mile electric transmission line and 75MW BESS project in Nicholas County, West Virginia. He led the necessary field efforts and application preparation for acceptance by the WVPSC.

Confidential Electric Transmission Line
Josh led threatened and endangered species surveys for a proposed electric transmission line in central West Virginia. As part of this project he was responsible for designing and implementing listed bat and amphibian surveys to fulfill regulatory requirements. Efforts included more than 40 sites of mist net surveys, 4 weeks of harp trap surveys, and 6 miles of rare amphibian surveys and all necessary reporting and agency consultation.

Multiple Natural Gas Gathering Lines
Josh has led Section 7 consultation efforts of for hundreds of miles of natural gas gathering lines in the northern panhandle of West Virginia. He designed and implemented field surveys including habitat assessments, bat mist net surveys, radio telemetry, bird nest sweeps as well as helped design and implement mitigation for listed species impacted by these projects. In addition Josh worked hand in hand with the regulatory agencies to develop survey and mitigation protocols for bat habitat assessments to help streamline the consultation process.

Martin County I Solar Project
Josh led the KYPSC application efforts, field studies and agency coordination for a proposed 120MW solar facility in eastern KY. This project was the first utility scale solar project to be approved on a reclaimed coal mine in Kentucky.

Ashwood Solar Project
Josh led the KYPSC application efforts, field studies and agency coordination for a proposed 86MW solar facility in western KY. At the time, this was the largest solar project to be presented to the KYPSC and was the second to gain the board's approval in the state of Kentucky.

Cider Solar Project
Josh was the ecology lead for this 500MW solar project in NY State. He designed and led field studies to comply with NYDEC and ORES requirements. He authored multiple sections of the 94c application. This was the first project to go through and be approved using the new 94c process and was the largest solar facility in the state at the time of approval.

Graceland Solar Project
Josh led the biological efforts for the NEPA studies for this 150MW project in western TN. In addition he assisted in writing sections of the NEPA document required by TVA for approval.

Confidential Solar Project
Josh led the local permitting efforts, KYPSC application efforts, field studies, attended public meetings, testified in hearings and led agency coordination for a proposed 100MW solar facility in central KY.

Confidential Solar Project
Josh led the local permitting efforts, KYPSC application efforts, field studies, attended public meetings, testified in hearings and led agency coordination for a proposed 120MW solar facility in south central KY.

Martin County II Solar Project
Josh led the KYPSC application efforts, field studies and agency coordination for a proposed 80 MW solar facility in eastern KY. This project was the second utility scale solar project to be approved on a reclaimed coal mine in Kentucky.

Anthony Agresti, INCE

Principal Consultant

Mr. Tony Agresti has 39 years of experience in noise assessments for renewable energy (solar, BESS, wind power), data centers, cogeneration/independent power, compressor station and linear projects, LNG facilities, and industrial clients. He specializes in the design and implementation of ambient noise monitoring programs, performing noise analyses, which include developing detailed noise data for a variety of sources, modeling to calculate facility noise levels, and noise impact analyses. Tony also provides expert witness testimony on noise related issues.

EXPERIENCE: 39 years' experience in the field of environmental noise consulting for power generation and energy projects, linear projects, and environmental impact statements.

LINKEDIN: https://www.linkedin.com/in/anthonyagresti/

EMAIL: tony.agresti@erm.com

EDUCATION

- BA. Meteorology, Kean University, USA, 1984

PROFESSIONAL AFFILIATIONS AND REGISTRATIONS

- Institute of Noise Control Engineering – Elected Member

LANGUAGES

- English, native speaker
- Italian, working knowledge

FIELDS OF COMPETENCE

- Noise analysis and impact assessments
- Conceptual noise control design
- Noise modeling and mitigation analyses
- Design and implementation of ambient noise monitoring programs

- FERC permitting
- Compliance testing
- Expert witness testimony

KEY INDUSTRY SECTORS

- Data Centers
- Power (fossil, renewables, BESS)
- Oil & Gas
- Electric Utilities
- Cogeneration/ Combined Heat & Power
- Commercial and Industrial

KEY PROJECTS

Brightnight Power Deschutes Solar Development

Prepared the noise assessment for this solar/battery energy storage facility in Wasco County Oregon. The project would be capable of generating and storing up to one gigawatt of electricity. Prepared the noise assessment required for the Energy Facility Siting Council that included detailed noise modelling of the facility solar inverters, battery energy storage systems and power inverters. Multiple noise modelling iterations were conducted for micro-siting of facility sources in order to achieve compliance with the Oregon noise standard.

Confidential Client BESS

Currently conducting the noise assessment for this proposed battery energy storage system facility in Whatcom County, Washington. The project would be located in close proximity to residences. The noise assessment revealed that multiple noise mitigation measures would be required to achieve compliance with the Washington State noise standard. Worked closely with client engineers to relocate sources on the site, incorporate vendor provided noise attenuation kits, and design noise barrier systems.

Brightnight Power Tualatin BESS

Prepared the noise assessment for this proposed battery energy storage system in Washington County, Oregon. Noise modelling was conducted for numerous potential site plan layouts in order to demonstrate compliance wit the Oregon noise standard. An ambient noise measurement program was conducted to determine the existing ambient noise environment as also required by the standard.

QTS Data Center

Mr. Agresti conducted an acoustic assessment of a proposed data center facility in Aurora, Colorado. The assessment included an acoustical model of the proposed facility's cooling equipment, main step-up transformers, and emergency generators. Modeling considered the barrier and reflection effects of existing and proposed structures. Models of both normal and emergency operation were prepared and the results were evaluated against the State of

Colorado's noise standard at industrial and residential property lines and found to be below the regulatory limit. No noise mitigation measures were required.

STACK Data Centers

Mr. Agresti has assisted STACK with the noise assessments for multiple proposed data center facilities throughout Virginia, Georgia, Texas and Arizona. The assessments include conducting ambient noise measurement programs to quantify the existing noise environment, and developing noise modeling assessments to determine project related noise levels during normal and emergency operating conditions. Additionally, he has conducted noise mitigation modeling that includes evaluating different chiller and emergency generator models, attenuation packages, and source relocation. He has also supporting STACK by providing expert witness testimony at public hearings

Arevon Swallowtail Solar Facility

Mr. Agresti conducted the noise assessment for this proposed photovoltaic facility in Bartholomew County, Indiana. The noise assessment was carried out to understand the noise levels that would be generated by the project inverters and transformers. In lieu of applicable noise standards, modeled noise levels were evaluated against USEPA guidelines.

Dauphin Solar/BESS I Facility

Mr. Agresti prepared the noise assessment for this proposed 55 MW combination solar and battery storage facility in Upper Paxton, Dauphin County, Pennsylvania. Mitigation modeling consisting of micro-siting individual inverters and the BESS area was conducted in order to achieve compliance with the County noise ordinance for solar generating facilities.Short summary

Stellar Renewables Dry Creek and Capital City Solar/BESS Projects

Mr. Agresti conducted the noise modeling assessments for these proposed solar/BESS facilities. The Dry Creek project is a proposed 237 MW photovoltaic facility that will include 262 inverters, 44 auxiliary transformers and one substation transformer. The Capital City project is a proposed combination solar and BESS project that will contain 47 Tesla Megapack BESS containers, 92 solar inverters and a substation transformer.

Confidential Client Biomass Power Project, Divo, Ivory Coast

Mr. Agresti prepared the noise assessment for the Environmental and Social Impact Assessment for this proposed biomass project in Ivory Coast. The project will include boilers, conveying systems, transformers and cooling fans. ERM utilized field measured ambient sound level data collected by others to quantify the existing noise environment. Mr. Agresti conducted the noise modeling and mitigation analysis for the major facility sources. Modeled noise levels were compared to existing ambient conditions and to the World Bank/IFC noise standards.

Confidential Client Liquefaction Facility, Plaquemines Parish, Louisiana

Mr. Agresti is currently preparing the Resource Report 9 noise assessment as part of the FERC licensing for this proposed natural gas liquefaction project. The liquefaction portion of the project

will be in Plaquemines Parish, Louisiana. The project will also include two compressor stations, also in Louisiana. The noise assessment will include modeling and mitigation analyses of all operational noise sources, and an assessment of construction related noise, including for horizontal direction drilling activity.

Confidential Client Port Development Project, Toco, Trinidad and Tobago.

Mr. Agresti prepared the noise assessment for the Environmental Impact Assessment for this proposed ferry port project in Toco, Trinidad. ERM analyzed ambient noise measurement data collected by others in order to quantify the existing noise environment. Mr. Agresti modeled noise associated with potential port vessels, including passenger ferries, coast guard vessels and pleasure boats. Modeling of construction related noise, including pile driving and dredging, was also conducted. Project noise levels were evaluated against the existing ambient noise levels, the World Bank/IFC noise standards, and the Trinidad and Tobago noise pollution standard.

Confidential Client Helium Export Project, Freeport, Louisiana.

Mr. Agresti conducted the Resource Report 9 noise assessment for this helium extraction facility to be located at the site of an existing natural gas pre-treatment facility in Freeport, Louisiana. The noise assessment include a modeling and mitigation analysis of the major facility sources that include compressors, cooling fans and transformers. Ambient noise measurements at nearby NSAs were also conducted.

US Steel Mining Expansion Project, Minnesota

Mr. Agresti assisted in preparing the noise impact assessment for the Environmental Assessment for a proposed mining project in Minnesota.

KEY PROJECTS PRIOR TO JOINING ERM

Power Generation

Independent Power Client Solar Project - West Greenwich, Rhode Island

Mr. Agresti prepared a screening level acoustical assessment of a proposed 3.34 Megawatt photovoltaic solar project in West Greenwich, Rhode Island. The assessment included modeling of the facility transformers and inverters in order to calculate expected sound levels during daytime and nighttime hours. Also prepared an estimate of the effect on sound levels at nearby residential properties that may occur with removal of a large amount of tree cover from the site.

Independent Power Client Solar Projects - Multiple Sites in Rhode Island

Conducted screening level noise assessments for photovoltaic solar projects proposed at multiple sites throughout Rhode Island. Each site would include transformers and inverters. Assessments were conducted in order to determine expected sound levels during daytime and nighttime operation, and to evaluate expected noise levels against the applicable local noise ordinances. Also estimated existing ambient conditions using ANSI standards.

Independent Power Client - Wawayanda, New York

Mr. Agresti assisted the client in developing a noise testing protocol for approval by the Town of Wawayanda. The protocol was developed in consultation with Town officials and their acoustical consultant in preparation for noise compliance testing. The protocol was designed to provide the methodology for determining compliance with the Town's noise ordinance. Following approval of the protocol, conducted noise compliance testing of the Valley Energy Center operating under full load conditions while firing natural gas, and while firing ultra-low sulfur diesel fuel.

Independent Power Client - Beacon Falls, Connecticut

Mr. Agresti assisted client in conducting a noise assessment for this proposed 63 MW fuel cell project in Beacon Falls, Connecticut. The proposed project would be the largest fuel cell project in the world, consisting of 21 Fuel Cell Energy modules. Conducted an ambient noise monitoring program at nearby noise sensitive residential locations in order to quantify the existing noise environment. He has conducted detailed noise modeling of the fuel cell sources utilizing the CadnaA model. The existing topographic features of the site were included in the modeling analysis. Worked with client and their engineers to explore noise mitigation measures for the project to reduce noise levels and minimize potential noise impacts.

Independent Power Client - Woodbridge, New Jersey

Mr. Agresti conducted a noise assessment for an energy center, located in Woodbridge, New Jersey. This 700 MW project will consist of two GE Frame 7 combustion turbines and associated heat recovery steam generators operating in combined cycle mode. Conducted extensive noise modeling of the facility in order to determine if project noise levels would be in compliance with the State of New Jersey noise standard and the Woodbridge noise ordinance. He worked closely with CPV and their engineering staff while exploring mitigation measures that would be required to reduce project generated noise levels.

Independent Power Client - Sayreville, New Jersey

Mr. Agresti conducted the noise modeling analysis of this proposed 560 MW electric power generation facility consisting of one General Electric (GE) 7HA.02 combustion turbine, one heat recovery steam generator, a wet mechanical draft cooling tower, and other ancillary sources. Worked with client staff and their engineers to explore and evaluate the effectiveness of noise mitigation on various project sources in order to reduce offsite noise levels. As part of an eventual EIS filing, he has also conducted an ambient noise monitoring program in order to establish baseline noise levels for comparison to expected project related noise levels.

Independent Power Client Solar Project - Shoreham, New York

This proposed solar project, to be located on the site of a former golf course, would be capable of generating nearly 25 MW of electricity utilizing photovoltaic modules. Mr. Agresti conducted a noise modeling study of the emissions from the project electrical inverters and main transformer in order to determine project related noise emissions at residential areas bordering the site. The analysis revealed that project noise levels would be very low and not expected to result in any noise impacts.

Independent Power Client - Brookhaven, New York

This combined cycle facility, located in Brookhaven, New York, would generate approximately 752 megawatts (MW) of electricity using state-of-the-art combined cycle (CC) technology. The power block would consist of two F-Class heavy-duty combustion turbines that would drive two combustion turbine generators to produce electric power. Each CT would be equipped with a heat recovery steam generator. The project will utilize an air cooled condenser for cooling. The facility would be designed to operate as a base load electric generating plant. Mr. Agresti prepared the EIS noise section for the proposed Project, and was responsible for all phases of the noise licensing, including ambient noise monitoring, noise modeling of project sources, and determining compliance with both local standards and the New York State Department of Environmental Conservation's Noise Policy. Noise modeling was conducted utilizing the CadnaA noise model. This 3-dimensional model was used to develop a noise contour map of the entire area. The model allows input of topographic features and buildings, and takes into account both reflection and absorption by these features.

Independent Power Client Project - Brookhaven, New York

Conducted an ambient noise monitoring program at selected residential locations in the vicinity of the proposed combined cycle project. The ambient program was designed through close interaction with local civic groups in order that their potential concerns regarding noise could be addressed. The program included continuous noise monitors at five residential locations, and short-term measurements at additional locations. The results of the program will be utilized in future noise modeling and impact assessments as will be required under New York State's SEQRA process.

Utility Client Repowering Project - Island Park, New York

Mr. Agresti participated in the noise assessment of the proposed repowering of this utility client's facility along with acoustical consultants from several other firms. The Project will consist of a new combined cycle electric generating facility containing two GE Frame 7 combustion turbines, and a simple cycle facility containing up to six GE LM6000 combustion turbines. The noise assessment will undergo New York State Article 10 licensing review. Ambient noise monitoring programs were conducted in order to establish existing ambient conditions. Preliminary indications are that significant noise control measures will be required in order to achieve compliance with anticipated Article 10 licensing requirements.

Independent Power Client - Yonkers, New York

Mr. Agresti prepared the noise assessment for this proposed HVDC transmission system that would transport renewable power from eastern Canada to the New York City Metropolitan Area. The project would include an HVDC converter system located in Yonkers, New York. Conducted the ambient noise monitoring program and conducted the noise modeling study of the major noise generating sources associated with the converter station, including transformers, valve coolers, and reactors. Modeling results were evaluated against the Yonkers noise ordinance limits to demonstrate compliance.

Independent Power Client - Haverstraw, New York

Mr. Agresti conducted the noise assessment as part of an Article X amendment filing for this proposed 775-megawatt (MW) combined cycle electric power generating facility adjacent to GenOn's existing power generating facility in Haverstraw, Rockland County, New York. Conducted an ambient noise monitoring program and a detailed noise modeling analysis. Noise emissions from the proposed air cooled condenser and combustion turbine air inlets were a primary concern due to the proximity of residential locations and the regulatory noise requirements. Also evaluated the effectiveness of various air cooled condenser configurations and provided detailed noise specifications for the project.

Independent Power Client Solar Project - Winchendon, Massachusetts

Mr. Agresti evaluated noise emissions from the inverter pads associated with this proposed solar farm project. Noise emission data for the inverter fans and transformers were obtained from a potential vendor and noise modeling was conducted in order to determine operational noise levels at property line and residential locations.

Independent Power Client Wind Energy Project - Searchlight, Nevada

Mr. Agresti conducted the noise assessment for the proposed Searchlight Wind Energy Project. The project will consist of from 87 to 96 wind turbine generators located in the area of Searchlight, Nevada. The analysis includes conducting noise modeling to determine noise levels throughout the area. Special attention is being paid to potential noise impacts on Bureau of Land Management and National Recreational Lands, including the adjacent Lake Mead Recreation Area. Provided expert witness testimony in support of the project.

Independent Power Client Wind Energy Project - Reading, Michigan

Mr. Agresti provided noise consulting services, including expert witness support, for this proposed 100 MW wind energy facility to be located on over 12,000 acres in and around Reading, Michigan. As part of the noise assessment, provided support in the form of attending and presenting at a local wind power exposition, and attended regulatory hearings. Detailed noise modeling was conducted in order to microsite wind turbine locations for demonstrating compliance with local noise ordinances.

Independent Power Client Wind Energy Project - Chautauqua County, New York

Mr. Agresti prepared the noise assessment for this proposed wind energy project. The project will consist of 42 Siemens SWT-2.3-108 wind turbine generators ranging in hub height from 80 meters to 98 meters. The analysis includes conducting multiple noise modeling iterations and micro-siting of the turbine locations in order to achieve compliance with the applicable noise standard at residential locations.

Independent Power Client - Maryland

Mr. Agresti conducted the noise guarantee testing of the air quality control systems (ACQS) at three electric generating facilities in Maryland. Testing was conducted under ANSI standards in order to determine the noise emissions of sources associated with the AQCS, and to determine if the sources were in compliance with contractor's performance guarantee.

Independent Power Client - Wawayanda, New York

Mr. Agresti prepared the SEQRA EIS noise assessment for this proposed 630 MW natural gas facility in Wawayanda, New York. The assessment consisted of an ambient noise monitoring program at selected noise residential locations in the vicinity of the project site, and a detailed 3-dimensional noise modeling and mitigation study. The proposed project would utilize air cooling technology, which required special attention during the noise modeling analysis. Also responsible to ensure that calculated future noise levels and increases in noise would be in compliance with the local noise ordinance and the requirements of the NYSDEC.

Local Jurisdiction Wind Project - Dartmouth, Massachusetts

Mr. Agresti conducted a peer review of the noise assessment conducted for the Dartmouth DPW Wind project for the Town of Dartmouth. The peer review was conducted in order to evaluate if the noise assessment was conducted in accordance with industry-accepted standards, and followed ANSI and other prescribed standards for conducting wind energy noise assessments.

Independent Power Client - Middletown, Connecticut

Mr. Agresti conducted the noise assessment for this 620 MW combined cycle facility located in Middletown, Connecticut. A detailed noise modeling study and an ambient noise monitoring program were conducted in order to satisfy the requirements of the State of Connecticut Siting Council. Provided expert witness testimony to the Siting Council in support of the Project, and continued to support this project through the design and implementation of construction noise monitoring programs and updating noise modeling to incorporate new or modified sources at the facility to ensure compliance with the noise standard. Completed the noise compliance testing for the facility as part of the Siting Council requirements. The testing demonstrated that facility noise levels were well below the State of Connecticut noise standard limits.

Independent Power Client Wind Energy Project - Grant County, West Virginia

Mr. Agresti served as the senior noise scientist on this proposed wind project in West Virginia. The project, proposed in Grant County, will consist of up to 66 GE or Clipper wind turbines rated at 1.5 MW to 2.5 MW each. The complex topographical features of the area required the use of the CadnaA 3-dimensional noise model for determining project noise levels throughout the area. The noise assessment for the project was designed to comply with the detailed requirements of the West Virginia Public Service Commission (WVPSC), which included a seven day ambient noise monitoring program, and noise modeling of operational and construction related noise levels. Prepared pre-filed direct testimony for submittal to the WVPSC.

Independent Power Client Wind Energy Project - Potter County, Pennsylvania

Mr. Agresti served as the senior noise scientist for licensing of this proposed wind power project in Potter County, Pennsylvania. Conducted or provided oversight of the ambient noise monitoring program, conducted to establish baseline noise level conditions, and the noise modeling study. The project would consist of up to 62 GE 1.5 XLE or 2.5 XL turbines. Also conducted a correlation analysis of hub height wind speeds versus ground level ambient sound levels, in order to provide an estimate of ambient sound levels during various hub height winds.

Independent Power Client - Babylon, New York

Mr. Agresti conducted the noise assessment for this combined cycle facility consisting of a GE LM6000 combustion turbine, HRSG, steam turbine, and ancillary equipment. The assessment included an ambient noise monitoring program to characterize existing conditions in the site vicinity, and a noise modeling/mitigation analysis. The project was required to comply with the noise requirements of the Town of Babylon and the New York State Department of Environmental Conservation's noise policy. The modeling analysis revealed that noise mitigation measures would be needed in order to demonstrate compliance. The selected mitigation measures included an acoustical enclosure for the gas compressors, and a 42 foot high wall to shield nearby residences.

Independent Power Client - Freeport, New York

Mr. Agresti conducted the noise assessment for this combined cycle facility located in Freeport, New York. The project consists of two GE LM6000 combustion turbines, HRSGs, steam turbine, cooling tower and ancillary equipment. The project was constructed adjacent to an existing power generation facility.

The noise assessment included an ambient noise monitoring program to characterize existing conditions in the site vicinity and a noise modeling/mitigation analysis. The project was required to comply with the noise requirements of the Village of Freeport and the New York State Department of Environmental Conservation's noise policy. The Village noise ordinance contained limits for residential, commercial and industrial property lines, and as such, the modeling analysis required evaluation of multiple compliance areas. The modeling analysis revealed that noise mitigation measures would be needed in order to demonstrate compliance with the Village limits and the NYSDEC noise policy. The selected mitigation measures included strategic positioning of facility sources, turbine inlet and exhaust silencers and enclosures for skid mounted equipment. A 42 foot high wall was also constructed to reduce noise at nearby properties.

Independent Power Client Wind Energy Project - Kibby Township, Maine

Mr. Agresti served as the noise scientist for this proposed wind project in Kibby and Chain of Ponds Townships in Maine. The project would consist of 15 Vestas V90 3 MW wind turbines. An ambient noise monitoring program and noise modeling of the output from the turbines was conducted. The modeling accounted for the complex terrain features in the area.

Independent Power Client Wind Energy Project - Pennsylvania

Mr. Agresti served as the noise scientist during licensing of this wind power project in Pennsylvania. The project, which is currently under construction, will consist of 124 GE 1.5 MW wind turbines. Conducted the ambient noise monitoring program, to establish baseline conditions, and conducted noise modeling of the wind turbines using the CadnaA model.

Utility Client - Queens, New York

Mr. Agresti prepared the Article X noise assessment for this combined cycle facility consisting of a Frame 7FA combustion turbine and air cooled condenser. Conducted an ambient noise monitoring program in accordance with NYSDPS requirements. Acoustic design goals for the facility were

developed based on ambient conditions as specified by the modified CNR method and NYSDPS stipulations. Conducted a noise modeling study as part of facility licensing to demonstrate compliance with all applicable noise standards. Also conducted the compliance noise testing of the project as required by NYSDPS.

Independent Power Client - Haworth, New Jersey

Mr. Agresti prepared a noise study of this proposed electric generating project in Haworth, New Jersey. The project will consist of four Caterpillar G3520C reciprocating internal combustion engines housed within a building. Was responsible for developing a building design that would allow for compliance with the State of New Jersey noise standard. Worked with noise control vendors to specify the required wall and acoustical louver materials required.

Utility Client - Northport, New York

Mr. Agresti conducted a technical noise assessment for the proposed installation of either a hybrid mechanical draft or a hyperbolic natural draft cooling tower at the client's Northport, New York electric generating station. The assessment included an ambient noise monitoring program in the project vicinity to quantify existing ambient noise levels, and a noise modeling/impact study. Future noise levels associated with the cooling towers were compared to the Town of Huntington and NYSDEC noise standards.

Independent Power Client Wind Energy Project - Cape Cod, Massachusetts

Mr. Agresti conducted the review of the anthropogenic noise impact analysis prepared for the proposed Cape Wind Project, the first offshore wind power project in the northeast. The project would be capable of generating up to 345 MW of electricity, or enough for 75 percent of Cape Cod. Multiple iterations of comment responses were required during the public hearing process. Worked with MMS staff in preparation of the noise sections.

Independent Power Client Wind Energy Project - Laurel Hill, Pennsylvania

Mr. Agresti served as the noise scientist on this project, preparing a detailed noise study. The project, proposed in Lycoming County, Pennsylvania, will consist of 47 GE wind turbines rated at 1.5 MW each. The complex topographical features of the area required the use of the CadnaA 3-dimensional noise model. Also conducted noise level measurements of wind turbines in operation at several sites to support study conclusions and provided expert witness testimony at numerous zoning board of approval hearing.

Subsequently conducted a detailed noise testing program of the operational project in order to demonstrate that noise emissions were in compliance with the Lycoming County noise ordinance limits.

Utility Client - Newington, Massachusetts

Performed the noise impact assessment for the client's proposed combined cycle electric generating facility. The facility will consist of two GE Frame 7FA turbines, heat recovery steam generators, a cooling tower, and other ancillary equipment. Performed computer noise modeling of

the major sources and designed the background noise monitoring program to establish baseline noise levels in the area. Noise control features were added in order to maintain future increases in noise to no greater than 3 dBA.

Independent Power Client Wind Energy Client - Barbour and Randolph Counties, West Virginia

Mr. Agresti served as the senior noise scientist on this proposed wind project in West Virginia. The project, proposed in Barbour and Randolph counties, will consist of up to 65 GE or Clipper wind turbines rated at 1.5 MW to 2.5 MW each. The complex topographical features of the area required the use of the CadnaA 3-dimensional noise model for determining project noise levels throughout the area. The noise assessment for the project was designed to comply with the detailed requirements of the West Virginia Public Service Commission (WVPSC), which included a seven day ambient noise monitoring program, and noise modeling of operational and construction related noise levels. Provided expert witness testimony to the WVPSC as part of project licensing.

Independent Power Client - Waterbury, Connecticut

Mr. Agresti performed the noise assessment for this simple cycle facility consisting of a GE LMS100 combustion turbine and ancillary equipment. The noise assessment included an ambient noise monitoring program, noise modeling of all the major facility sources, and a noise impact assessment. Project compliance with the State of Connecticut and City of Waterbury noise standards was demonstrated. Provided expert witness testimony for FirstLight in front of the Connecticut State Siting Council. Following project approval, Mr. Agresti worked closely with FirstLight engineers during the equipment procurement process developing noise specifications for the major equipment sources. Also conducted the noise compliance test in for the facility.

Independent Power Client - Brookhaven, New York

Mr. Agresti prepared the EIS noise section for this proposed 346 MW combined cycle combustion turbine project in Brookhaven, New York. The project will consist of a Siemens Westinghouse combustion turbine and a heat recovery steam generator. The project will utilize an air cooled condenser for cooling. Was responsible for all phases of the noise licensing, including ambient noise monitoring, noise modeling of project sources, and determining compliance with both local standards and the New York State Department of Environmental Conservation’s Noise Policy. Noise modeling was conducted utilizing the CadnaA noise model. This 3-dimensional model was used to develop a noise contour map of the entire area. The model allows input of topographic features and buildings, and takes into account both reflection and absorption by these features. Subsequently provided oversight during the noise compliance guarantee testing conducted by Siemens.

Utility Client Distributed Generation Project - Norwalk, Connecticut

Mr. Agresti prepared a noise study for three Caterpillar XQ2000 emergency generators at a site in Norwalk, Connecticut. Was responsible for preparing a noise model of the engines. Conducted noise measurements following engine installation to confirm calculated noise levels complied with the City of Norwalk and State of Connecticut noise standards. Represented client at town planning board and zoning board meetings.

Independent Power Client - Cambridge, Massachusetts

Mr. Agresti performed the noise impact assessment for the construction of a combined cycle facility at the site of a currently operating steam boiler facility. The project consists of one GE Frame 7FA turbine coupled to a heat recovery steam generator. Performed computer noise modeling of major facility sources in order to determine future noise levels at nearby sensitive receptors. The State noise standard limits noise increases to no greater than 10 dBA above background. The MADEP required that a "BACT" analysis be performed in order to determine the incremental cost involved in adding noise control features in order to reduce facility noise levels to increments of 3, 6 and 9 dBA above background. Determined noise control required for each major source and obtained cost estimates from vendors and suppliers. Also provided expert witness testimony in support of the project in front of the State Siting Council.

Independent Power Client - Peabody, Massachusetts

Mr. Agresti prepared the noise study for this proposed 99 MW peaking power facility. The project will include an Alstom Model GT11N2 combustion turbine generator. Conducted noise modeling of facility sources and provided oversight of the ambient noise monitoring project. Specified noise control measures required to comply with MADEP's noise policy; limiting increases in future noise levels to no greater than 10 dBA at any locations.

Independent Power Client - Sandwich, Massachusetts

Mr. Agresti performed the noise impact assessment for the expansion of this facility. Expansion to consist of the addition of two GE Frame 7FA turbines and ancillary equipment to an existing power plant. Performed computer noise modeling of major facility sources in order to determine future noise levels at nearby sensitive receptors. The State noise standard limits noise increases to no greater than 10 dBA above background. The MADEP required that a "BACT" analysis be performed in order to determine the incremental cost involved in adding noise control features in order to reduce facility noise levels to increments of 3, 6, and 9 dBA above background. Determined noise control required for each major source and obtained cost estimates from vendors and suppliers.

An additional requirement of MADEP was that the impact assessment consider the increase in noise over the baseline noise levels that would exist in the absence of the existing plant. Therefore, as part of the background noise monitoring, the contribution of noise from the existing plant to the noise environment was calculated and subtracted from the measured noise levels.

Utility Client - Queens, New York

Mr. Agresti performed the noise assessment in support of the Article X permitting for two additional proposed baseload combined cycle facilities. The assessment included an ambient noise monitoring program to characterize the existing noise environment. Computer noise modeling of the major facility sources was performed using the NYSDPS's NOISECALC model. Noise control measures were incorporated as needed in order to comply with the New York City noise standards (including the CEQR requirement) and the modified CNR analysis. Extensive meetings were held with NYCDEP noise staff during the licensing phase.

Independent Power Client - Everett, Massachusetts

Mr. Agresti provided oversight for the client during EPC contractor compliance noise testing of the completed Mystic Station 8&9. Conducted simultaneous noise measurements with EPC contractor staff to verify measured levels.

Independent Power Client - Weymouth, Massachusetts

Mr. Agresti was contracted by client to provide oversight during EPC contractor compliance noise testing of the operational facility. Also contracted to conducted periodic compliance testing on a semi-annual basis. Prepared a noise compliance testing protocol that was submitted to regulatory officials for approval.

Utility Client - Somerset and Salem, Massachusetts

Mr. Agresti conducted noise assessments for proposed air pollution control equipment upgrades at these two coal fired power plants in Massachusetts. Both assessments required that background noise monitoring programs be conducted in the vicinity of each project site in order to quantify existing baseline noise levels. Detailed computer noise modeling of each project was then conducted incorporating major noise generating sources, which included FD and ID fans, ash vacuums, blowers, and transformers. Noise mitigation measures were incorporated during the design phase, including FD fan discharge silencers, fan casing, and ductwork acoustical lagging, in order to maintain noise level increases to imperceptible levels.

Independent Power Client - Shoreham and Edgewood, New York

Mr. Agresti prepared the noise assessments for these two proposed peaking facilities consisting of two LM6000 combustion turbines each, in Brookhaven, New York and Brentwood, New York. Under the SEQR filing, noise will be governed by the local noise standard and the NYSDEC noise guidelines. The assessments consisted of background noise monitoring to quantify existing noise levels and conducting noise modeling to calculate future facility levels. Worked closely with engineering staff to specify noise control measures which would be required in order to comply with both local regulations and the NYSDEC noise impact guidelines. Also conducted follow-up noise testing with facility in operation.

Utility Client - Huntington, New York

Mr. Agresti prepared the Article X noise assessment for a proposed 250 MW combined cycle facility consisting of a Frame 7F combustion turbine and air cooled condenser. Collected background noise level data in accordance with NYSDPS requirements. Acoustic design goals were developed based on ambient conditions as specified by the modified CNR method and NYSDPS stipulations. Fairly low ambient noise levels and the proximity of residential uses required extensive noise control, especially on the air cooled condenser. Provided expert witness testimony at the Article X hearings.

Utility Client Peaking Units - Glenwood, NY and Port Jefferson, New York

Mr. Agresti prepared the noise assessments for these two proposed simple cycle peaking facility consisting of two LM6000 combustion turbines each in Glenwood, New York and Port Jefferson, New York. Under the SEQR filing, noise will be governed by the local noise standard and the

NYSDEC noise guidelines. The assessments consisted of background noise monitoring to quantify existing noise levels and conducting noise modeling to calculate future facility levels. Worked closely with engineering staff to specify noise control measures, which would be required in order to comply with both local regulations and the NYSDEC noise impact guidelines.

Independent Power Client - Smithtown, New York

Mr. Agresti prepared the noise assessment in support of the Article X permitting for a proposed 300 MW peaking facility consisting of six LM6000 combustion turbines. The proximity of residential uses and low existing ambient noise levels required that extensive noise control measures be incorporated into the facility design in order to meet the stringent requirements of the New York State Department of Public Service's modified Composite Noise Rating method. He worked closely with equipment suppliers and project engineers to specify noise control measures, which include an extensively treated turbine building, significant stack silencers, and strategically locating sources on the site.

Utility Client - Norwalk, Connecticut

Mr. Agresti provided technical oversight for all phases of the noise assessment for this 50 MW repowering project located in South Norwalk, Connecticut. The project consists of the removal of six deactivated engine generators and replacement with three Wartsilla dual fuel generator sets. Noise control was a major component of the project as residential areas were located as close as 150 feet away. In addition, particular attention was paid to low frequency noise produced by the engines, in order to prevent any noise-induced vibration at the residential locations. Extensive noise mitigation measures were designed into the project, including an engine building of acoustical masonry, high efficiency silencers on all inlets, exhausts, and building ventilation, and a low noise design cooling tower. Provided expert witness testimony to the Connecticut Siting Council in support of the project.

Independent Power Client - Queens, New York

Mr. Agresti prepared the noise assessment in support of the Article X permitting for this proposed baseload combined cycle facility. The assessment included an ambient noise monitoring program to characterize the existing noise environment. Computer noise modeling of the major facility sources was performed using the NYSDPS's NOISECALC model. The projected facility noise levels and the existing ambient noise levels were incorporated into the modified CNR analysis to determine potential noise impacts. Extensive noise control measures were required in order to meet the CNR analysis requirement and to meet the NYC noise standards, including the zoning resolution, noise code, and CEQR requirements. Extensive meetings were held with NYCDEP noise staff during the licensing phase.

Utility Client - Queens, New York

Mr. Agresti performed the noise assessment in support of the Article X permitting for two additional proposed baseload combined cycle facilities. The assessment included an ambient noise monitoring program to characterize the existing noise environment. Computer noise modeling of the major facility sources was performed using the NYSDPS's NOISECALC model. Noise control measures were incorporated as needed in order to comply with the New York City noise standards

(including the CEQR requirement) and the modified CNR analysis. Extensive meetings were held with NYCDEP noise staff during the licensing phase.

Independent Power Client Peaking Facility - Buchanan, New York

Mr. Agresti prepared the Article X noise assessment for a proposed 500 MW simple cycle facility consisting of eight LM6000 combustion turbines. Assessment consisted of background noise monitoring during leaf on and leaf off conditions, in accordance with NYSDPS requirements. Acoustic design goals were developed based on ambient conditions as specified by the modified CNR method and NYSDPS stipulations. Fairly low ambient noise levels and the proximity of residential uses will require fairly extensive noise control measures.

Independent Power Client - Chicago Illinois

Mr. Agresti performed a noise modeling study of a proposed eight unit simple cycle peaking facility consisting of eight Frame 6B units and ancillary equipment. Noise from the facility is regulated under the State of Illinois and City of Chicago noise standards. Because of the proximity of residential uses, noise control measures were required. Worked closely with equipment suppliers and the client to ensure cost-effective control measures would be designed into the project. Also conducted detailed noise modeling to determine the minimum effective noise barrier wall height required to meet applicable regulation.

Independent Power Client - West Deptford, New Jersey

Mr. Agresti performed a detailed noise assessment study of all major sources associated with the proposed Crown Vista Energy coal fired power project in West Deptford, New Jersey. Developed noise data for many sources from the literature and conducted detailed analysis of coal car shaker noise. Many noise control features were specified for the facility as part of the modeling analysis in order to meet both the state of New Jersey noise control code and a stipulated noise impact criteria using the modified CNR analysis. The study also required an analysis of truck noise on local roads associated with ash disposal. Also designed and conducted an ambient noise monitoring program to characterize the existing noise environment and collect data for use in the noise impact analysis.

Utility Client - Auburn and Walden, New York

Mr. Agresti conducted noise assessments in support of local township approvals for the installation of a portable Taurus 70 combustion turbine generator. The studies consisted of noise modeling to determine future noise levels, ambient noise monitoring to determine existing noise levels, and post-operational monitoring to evaluate the effectiveness of noise control measures. A turbine was installed at NYSEG’s Auburn facility and is currently operating.

Independent Power Client - South Lebanon, Pennsylvania

Mr. Agresti performed the noise impact assessment for the AES Ironwood facility. The facility consists of two Westinghouse 501G combustion turbines operating in combined cycle mode. The noise assessment consisted of several noise monitoring programs to quantify existing noise levels, detailed computer noise modeling of the major noise generating sources at the plant, and incorporation of noise control measures. The calculated noise levels were evaluated against

existing ambient levels and, in lieu of applicable state and local standards, the noise standards from neighboring states.

Independent Power Client - Wallingford, Connecticut

Mr. Agresti performed the noise assessment for a 300 MW peaking facility consisting of six LM6000 combustion turbines. Facility noise levels are governed by the State of Connecticut noise standard. Noise control measures for the project included enclosures on ancillary skids, intake and exhaust silencers, and a 50 foot tall noise barrier wall on three sides of the facility. Supported the client at State Siting Board hearings and provided expert witness testimony. The project was approved and constructed. Subsequently conducted the noise compliance testing for the facility as part of the Siting Council requirements. Testing revealed that project noise levels were within applicable noise limits.

Independent Power Client - Morro Bay and Moss Landing, California

Mr. Agresti performed the noise impact assessment for the expansion of these two facilities. Expansion to consist of the addition of two GE Frame 7FA turbines and ancillary equipment to the Moss Landing plant and four turbines and ancillary equipment at the Morro Bay plants. Performed computer noise modeling of major facility sources in order to determine future noise levels at nearby sensitive receptors. The California Energy Commission required that late night noise levels could not increase more than 5 dBA over ambient levels. In addition, each town adopted Noise Elements, which further regulate allowable noise levels. Varying levels of noise control were required at each plant in order to meet the requirements.

Oil & Gas Permitting Projects

Confidential Client - Cambridge, Massachusetts

Mr. Agresti conducted a noise modeling and mitigation study of a proposed gas metering station to be located in Cambridge, Massachusetts. The project would be located on a small parcel of land within a residential neighborhood. Project generated sound would be regulated by the Cambridge noise standard. Conducted noise modeling and mitigation analyses and provided recommended noise control measures that will be required in order for offsite noise levels to be in compliance with the local noise ordinance.

Confidential Gas Pipeline Client - Boone County, Missouri

Conducted a Resource Report 9 noise assessment for the proposed uprating of the existing Columbia Compressor station located in Boone County, Missouri. The assessment included a noise testing program to determine noise levels generated by the existing facility at nearby NSAs, estimating future sound levels associated with uprating of the compressor station combustion turbine, and preparation of the Resource Report 9 noise section. A follow-up noise testing program was performed following FERC approval, and demonstrated that noise levels generated by the facility were within FERC limits.

Confidential Gas Pipeline Client, Compressor Station - Mamou, Louisiana

Conducted the Resource Report 9 noise assessment as part of the FERC licensing for this proposed compressor station. The project will include Dresser Rand compressors driven by three Solar Taurus 70 turbines and one Solar Titan 130 combustion turbine. An ambient noise monitoring program was conducted in order to establish existing ambient noise levels in the vicinity of the gas compressor station. A noise modeling study of operational noise from the compressor station was conducted and noise mitigation measures were developed in order to comply with FERC's 55 dBA Ldn noise level limit.

Confidential Gas Pipeline Client - Northeastern Louisiana

Prepared the noise assessment as part of the FERC licensing for this proposed gas storage project. The project will include a gas compressor station, 16 horizontally drilled wells, and 5 observation wells. An ambient noise monitoring program was conducted in order to establish existing ambient noise levels in the vicinity of the gas compressor station and wells. A noise modeling study of operational noise from the compressor station was conducted and noise mitigation measures were developed in order to comply with FERC's 55 dBA Ldn noise level limit. Noise modeling of drilling operations was also conducted.

Confidential Client - Pittsburg Terminal – Pittsburg, California

Conducted the noise analysis for the proposed upgrade of this existing tank farm to a ship loading terminal. The project will include the installation of 19 large electric motor driven pumps, ranging from 200 hp to 3,500 hp, transformers, heaters and a thermal oxidizer. A noise modeling study was conducted in order to determine offsite noise levels, and the noise mitigation measures that will be required in order for project noise emissions to be in compliance with the Pittsburg noise element and other noise restrictions.

Confidential Client - Various Sites, Louisiana

Conducted the RR9 noise assessments for five gas compressor stations associated with the Mid-Continent Express Pipeline. Ambient noise monitoring programs were conducted at each site, and computer noise modeling and mitigation studies were conducted. Prepared the noise specifications required for each compressor station site. Subsequently conducted or overseen the noise compliance tests for each compressor station in order to fulfill the FERC requirement for noise testing.

Confidential Gas Transmission Company - Red River Parish, Louisiana.

Mr. Agresti conducted the noise assessment as part of the FERC licensing for this 1,680 hp compressor station. The project included a Waukesha L7044GSI reciprocating engine powering an Arial compressor. An ambient noise monitoring program was conducted in order to establish existing ambient noise levels in the vicinity of the gas compressor station. A noise modeling study of operational noise from the compressor station was conducted and noise mitigation measures were developed in order to comply with FERC's 55 dBA Ldn noise level limit.

Confidential Client, Gas Processing Plants - Carlisle, Ohio and Shultz, West Virginia

Mr. Agresti conducted detailed noise assessments for these two gas processing plants. Assisted client in developing acceptable noise levels in lieu of any local or state noise standards governing allowable noise levels. Ambient noise monitoring programs were conducted at each site in order to quantify the existing noise environment. Noise modeling was conducted of the major facility sources, which included multiple reciprocating engines, gas compressors, and gas coolers. Significant topographic features were present and were included in the noise modeling study. Several noise mitigation scenarios were prepared and presented to client. Also assisted client during the procurement process of the facility buildings in order to ensure that the buildings would meet the noise specifications that were developed.

Confidential Gas Transmission Company, Compressor Stations - Texas and Louisiana

Mr. Agresti conducted the FERC noise assessments for these two compressor station projects proposed as part of CEGT's Carthage to Perryville Project. The compressor stations were to be powered by Solar Taurus and Mars turbines. Detailed noise emission derivation calculations were required for each source and building proposed for the project, and noise modeling was conducted to determine future noise levels at nearby NSAs. Noise control measures and their performance specifications were also developed. An ambient noise monitoring program was conducted in order to establish existing ambient noise levels in the vicinity of the gas compressor stations.

Confidential Client, LNG Infrastructure Enhancement Project - Lake Charles, LA

Conducted a detailed noise assessment of the proposed IEP project at the Lake Charles LNG facility. The assessment included detailed noise modeling of the proposed IEP sources that included vaporizers, pumps, compressors, exchangers, and heater fans. Particular attention was paid to the proposed 192 heater fans and their noise contribution to the project. Evaluated several different fan designs, and provided recommendations to client for noise specifications and fan selection.

Confidential Client, New York/New Jersey Energy Bridge Project - Staten Island, New York

Prepared the noise assessment in support of preparation of an application to the U.S. Coast Guard under the Deepwater Ports Act for an offshore LNG terminal and 48-mile subsea pipeline. The proposed LNG terminal would be located offshore New Jersey with a subsea pipeline traversing Lower New York Bay to a landfall on Staten Island. Responsibilities included coordination of offshore environmental studies with the geophysical surveys and geotechnical sampling program.

Confidential Client, Quoddy Bay LNG Project - Washington County, Maine

Conducted the FERC noise assessment for this proposed 2.0 Bcfd LNG facility in Washington County, Maine. A noise monitoring program, compliant with the requirements of the Maine DEP noise standard, was conducted in order to quantify the existing noise environment. A noise modeling study that included development of conceptual noise control measures was conducted to determine future noise levels from the numerous sources at the facility. Noise modeling was also conducted to determine construction noise levels and HDD noise levels. The noise assessment was

summarized in the FERC Resource Report 9 and in the Maine Site Location of Development Act application.

Oil and Natural Gas Client, Elba Island III - Elba Island, Georgia

Prepared the third party EIS for clients' proposed expansion of its existing LNG import terminal on Elba Island near Savannah, in Chatham County, Georgia. The expansion would more than double the site's LNG storage capacity by adding 405,000 cubic meters (m3) of new storage. Worked closely with FERC staff in preparing data requests as needed and reviewing Southern's application.

Rockies Express Western Phase Project - New Mexico, Colorado, Wyoming, Nebraska, Kansas, Missouri

Prepared the noise sections of the Environmental Impact Statement for this proposed multi-state pipeline project. The project contained 12 compressor stations sites, each requiring noise analysis. Conducted the review of each noise analysis that was prepared and submitted by the applicants, and prepared data requests for supplemental data that were required. Worked closely with FERC staff to develop recommendations for project noise conditions.

Confidential Client, Gas Compressor Projects - Various Locations

Prepared the Resource Report 9 sections for submittal to the Federal Energy Regulatory Commission required for licensing of three gas compressor stations located in Rio Blanco County, Colorado, Wise County, Texas, and Carter County, Oklahoma. Was responsible for both the ambient noise monitoring and the noise modeling of each station. Specified noise control measures required to achieve compliance with FERC's noise limit of 55 dBA Ldn at any noise sensitive area.

Oil and Natural Gas Client, Lavaca Bay LNG Project - Calhoun and Jackson Counties, Texas

Prepared the FERC third party EIS for the clients' LNG facility, to be located in Calhoun and Jackson Counties, Texas. The project will have the ability to liquefy five million tons of LNG per year and store 500,000 cubic meters of LNG. Activities included reviewing the submitted analyses, preparing data requests for additional information, and prepared the FERC EA.

Energy Client, LNG Terminal Project - Cameron Parish, Louisiana

Prepared the noise section for the third party EIS for this LNG import terminal to be located in Cameron Parish, Louisiana. The proposed project will import, store, and vaporize approximately 2,600 MMscfd of LNG per day.

Energy Client, LNG Liquefaction Project - Brazoria County, Texas

Prepared the FERC third party EIS for clients' proposed expansion of its existing LNG import terminal on Quintana Island in Brazoria County, Texas. The expansion would include a Liquefaction Project, capable of producing 13.2 million tons of liquefied natural gas per year, and an upstream pre-treatment plant to remove certain contaminants. The proposed combined project presents the potential for noise impacts due to normal operation, gas flaring, and LNG tanker movements. Construction, which will include pile driving, also presents the potential for noise impacts. Worked

closely with FERC staff in preparing multiple data requests as needed and reviewing Freeport's analyses.

Confidential Client, Cameron LNG Liquefaction Project - Hackberry, Louisiana

Mr. Agresti prepared the Resource Report 9 noise analysis for this proposed natural gas liquefaction facility at the existing Cameron LNG Terminal (LNG Terminal), which is located near the town of Hackberry, Louisiana. The Cameron LNG Liquefaction Project will add liquefaction capability to the LNG Terminal. With the added liquefaction capability, natural gas received at the LNG Terminal will be cooled into liquid form and stored in full-containment LNG storage tanks. The existing terminal systems and marine facilities will be utilized to transfer LNG onto ships.

Confidential Client - Long Beach, California

Mr. Agresti conducted the ambient noise monitoring and prepared the draft Resource Report 9 section for this proposed LNG terminal in Long Beach, California.

Confidential Client - Cheshire, Connecticut

Mr. Agresti performed the noise assessment for a proposed gas compressor station that will consist of a Taurus 70 combustion turbine and ancillary equipment. The project is subject to the local noise standard and FERC noise standards. Noise modeling revealed that noise control measures, including stack and inlet silencers and a turbine enclosure, would be required in order to achieve these standards. Designed the ambient noise monitoring program required to establish baseline noise conditions.

Energy Storage

Confidential Client - Stillwater, New York

Mr. Agresti prepared a noise study of a proposed battery storage project in Stillwater, New York. The assessment included an ambient noise measurement program and noise modeling study to determine expected offsite sound levels during project operation. Assisted client in negotiations with Town officials to develop acceptable increases in sound over ambient conditions during special use permit licensing.

Confidential Client - Moss Landing, California

Mr. Agresti completed a noise study for this proposed battery storage project in Moss Landing, California. The project would consist of up to 268 Tesla Megapack battery storage units with cooling systems, 3 GSU transformers, and 67 pad mounted transformers. Offsite noise levels are regulated by the Monterey County noise ordinance, which placed restrictive nighttime noise level limits at adjacent residential properties. Worked closely with client and Tesla, conducting multiple noise model iterations to determine expected offsite noise levels under various operating conditions. Also assisted TRC, client's overall permitting consultant, in implementing an ambient noise monitoring program at the site.

Confidential Client, Martha's Vineyard Battery Project - Oak Bluffs, Massachusetts

Mr. Agresti conducted the acoustical assessment for this proposed battery storage project to be located on Martha's Vineyard, Massachusetts. As part of the assessment, conducted a 7 day ambient noise measurement program at multiple residential locations around the project site in order to develop baseline sound levels. The project is being licensed under the jurisdiction of the Massachusetts Department of Public Utilities. The DPU utilizes a very conservative method for determine baseline noise levels for proposed projects that required the 7 day ambient program. The DPU also has a more restrictive noise limit than the Massachusetts Department of Environmental Protection's noise standard. Conducted multiple noise modeling assessments of the project's chillers and transformers and presented various noise control options to client. Extensive noise control measures will be required in order to achieve compliance with the noise limits.

Confidential Client, East Hampton Energy Storage Center and Montauk Energy Storage Center - East Hampton and Montauk, New York

Mr. Agresti prepared the noise assessments for these two battery storage projects on Long Island. Each project will have a 5 MW capacity with the ability to deliver 40MWh of energy. Both projects will contain lithium ion batteries with associated HVAC systems, inverters, and transformers. The projects will store energy from the grid and store it for use during peak demand hours.

Utility Infrastructure

Confidential Client, North Central Reliability Project - Various Towns in New Jersey

Mr. Agresti conducted the noise assessments for six substation upgrades located in various towns in New Jersey. The noise assessments included detailed computer noise modeling of the emissions from each proposed transformer. The analyses were conducted to ensure compliance with the State of New Jersey Noise Code and local noise ordinances. Noise mitigation measures were conceptually designed at substation sites where needed in order to demonstrate compliance with applicable noise standards.

Confidential Client - Multiple Substations

Conducted the noise assessment for multiple proposed and upgraded substation sites throughout Massachusetts, New York, and Rhode Island. The proposed substations contained from one to multiple transformers and reactors of varying capacities. Many were located in residential areas, adding to concerns about potential noise impacts. The noise studies included ambient noise monitoring programs to establish existing ambient noise levels in the areas surrounding the site, and noise modeling studies to determine the sound levels associated with the new substations. Modeled substation noise levels were compared against the existing ambient levels and against noise standards and impact criteria. Continuing to support client on newly proposed substation projects. As part of the assessments, provides guidance for reducing project noise levels when required, which includes evaluating low noise design options for the transformer, providing recommendations to client on noise specifications and evaluating noise barrier wall effectiveness.

Confidential Client, University Wash Project - Riverside, California

Mr. Agresti conducted a construction noise and vibration analysis for the CEQA compliance and permitting of the University Wash Project in Riverside, California. The project would consist of approximately 2,500 linear feet (LF) of 90" reinforced concrete pipe underground storm drain, catch basins, and associated access manholes, street repaving, and grading of approximately 2 acres. The construction noise analysis included modeling of the construction noise equipment expected to be utilized in the various phases of construction, and comparison of the expected construction noise levels against the Riverside municipal noise ordinance limits.

Confidential Client, Sycamore Canyon and Penasquitos Transmission Line - San Diego County, California

Mr. Agresti conducted the noise assessment required for inclusion to the Proponent's Environmental Assessment (PEA) for this proposed transmission line upgrade. The Project will include a new 16.5 mile 230 kV transmission line and consolidation of two existing 69kV power lines onto steel structures that will replace existing wood structures. The applicable noise regulations and standards were evaluated, and noise levels associated with pole replacement and underground line installation were calculated. Potential noise impacts evaluated, and noise mitigation measures were proposed.

Confidential Client - Multiple Substations

Mr. Agresti conducted the noise assessment for multiple proposed and upgraded substation sites throughout New York. The proposed substations contained from one to multiple transformers and reactors of varying capacities. Many were located in residential areas, adding to concerns about potential noise impacts. The noise studies included ambient noise monitoring programs to establish existing ambient noise levels in the areas surrounding the site, and noise modeling studies to determine the sound levels associated with the new substations. Modeled substation noise levels were compared against the existing ambient levels and against noise standards and impact criteria. As part of the assessments, guidance is provided for reducing project noise levels when required, which includes evaluating low noise design options for the transformer, providing recommendations to National Grid on noise specifications and evaluating noise barrier wall effectiveness.

Confidential Client, Wood to Steel Tieline 637 - San Diego County, California

Mr. Agresti conducted the noise assessment required for inclusion to the Proponent's Environmental Assessment (PEA) for this proposed transmission line upgrade. The applicable noise regulations and standards were evaluated, and noise levels associated with pole replacement were calculated, including the use of helicopters and noise at construction staging areas. Potential noise impacts evaluated, and noise mitigation measures were proposed.

Confidential Client, Sycamore Canyon and Penasquitos (SX to PQ) Transmission Line - San Diego County, California

Mr. Agresti conducted the noise assessment required for inclusion to the Proponent's Environmental Assessment (PEA) for this proposed transmission line upgrade. The Project will include a new 16.5 mile 230 kV transmission line and consolidation of two existing 69kV power

lines onto steel structures that will replace existing wood structures. The applicable noise regulations and standards were evaluated, and noise levels associated with pole replacement and underground line installation were calculated. Potential noise impacts evaluated, and noise mitigation measures were proposed.

Confidential Client, Hampden Substation - West Hampden, Massachusetts

Mr. Agresti conducted the noise assessment for this substation proposed as part of the Hampden County Reliability Program in Massachusetts. The project involved the installation of one 40 MVA and one 56 MVA transformer at the new site. Conducted an ambient noise monitoring program to establish existing noise levels, and detailed computer noise modeling of transformer noise. The Massachusetts noise standard and the Town of West Hampden noise ordinance limited allowable noise levels at the project property line and at neighboring residences. Evaluated several low noise design transformers in order to achieve compliance with the noise limits.

Confidential Client, Gateway Substation - Brooklyn, New York

Mr. Agresti conducted the noise analysis for the Gateway substation environmental assessment. The analysis included calculating offsite noise levels from transformers that would be contained in partially enclosed vaults at the substation. The assessment included evaluating calculated noise levels against ambient conditions at residential locations in order to determine compliance with the NYC CEQR requirements, and determination of compliance with the New York City noise standards.

Confidential Client, Maine Power Reliability Program - Various Sites, Maine

Mr. Agresti conducted the noise assessments for seven proposed and/or upgraded substations located in eastern Maine as part of the Maine Power Reliability Program. The Program involves the installation, upgrade, and/or expansion of numerous transmission lines and substations throughout southern, western, and eastern Maine. The noise assessments were conducted in accordance with the requirements of the Maine Department of Environmental Protection’s noise standard and the Site Location of Development Act permitting process. The noise assessments include ambient noise monitoring at each of the seven sites, conducted over a minimum period of four days at each location, and computer noise modeling of the noise emissions from the transformers. Worked closely with client engineers and provided conceptual design for noise mitigation measures (barrier walls) and/or recommended installation of low noise design transformers at several of the sites.

Subsequently conducted noise testing programs at several of the substations to determine compliance with the State noise standard.

Confidential Client, Corning Valley Upgrade Project - Steuben County, New York

Mr. Agresti conducted the noise assessments for two substation sites in Steuben County, New York. The noise assessments were part of the overall permitting process for the project. Ambient noise monitoring programs were conducted at nearby residential areas to each site in order to quantify existing ambient conditions. The existing ambient noise levels were used for evaluating

potential noise impacts as per the New York State Department of Environmental Protection's Noise Policy, which limits increases in future noise levels to 6 dBA or less at nearby residential areas. Computer noise modeling of the transformer noise emissions was then conducted. Utilized the noise specifications issued by client to equipment vendors in conducting the noise modeling. The noise modeling results revealed that increases in future noise levels would be well below the NYSDEC noise impact criterion, and well below the noise ordinance limits in each Town.

Confidential Client, Winthrop Substation - Winthrop, Massachusetts

Conducted a noise assessment for the proposed upgrade of the existing Winthrop substation in Winthrop, Massachusetts. The substation is located in a residential area, and currently contains two transformers. A third transformer, that has already been procured, is proposed to be added. The client requested a noise modeling study to determine if the addition of the third transformer will be in compliance with the very strict noise standard of the Town of Winthrop and the State of Massachusetts noise standard. The analysis revealed that mitigation would be required. Provided conceptual noise designs for several potential noise barrier wall systems. Working with client engineers, evaluated potential replacement of the transformer fans with lower noise fans in order to provide further reductions in future noise levels.

Confidential Client, M29 Feeder Project - Yonkers, New York to Manhattan

Mr. Agresti conducted the detailed noise assessment of the M29 feeder project from Yonkers, NY to Manhattan, including the Sprainbrook and Academy substations. The project required horizontal directional drilling for a portion of the transmission line under the Harlem River, in close proximity to schools and residential housing. Conducted detailed noise measurements of an HDD site in order to obtain noise level data for the project's HDD noise analysis. Also provided expert witness testimony in support of client at State of New York Public Service Commission evidentiary hearings.

Confidential Client, Weld Shop - Astoria, New York

Mr. Agresti conducted an analysis of noise emissions from a welding shop at client's Astoria, New York facility. The weld shop operates on an emergency basis 24 hours per day. Complaints from nearby residences prompted client to request a study to evaluate potential noise control measures. The study included computer noise modeling of the facility and specifications for several noise control measures. The study also included cost estimates and associated reductions with each measure.

Confidential Client, Melrose and Chandler Street Substations - Melrose, Massachusetts

Mr. Agresti evaluated the existing and proposed noise levels associated with the replacement of transformers at these two substations. The analyses included ambient fenceline and residential noise level measurements, close-in measurements of the transformers and computer modeling to determine future noise levels. Mitigation measures, including the specification of lower noise transformers and/or noise barrier walls were also prepared as part of the analyses.

Confidential Client, Shaft33B EIS - New York, New York

Mr. Agresti conducted extensive computer noise modeling of construction activities at four potential water shaft locations in Manhattan. The analyses considered numerous construction equipment and noise barrier wall alternatives. Modeling results were incorporated into an EIS for the project.

Confidential Client, Rochester Transmission Project - Rochester, New York

Mr. Agresti prepared a noise assessment of the existing and future noise levels at six substation sites along the route of the transmission line. The assessment included ambient noise level measurements at residential and substation fenceline locations and modeling to determine future levels at the substations where new transformers were proposed. Future levels were evaluated against the New York State Department of Environmental Conservation's Noise Policy guideline to determine if any impacts would occur.

Confidential Client, 115 kV Project - Rochester, New York

Mr. Agresti prepared the noise analyses for the Article VII application for 115 kV system reinforcements in Monroe and Wayne Counties, New York. The proposed facilities include: approximately 13.2 miles of new overhead 115 kV transmission lines along two alignments; a new 1.1-mile underground 115 kV cable parallel to existing underground lines; approximately 19 miles of rebuilt overhead 115 kV transmission lines; a new 115 kV substation; and various equipment upgrades and circuit relocations at several other existing substations. The Article VII application was prepared on a fast-track basis and filed on September 30, 2003, approximately 12 weeks following Notice to Proceed

Confidential Client, Urban Transitway EIS - Stamford, Connecticut

Mr. Agresti prepared the noise assessment for the proposed transit project. The assessment included ambient noise monitoring at selected residential areas along streets and at intersections were traffic analyses were conducted. Calculated noise levels associated with traffic volume changes and calculated impacts in accordance with Federal Highway Administration noise standards.

Industrial and Commercial

Confidential Client. - Eatontown, New Jersey

Mr. Agresti conducted sound level measurements of client's existing cooling tower units at a nearby residential property in order to determine if sound levels were in compliance with the NJDEP and Borough of Eatontown noise standards. Also conducted near-field measurements of the cooling towers and prepared recommendations for reducing cooling tower noise.

Confidential Client - Flushing, New York

Mr. Agresti conducted noise compliance testing of the facility's outdoor compressors. Compliance testing was required by the City of New York under a Notice of Objection. Noise complaints due to the compressors were being received and the City required client to install sound barrier walls to reduce noise levels. The compliance testing was conducted after installation of the sound barriers.

Confidential Client - Cedar Knolls, New Jersey

Mr. Agresti completed a study to evaluate future noise levels associated with operation of proposed mechanical equipment at the facility site. Equipment included a chiller, new exhaust and ventilation fans, and a replacement emergency generator. As part of the study, conducted an ambient noise measurement program at the nearest residential location in order to establish baseline conditions. In addition to evaluating proposed equipment, conducted near field measurements of the existing rooftop HVACs and vents and incorporated data into the Soundplan model in order to determine expected noise levels with all equipment in operation. Developed noise control measures for the chiller and an exhaust fan, and prepared noise specifications for the proposed emergency generator.

Confidential Client - Eatontown, New Jersey

Mr. Agresti conducted the acoustical assessment for this proposed residential development project on a portion of the existing Monmouth Mall. The project would include over 1,000 rooftop HVAC units and garage ventilation fans. The assessment included acoustical modeling to determine expected sound levels at nearby residential locations with all project sources in operation. Provided expert witness testimony to the Eatontown planning board.

Confidential Client, Woodbury Casino, LLC - Woodbury, New York

Contracted by client to prepare the noise assessment for the SEQRA EIS for the proposed Woodbury Casino project in the Village of Woodbury, New York. The Project is proposed to include a Casino complex, a 300 room multi-story hotel, a ten story parking garage, and an outdoor amphitheater that will be used for periodic entertainment performances. The noise assessment consisted of an ambient noise measurement program conducted at nearby residential locations, and a noise modeling and impact assessment of the operational noise sources and the outdoor amphitheater. The noise assessment also included an evaluation of potential noise impacts associated with increased vehicular traffic associated with the Project and construction related noise. Expected project sound levels were assessed against existing ambient levels and evaluated against the New York State Department of Environmental Conservation’s Noise Policy.

Confidential Client, Resilient Electric Grid Project at Dunwoodie Substation - Yonkers, New York

Mr. Agresti conducted a detailed noise impact assessment and noise mitigation analysis of this proposed superconducting cable project at clients’ Dunwoodie Substation site in Yonkers, New York. The project will include a superconducting cable, a refrigeration plant and three chillers. An ambient noise monitoring program was conducted by clients’ staff at nearby residential uses to quantify the background sound levels. American Superconductor’s engineers provided OEM noise data for the refrigeration plant interior sources and exterior chillers, and a description of the refrigeration plant building material and ventilation louvers. Determined the noise emissions expected through the building walls and louvers, and utilized the CadnaA noise model in order to calculate operational noise at offsite residential locations. Also assisted in the refrigeration plant design process by providing noise specifications required for the building walls and ventilation louvers that would be required to achieve compliance with the Yonkers noise ordinance limits.

Confidential Client, Former Otay Skeet and Trap Shooting Range Remediation Project - Chula Vista, California

Mr. Agresti conducted a detailed noise assessment for the proposed remediation of this former skeet and trap shooting range. A multiple species conservation area borders the site, and the presence of endangered species required that a noise assessment be conducted to prevent any impacts during the nesting season. The assessment consisted of ambient noise measurements to quantify the existing noise environment, in particular at the conservation boundary with the remediation site. Multiple iterations of detailed noise modeling were conducted to determine the area of extent that construction could occur in while maintaining construction noise levels below the criteria limits at the conservation boundary.

Wholesale Store - Yorktown, New York

Mr. Agresti conducted the noise assessment as part of the EIS for the proposed wholesale store in Yorktown, New York. Noise impacts could be associated with demolition of the existing buildings, construction of the project, and, for operational impacts, delivery trucks and increased vehicular traffic in the area. Conducted the ambient monitoring program and assessed potential noise impacts.

Port Chester Gateway EIS - Port Chester, New York

Mr. Agresti prepared the noise assessment sections of the EIS for this proposed mixed use residential and commercial project. The project would be constructed on the site of a former hospital. Noise impacts could be associated with demolition of the former hospital, construction of the project, and, for operational impacts, increased vehicular traffic in the area. Conducted the ambient monitoring program and assessed potential noise impacts and continues to support the project through preparation of the FEIS.

Confidential Client, Holbrook Superconducting Cable Demonstration Project - Holbrook, New York

Mr. Agresti conducted a detailed noise impact assessment and noise mitigation analysis of this installed but not yet operational superconductor refrigeration plant in Holbrook, New York. An ambient noise monitoring program was conducted at nearby residential uses to quantify the background sound levels. Client provided OEM noise data for the refrigeration plant interior sources, and a description of the refrigeration plant building material and ventilation louvers.

Determined the noise emissions expected through the building walls and louvers, and utilized the CadnaA noise model in order to calculate operational noise at offsite residential locations. The modeling analysis indicated that in its present conditions, the refrigeration plant would likely exceed the local noise ordinance limits.

After the refrigeration plant was put into operation, returned to conduct detailed measurements of the refrigeration plant, including close in measurements of all building ventilation louvers. These data was used to calibrate the noise model. Noise level measurements were also conducted at the

residential locations and confirmed that noise levels were in excess of the local ordinance. Utilized the noise model as a design tool, and provided Air Liquide with several options for reducing noise to acceptable limits. Noise control measures were installed following my recommendations. Subsequent field measurements confirmed that the noise control measures were very effective in reducing noise to well below the applicable noise ordinance limit.

Lighthouse Landing EIS - Sleepy Hollow, New York

Mr. Agresti prepared the noise section of the DEIS for this major residential/commercial development proposed for a former General Motors manufacturing site in Sleepy Hollow New York. Conducted the ambient noise monitoring program and prepared all noise analyses for the project, including noise associated with increased vehicular traffic, demolition, construction, and railway noise. The project team is currently responding to comments in anticipation of an FEIS filing.

Windsor Landfill - Windsor, Connecticut

Assisted client in evaluating potential measures available to reduce noise impacts to nearby residential uses at an existing landfill operation. Impacts are currently experienced due to backup beepers on construction equipment and other sources at the landfill.

Confidential Client - White Plains, New York

Mr. Agresti conducted a noise study in support of a local special use permit for a proposed motorcycle sales and service center in White Plains. The study consisted of conducting a simulation of scenarios with various types and numbers of motorcycles and concurrently conducting noise level measurements. The study results were evaluated against the town noise standard and existing ambient noise levels. Provided expert witness testimony to the town zoning board. The application was subsequently approved.

Confidential Client, Golf Course - Westchester County, New York

Mr. Agresti prepared the EIS noise assessment for the construction and operation of a proposed country club and associated residential housing development in Westchester County, New York. The assessment consisted of performing noise monitoring in order to determine the existing noise environment. Traffic data for each of the build and no-build scenarios were then incorporated into a computer noise model in order to determine future noise levels at sensitive receptors. Modeling was also performed in order to determine site average noise levels from construction activities and facility maintenance. An impact analysis was then performed. Practical noise abatement measures were recommended as appropriate.

Confidential Client - Bermuda

Mr. Agresti performed a noise assessment for client for a quarry operation in Bermuda. The quarry is located in a residential area and noise from facility operations, including a rock crusher, screening machines, concrete block making plant, and truck movements are resulting in significant impacts to area residents. Collected background noise level data and developed sound level data for each of the facility sources in order to perform computer noise modeling. The quarry was proposing to relocate equipment and the client requested that various modeling scenarios be

run in order to determine the scenario which results in the least impact. Noise mitigation measures were also incorporated.

Confidential University Client - Westchester County, New York

Mr. Agresti performed the noise assessment for future expansion scenarios at client's university campus. The assessment consisted of performing noise monitoring in order to determine the existing noise environment. Traffic data for each of the build and no-build scenarios were then incorporated into a computer noise model in order to determine future noise levels at sensitive receptors. An impact analysis was then performed. Practical noise abatement measures were recommended as appropriate.

Kirkland Appraisals, LLC

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Raleigh, North Carolina 27603
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Professional Experience

Kirkland Appraisals, LLC, Raleigh, N.C. 2003 – Present
Commercial appraiser
Hester & Company, Raleigh, N.C.
Commercial appraiser 1996 – 2003

Professional Affiliations

MAI (Member, Appraisal Institute) designation #11796 2001
ARA (American Society of Farm Managers and Rural Appraisers) 2025
NC State Certified General Appraiser # A4359 1999
VA State Certified General Appraiser # 4001017291
SC State Certified General Appraiser # 6209
KY State Certified General Appraiser # 5522
TN State Certified General Appraiser # 6240
FL State Certified General Appraiser # RZ3950
GA State Certified General Appraiser # 321885
MI State Certified General Appraiser # 1201076620
PA State Certified General Appraiser # GA004598
OH State Certified General Appraiser # 2021008689
IN State Certified General Appraiser # CG42100052
IL State Certified General Appraiser # 553.002633
LA State Certified General Appraiser # APR.05049-CGA
TX State Certified General Appraiser # 1380528-CG
ND State Certified General Appraiser # CG-224129
OR State Certified General Appraiser # C001665

Education

Bachelor of Arts in English, University of North Carolina, Chapel Hill 1993

Continuing Education

Advanced Exam Preparation Course - ARA	2025
Valuation of Residential Solar	2025
Fair Housing Bias and Discrimination	2025
The Cost Approach	2025
Uncovering and Valuing Current Luxury Home Trends	2025
Uniform Standards of Professional Appraisal Practice Update	2024
ASFMRA Integrated Approaches to Value (A360)	2024
ASFMRA Best in Business Ethics	2023
Appraising Natural Resources Series – Oil, Gas & Minerals	2023
Appraisal of Industrial and Flex Buildings	2023
Commercial Land Valuation	2023
Fair Housing, Bias and Discrimination	2023
Pennsylvania State Mandated Law for Appraisers	2023
What NOT to Do (NCDOT Course)	2023
The Income Approach – A Scope of Work Decision	2023
Valuation of Residential Solar	2022
Introduction to Commercial Appraisal Review	2022

Residential Property Measurement and ANSI	2022
Business Practices and Ethics	2022
Uniform Standards of Professional Appraisal Practice Update	2022
Sexual Harassment Prevention Training	2021
Appraisal of Land Subject to Ground Leases	2021
Michigan Appraisal Law	2020
Uniform Standards of Professional Appraisal Practice Update	2020
Uniform Appraisal Standards for Federal Land Acquisitions (Yellow Book)	2019
The Cost Approach	2019
Income Approach Case Studies for Commercial Appraisers	2018
Introduction to Expert Witness Testimony for Appraisers	2018
Appraising Small Apartment Properties	2018
Florida Appraisal Laws and Regulations	2018
Uniform Standards of Professional Appraisal Practice Update	2018
Appraisal of REO and Foreclosure Properties	2017
Appraisal of Self Storage Facilities	2017
Land and Site Valuation	2017
NCDOT Appraisal Principles and Procedures	2017
Uniform Standards of Professional Appraisal Practice Update	2016
Forecasting Revenue	2015
Wind Turbine Effect on Value	2015
Supervisor/Trainee Class	2015
Business Practices and Ethics	2014
Subdivision Valuation	2014
Uniform Standards of Professional Appraisal Practice Update	2014
Introduction to Vineyard and Winery Valuation	2013
Appraising Rural Residential Properties	2012
Uniform Standards of Professional Appraisal Practice Update	2012
Supervisors/Trainees	2011
Rates and Ratios: Making sense of GIMs, OARs, and DCFs	2011
Advanced Internet Search Strategies	2011
Analyzing Distressed Real Estate	2011
Uniform Standards of Professional Appraisal Practice Update	2011
Business Practices and Ethics	2011
Appraisal Curriculum Overview (2 Days – General)	2009
Appraisal Review - General	2009
Uniform Standards of Professional Appraisal Practice Update	2008
Subdivision Valuation: A Comprehensive Guide	2008
Office Building Valuation: A Contemporary Perspective	2008
Valuation of Detrimental Conditions in Real Estate	2007
The Appraisal of Small Subdivisions	2007
Uniform Standards of Professional Appraisal Practice Update	2006
Evaluating Commercial Construction	2005
Conservation Easements	2005
Uniform Standards of Professional Appraisal Practice Update	2004
Condemnation Appraising	2004
Land Valuation Adjustment Procedures	2004
Supporting Capitalization Rates	2004
Uniform Standards of Professional Appraisal Practice, C	2002
Wells and Septic Systems and Wastewater Irrigation Systems	2002
Appraisals 2002	2002
Analyzing Commercial Lease Clauses	2002
Conservation Easements	2000
Preparation for Litigation	2000
Appraisal of Nonconforming Uses	2000
Advanced Applications	2000
Highest and Best Use and Market Analysis	1999
Advanced Sales Comparison and Cost Approaches	1999
Advanced Income Capitalization	1998
Valuation of Detrimental Conditions in Real Estate	1999
Report Writing and Valuation Analysis	1999
Property Tax Values and Appeals	1997

Uniform Standards of Professional Appraisal Practice, A & B	1997
Basic Income Capitalization	1996

Ellen Mullins

Principal Technical Consultant

Ellen brings 15 years of experience in navigating the fine details of permits, policy, and regulations at federal, state and local levels, while remaining focused on big picture objectives. Her experience as a state regulator and strong written and verbal communication skills have led to successful coordination of environmental requirements internally, externally, and with regulatory agencies. Her networking and project management abilities provide leadership, organization, scope & budget, time management, and teambuilding skills.

EXPERIENCE: 15 years' experience in Transportation, Water, Industrial, and Renewable Energy

LINKEDIN: https://www.linkedin.com/in/ellen-mullins-74805884/

EMAIL: ellen.mullins@erm.com

EDUCATION

- Master of Science. Forestry, Mississippi State University, USA, 2014
- Bachelor of Science. Forestry, University of Kentucky, USA, 2011

PROFESSIONAL AFFILIATIONS AND REGISTRATIONS

- First Aid/CPR/AED Certified

LANGUAGES

- English, native speaker

FIELDS OF COMPETENCE

- Wetland Assessment, Delineation, Permitting
- Threatened and Endangered Species Assessments

- NEPA Documentation
- Project Management

KEY INDUSTRY SECTORS

- Transportation
- Water
- Industrial/Commercial
- Renewable Energy

HONOURS AND AWARDS

- 2022 Inducted as Kentucky Colonel, for public service on BOSK-Ford Glendale Battery Plant economic development project (Glendale, Kentucky, USA)
- 2019 Kentucky Transportation Cabinet's Public Service Recognition Award (Frankfort, Kentucky, USA)

PUBLICATIONS

Ellen M. Boerger, Brent R. Frey, Andrew W. Ezell, Tracy Hawkins. 2015. "Effects of late rotation thinning on light availability and red oak regeneration within a minor stream bottom in Mississippi" (2015). In Proceedings of the 17th biennial southern silvicultural research conference. e–Gen. Tech. Rep. SRS–203. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 8 p.

Brent R. Frey, Ellen M. Boerger. "Groundstory vegetation response to different thinning intensities in a minor stream bottom in Mississippi: a preliminary analysis" (2015). Proceedings of the 17th biennial southern silvicultural research conference. e–Gen. Tech. Rep. SRS–203. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 7 p.

Boerger, Ellen Marie, "Natural Regeneration Dynamics of Red Oak Seedlings in Mississippi Bottomland Forests" (2014). Theses and Dissertations. 3269. https://scholarsjunction.msstate.edu/td/3269

KEY PROJECTS

KENTUCKY STATE GOVERNMENT AND REGULATORY EXPERIENCE

§401 Water Quality Certification | Kentucky Division of Water | Statewide, Kentucky | 2019-2023 | Environmental Scientist, Section Lead

Evaluated and managed Section 401 applications for all sectors focusing on water resources identification, quality assessment, project activity impacts, best management practices and compensatory mitigations. Also conducted monitoring inspections for facilities during active construction. Compliance inspections on stream relocation or restoration actions. As Section Lead, was assigned to large, complex, political, and economically significant projects. Outstanding performance throughout the regulatory review for state-import Economic Development projects resulted in induction as a Kentucky Colonel by the state Governor.

Project examples include Nucor Steel Brandenburg & Gallatin Facilities, Ford Motor Company Glendale Battery Plant, FERC certification modifications, US Army Corps of Engineers projects including the Ohio River Maintenance Dredge program, Barren River Lock & Dam No. 1 removal, Green River Lock & Dam 5 removal, Green River Lock & Dam 6 removal & emergency debris cleanup, and Green River Lock & Dam 2 emergency dredge.

Endangered Species Act (ESA) Section 7 | Kentucky Transportation Cabinet | Statewide, Kentucky | 2013-2019 | Environmental Scientist, Section Lead

Project manager overseeing budget and scope development for ESA assessments. Ellen conducted plant and fish surveys, served as technical expert for species determinations in Biological Assessments, and led coordination with USFWS, including multiple Biological Opinions. She has successfully navigated complex minimization and/or mitigations for fish, plants, bats, freshwater mussels, birds, and crayfish.

Ellen also led creation of the KYTC Pollinator Program which included designated habitat areas, policy development, and acquisition of funding for a 5-year, statewide roadside grassland and pollinator habitat field survey conducted from 2020-2024 in partnership with the state Office Kentucky Nature Preserves.

Project examples include the Mountain Parkway Expansion Project, Right Fork Maces Creek Bridge Replacements (3), Hacker Branch Bridge Replacement, Kentucky Lake and Lake Barkley Bridge Replacements, and Kentucky Glade Cress Mitigation at KY-61, KY-480, and Cooper Chapel Road - III.

COMMERCIAL / INDUSTRIAL

Confidential Data Center Development l Pulaski County, Arkansas l 2024-2025 l Permit Consultation & Lead

Ellen supported due diligence studies including wetland delineation, habitat assessment, and cultural resources. Following field studies, she also assessed conceptual site layouts for potential water resource impacts related to compliance with state and federal permitting requirements and calculated anticipated compensatory mitigation estimates for the client. Ellen coordinated the PreApplication Meeting with US Army Corps of Engineers' Little Rock District in anticipation of a two-phase permitting of an Individual Permit with use of a preliminary Nationwide Permit for initial construction activities.

Landfill Expansion Project | Rumpke of Kentucky LLC| Pendleton County, KY | 2023-2025 | Permit Coordinator, Technical Writer, & Construction Support

Led the Clean Water Act Section 404 & 401 coordination on this large-scale landfill expansion project via preparation of application packages including preparation of the alternatives analysis discussion. Transitioned the project through regulatory updates resulting in permit reduction from an Individual Standard Permit to the acquired 404 Nationwide Permit 39 with 401 Individual Water Quality Certification. Provided a Permit Directives Memo to assist with agency communications in the 15 year construction timeline, and providing active construction permit compliance advisement.

ENERGY

Confidential Utility Scale Solar Project l Mason County, Kentucky l 2025 l Proposal Preparation and Project Management

Assisted project manager by preparing full environmental services scope and fees proposal. Approved Purchase Order included wetland delineation, habitat assessment, cultural resources studies, and EA/FONSI NEPA documentation for compliance with RUS grant funding.

Martin County Solar | Martin County, Kentucky | 2024 | Project Manager

Project manager over environmental tasks including habitat assessment, wetland delineation, and related agency correspondence. Project management includes scope and fee preparation with risk assessment, scheduling, budget and invoice, and team and deliverables management.

Confidential Utility Scale Solar Project l Metcalfe County, Kentucky l 2024-2025 l Permit Consultation

Facilitated PreApplication Meeting with US Army Corps of Engineers and provided consultation regarding interpretation of water resource impacts and avoidance in support of preparation of a Permit Strategy Memo.

LG&E Mill Creek Generating Station Wetland Delineation | Louisville Gas & Electric (LG&E) | Jefferson County, Kentucky | 2023-2024 | Project Manager

Project Manager for 63-acre wetland delineation. Stantec previously delineated 15-acres, so this action includes investigation of supplemental parcels and re-evaluation of previously identified waters for compliance with current waters rules and regulations. Ellen also assisted in interpretations of complex jurisdictional determinations during time of regulation transition.

Bluebird Solar | BayWa r.e. Solar Projects | Harrison County, Kentucky | 2023 | Project Manager

Project manager and lead for evaluating existing environmental documents provided by the client to identify any outstanding needs or issues. Review focused on water resources and related permitting requirements. Supplied documentation and commitments for CWA Section 404 and 401 compliances. Prepared and acquired the state and local floodplain permits.

TRANSPORTATION / TVA

Progressive Design-Build KY 8 Bridge Replacement| Kentucky Transportation Cabinet | Kenton County, Kentucky| 2023-2025 | Environmental Compliance Manager

Environmental Compliance Manager serving as an expert environmental scientist responsible for monitoring, documenting, and reporting the status of environmental compliance for the work reporting and coordinating all issues directly with the Kentucky Transportation Cabinet and the Project Manager. Responsible for application and acquisition of Clean Water Act Section 404/401/408, River & Harbors Act Section 10, and USFWS Goose Depredation permits. Assist with Section 9 US Coast Guard permitting.

Design-Build Henderson - I 69 Ohio River Crossing (ORX), Section 1 | Kentucky Transportation Cabinet | Henderson, Kentucky, United States | 2023-2024 | Environmental Compliance Reviewer

Review Build Unit Group plan sets, track environmental commitments and ensure compliance maintained as construction progresses.

FY24-25 & FY22-23 Planning Statewide Contract | Kentucky Transportation Cabinet | Kentucky | 2023-2025 | Environmental Task Manager

Task manager and lead author for Environmental Overview 'red flag' Reports for the project study corridors related to on-call statewide contract. Recent project study areas have covered up to 10,000 acres, and included features such as NRHP Historic Districts, hydraulic dams, public boat ramps, and recreational trails.

US 60 Ballard County PEL Study - Ecological Report | Kentucky Transportation Cabinet | Kentucky | 2023-2024 | Environmental Biologist & Writer

Participated in multiple Resource Agency Meetings. Coordinated desktop data requests. Drafted a robust Ecological Report as dictated by the PEL study and wide variety of wildlife and waters resources identified in the study corridor. The 16,167 acre study corridor included cross-country corridor establishment on the Kentucky approach, a new bridge crossing over the Ohio River, and standard Illinois approach. Land protections within the study area included the state Boatwright Wildlife Management Area, multiple NRCS Wetland Reserve Program and Emergency Watershed Protection Program – Floodplain Easements, Axe Lake Swamp State Nature Preserve, and Cypress National Wildlife Refuge.

FY25 InvestPrep Projects l Tennessee Valley Authority l TN (4 sites), MS (1 site) l 2025 l Writer & Deputy Project Manager

Proposed actions included purchase and/or minor development at sites poised for future industrial development as part of TVA's FY24 InvestPrep Projects. Ellen provided project management support focused on communications, quality assurance, and deliverables schedule. Awareness and prompt adjustment to federal directives related to environmental justice, climate change, etc. Prepared annotated outlines and authored botany section narratives.

FY24 InvestPrep Projects | Tennessee Valley Authority | KY (3 sites), TN (2 sites), AL (1 site) | 2024 l Writer & Reviewer

Proposed actions included purchase and/or minor development at sites poised for future industrial development as part of TVA's FY24 InvestPrep Projects. Ellen coordinated with NRCS on Prime Farmland areas and wrote sections on Prime Farmlands, Noise, and Air Quality & Climate Change for 6 unique Environmental Assessment documents spanning 3 states. Ellen also served as reviewer for associated wetland delineation reports.

WATER

Permit Strategy Memo | City of Norwood | Massachusetts | 2023-2024 | Writer

In support of the Basis of Design Memorandum, Ellen prepared the permit strategy report identifying and evaluating critical permitting and development issues that would require special attention including DCR Dam Safety Permit and MEPA requirements. A summary permitting matrix of required discretionary approvals from local, state, federal and/or tribal authorities. Navigated Article 97 land status issues.

Willisburg Lake Dam Improvements | Kentucky Division of Water | Washington County, Kentucky | 2023-2024 | Environmental Task Manager & Biologist

Task manager over environmental permitting: CWA Sections 404/401, Section 7 ESA, Section 106 NHPA, and state/local floodplains for NRHP eligible dam. Conducted habitat assessment and waters delineation. Acquired Section 404 Nationwide Permit 3 with 401 General Certification. Coordinating state/local floodplains permits.

Pennyrile Lake Dam Improvements l Kentucky Department of Parks l Christian County, Kentucky l 2024-2025 l Environmental Task Manager & Biologist

Task manager over environmental permitting: CWA Section 404/401, Section 7 ESA, Section 106 NHPA, and state/local floodplains for an eligible dam within a NRHP Historic District. Conducted habitat assessment and waters delineation. Acquired Section 401 Individual Water Quality Certification. Section 404 Nationwide Permit 3 issuance pending historic MOA.

South Fork Beargrass Creek Dry Bed Basin Improvement | Louisville Metropolitan Sewer District | Jefferson County, Kentucky | 2023-2024 | Environmental Task Manager and Permit Preparation

Task manager for maintenance dredge at a flood control facility. Environmental permitting included Section 404 Nationwide Permit 31, 401 General Certification, state floodplain permit, and local MS4 floodplain permit.

Millersburg Water Supply Project | Kentucky American Water | Bourbon County, Kentucky | 2023-2024 | Environmental Task Manager & Permitting

Task manager for a 12-mile new waterline installation within existing highway right-of-way area traversing through a county with many eligible historic resources. Acquired Section 404 Nationwide Permit 57, 401 General Certification, and state floodplain permit.

KY 536 Widening - NEPA Environmental Baseline | Kentucky Transportation Cabinet District 6 | Boone and Kenton Counties, Kentucky | 2023-2025 | Environmental Task Manager

Coordination of all environmental team tasks and project information including incorporation of design and multiple alternate design modifications in preparation of full baseline studies to support NEPA Categorical Exclusion III (CE3) documentation.

I-71 Road Widening Project | Kentucky Transportation Cabinet | Gallatin County, Kentucky | 2023-2024 | Environmental Task Manager; NEPA & Permitting

Task manager for Aquatic & Terrestrial, and Noise Analysis field survey and reporting. Ellen authored the Categorical Exclusion II (CE2) documentation and coordinated the Section 404 Nationwide Permit 14 with 401 General Certification.

JOSHUA C. PINKSTON

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University of Louisville
Louisville, KY 40292

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www.JoshPinkston.com

Education

Ph.D.: Economics, Northwestern University, 2001.
M.A.: Economics, Northwestern University, 1996.
B.A.: Economics (minor in mathematics), Auburn University, 1995.

Employment

Associate Professor, Economics Department, University of Louisville, August 2016-present.

Assistant Professor, Economics Department, University of Louisville, August 2009-July 2016.

Research Economist, Bureau of Labor Statistics, Employment Research and Program Development Staff, October 2001-July 2009.

Adjunct Professor, Johns Hopkins University MA Program in Applied Economics, January 2007- June 2009.

Current Research Interests

Labor economics, health economics, personnel economics, and discrimination.

Refereed Publications

"Chance Elections, Social Distancing Restrictions, and Kentucky's Early COVID-19 Experience" (with Charles Courtemanche, Joseph Garuccio, Anh Le and Aaron Yelowitz), *PLOS One,* July 2021.

"Time Spent Exercising and Obesity: An Application of Lewbel's Instrumental Variables Method" (with Charles Courtemanche and Jay Stewart). *Economics & Human Biology,* May 2021.

"Strong Social Distancing Measures in the United States Reduced the COVID-19 Growth Rate" (with Charles Courtemanche, Joseph Garuccio, Anh Le and Aaron Yelowitz). *Health Affairs*, May 2020

"Breaking Bad in Bourbon Country: Does Alcohol Prohibition Encourage Methamphetamine Production?" (with Jose Fernandez and Steve Gohmann). *Southern Economic Journal*, April 2018.

"The Dynamic Effects of Obesity on the Wages of Young Workers". *Economics & Human Biology,* November 2017.

"Can Changing Economic Factors Explain the Rise in Obesity?" (with Chuck Courtemanche, Chris Ruhm and George Wehby). *Southern Economic Journal,* February 2016.

"Adjusting Body Mass for Measurement Error with Invalid Validation Data" (with Jay Stewart and Chuck Courtemanche). *Economics & Human Biology*, December 2015.

"How Much Do Employers Learn from Referrals?" *Industrial Relations*, April 2012.

"A Model of Asymmetric Employer Learning with Testable Implications." *Review of Economic Studies*, January 2009.

Reprinted in *Learning in Labor Markets*, edited by Michael Waldman. London, Edward Elgar Publishing, 2017.

"A Test of Screening Discrimination with Employer Learning." *Industrial and Labor Relations Review*, January 2006.

"Housing Vouchers and Economic Self-Sufficiency: Evidence from a Randomized Experiment" (with Jens Ludwig and Greg Duncan). *Journal of Public Economics,* January 2005.

"Screening Discrimination and the Determinants of Wages." *Labour Economics,* December 2003.

Working Papers

The Effects of Minimum Wages on "Mom & Pop" Businesses

Changes Over Time in the Job Search Methods of Young Adults.

Work in Progress

Differing Effects of Minimum Wage Increases: Switchers vs. Repeatedly Treated States

Gender Differences in the Choice of Job Search Methods.

Other Publications

"Changing Economic Factors and the Rise in Obesity." (with Chuck Courtemanche, Chris Ruhm and George Wehby) VoxEU.org, July 2015

"Annual Measures of Gross Job Gains and Gross Job Losses." (with James Spletzer) *Monthly Labor Review,* vol. 127(11), November 2004.

"Annual Measures of Job Creation and Job Destruction Created From Quarterly ES-202 Microdata." (with James Spletzer) *Proceedings: American Stat. Assoc.*, 2002.

Presentations and Seminars

Southeast Micro Labor Workshop, April 2026.

Kentucky Economics Association Meetings, October 2025.

Southern Economic Association Meetings, November 2024.

Southern Economic Association Meetings, November 2021.

Southern Economic Association Meetings, November 2020.

Society of Labor Economists Annual Meetings, Raleigh, NC, May 2017.

American Society of Health Economists, Philadelphia, PA, June 2016.

Society of Labor Economists Annual Meetings, Seattle, WA, May 2016.

Midwest Economics Association Meetings, SoLE sessions, Evanston, IL, March 2016.

Federal Reserve Bank of Cleveland Policy Summit on Housing, Human Capital, and Inequality, Pittsburgh, PA, June 2015.

OEIO Workshop at the University of Tokyo, March 2015.

Southeast Health Economics Study Group, Tallahassee, FL, October 2014.

American Society of Health Economists, Los Angeles, CA, June 2014.

Midwest Economics Association Meetings, SoLE sessions, Evanston, IL, March 2014.

Southern Economic Association Meetings, Tampa, FL, November 2013.

Society of Labor Economists Annual Meetings, Boston, MA, May 2013.

Southern Economic Association Meetings, Washington, DC, November 2011.

International Health Economics Association World Congress, Toronto, ON, July 2011.

Southern Economic Association Meetings, Atlanta, GA, November 2010.

APEE Meetings, Las Vegas, NV, May 2010.

Southern Economic Association Meetings, Washington, DC, November 2008.

Society of Labor Economists Annual Meetings, Chicago, IL, May 2007.

Society of Labor Economists Annual Meetings, Cambridge, MA, May 2006.

Invited Seminars: University of South Florida, University of Kentucky (Ag Econ), University of Wisconsin, Milwaukee; Western Kentucky University; University of Cincinnati; University of Kentucky (Econ); University of Louisville; University of Texas, Arlington; Clemson University; University of North Carolina, Chapel Hill; Washington Statistical Society; Florida State University; Federal Reserve Board; Census Bureau, CES; University of Minnesota, Industrial Relations; CNA Corporation; Mathematica.

Research Discussed in the Media

"Strong Social Distancing Measures in the United States Reduced the COVID-19 Growth Rate" and related papers

The New York Times, The Washington Post, Vox.com, CNN, *U.S. News & World Reports, The Chicago Tribune, The Hill,* Fox News, NPR, Slate, and many others

"Can Changing Economic Factors Explain the Rise in Obesity?"

"Varney & Company," Fox Business; Washington Post.com; *Bloomberg Business*; National Public Radio; *International Business Times*; HuffPost Live; *The Atlantic*; *Fast Company*; KRCC; News Talk 770 (Calgary); Newstalk 1010 (Toronto); *Toronto Star*; Marginal Revolution; The Salt Blog, NPR.org; CBS Money Watch; *Atlanta Magazine*; Matt Townsend Show; "60-Second Science", *Scientific American*

"Breaking Bad in Bourbon Country: Does Alcohol Prohibition Encourage Methamphetamine Production?"

Society Magazine; *The Economist*, Oct 3rd 2015 edition; *The Washington Post*, Wonkblog; Quartz; Marginal Revolution; WSJ.com, Real Time Economics; Business Insider; The Daily Caller; Pacific Standard; The Lane Report; Insider Louisville; Radio Live, New Zealand

Consulting and Applied Policy Work

Provide economic impact analysis and policy evaluation, with a focus on energy infrastructure, labor markets, public health and regional development. Work includes IMPLAN-based modeling and support for state siting proceedings.

Representative clients include Copperhead Environmental Consulting, Dare to Care, ERM, Kentucky Chamber of Commerce, Louisville Medical & Education District

Professional Service

Session Chair, SEA Meetings, November 2024

Session Chair, SEA Meetings, November 2021

President, Kentucky Economic Association, 2019-2020.

Conference Program Chair, Kentucky Economic Association 2019 Conference.

Board Member, Kentucky Economic Association, 2017-2021.

Discussant and Session Chair, SEA Meetings, November 2020

Discussant: ASHE Meetings, Philadelphia, PA, June 2016.

Discussant: MEA Meetings, SoLE sessions, Evanston, IL, March 2016.

Discussant: ASHE Meetings, Los Angeles, CA, June 2014.

Discussant: MEA Meetings, SoLE sessions, Evanston, IL, March 2014.

Discussant: Southern Economic Association Meetings, Tampa, FL, November 2013.

Discussant: 3rd Annual Midwest Health Economics Conference, May 2012.

Discussant: Multiple sessions, SEA Meetings, November 2011.

Discussant: International Health Economics Association World Congress, July 2011.

Discussant: Multiple sessions, SEA Meetings, November 2010.

Discussant: SoLE Meetings, May 2007.

Organizer and Discussant: "The Effects of Activation on the Earnings and Employment of Reservists and their Spouses", ASSA Meetings (SGE session), January 2007.

Discussant: WEA Meetings, Defense Economics, July 2006.

Discussant: ASSA Meetings, January 2004.

Referee: *American Economic Review, Review of Economic Studies, Journal of Labor Economics, Journal of Human Resources, Industrial and Labor Relations Review, International Economic Review, Economic Journal, AEJ: Applied Economics, AEJ: Microeconomics, AEJ: Macroeconomics, Economic Inquiry, Southern Economic Journal, Economic Letters, Health Economics, Labour Economics, Journal of Population Economics, Journal of Policy Analysis and Management, European Economic Review, Journal of the European Economic Association, Journal of Economic Behavior and Organization, Journal of Applied Econometrics, B.E. Journal of Economic Analysis & Policy, Review of Economics of the Household, Economics of Education Review, Economica, Journal of Law Economics and Organization, Journal of Labor Research, Journal of Applied Economics & Policy, Journal of Applied Economics, Empirical Economics, Contemporary Economic Policy, Advances in the Economic Analysis of Participatory and Labor-Managed Firms.*

Departmental/College Service

Dept. Representative to the College of Business Personnel Committee, 2020-present.

Chairman, College of Business Personnel Committee, January 2021-May 2022

MBA Program Committee, 2020-present.

College Representative to the Cardinal Core Curriculum Committee, 2019-2022.

College of Business Diversity and Inclusion Committee, 2019-present

Organizer: Economics Department Seminar Series, Spring 2011-2020.

Entrepreneurship MBA Program Committee, 2009-2019.

College of Business ad hoc Research Evaluation Committee, Fall 2016-2018.

Chair: Economics Department junior faculty recruiting committee, Spring 2012.

Economics Department junior faculty recruiting committee, 2009-2010.

Executive MBA Program Committee, spring 2013.

Other Service

Board of Directors, Second Street Neighborhood Association, 2014.

Courses Taught

University Of Louisville, MBA

Economics I & II, Full Time MBA Program. Fall, 2020-2025
Economics of Strategy, Entrepreneurship MBA Program. Fall, 2010-2019.
Economics I & II, Weekend MBA Program. Spring, 2012-2015

University of Louisville, undergraduate

Introduction to Econometrics, Fall 2024
Labor Economics. Spring, 2010-2020, Fall 2021-2023, 2025
Principles of Microeconomics, Spring, 2016, 2017, 2019-2021, 2025, 2026
Business Statistics (in-person and online sections), Spring 2022-2024
Independent study in Mathematical Economics, Fall 2021
Mathematical Economics, Fall semesters, 2009, 2010, 2012-2016, 2018, 2019
Intermediate Microeconomics, Fall 2017, Spring 2018

Johns Hopkins University, MA Program in Applied Economics

Economics of the Labor Market. Spring, 2007-2009

Fellowships and Awards

Center for Free Enterprise Faculty Affiliate, 2023

Center for Free Enterprise Faculty Affiliate, 2022

College of Business Summer Research Incentive Grant, summer 2022.

Center for Free Enterprise Summer Research Grant, summer 2021.

2020 Altmetric Top 100 most discussed articles across disciplines, for "Strong Social Distancing Measures in the United States Reduced the COVID-19 Growth Rate" with Courtemanche, Garuccio, Le and Yelowitz.

College of Business Summer Research Incentive Grant, summer 2020.

College of Business Summer Research Incentive Grant, summer 2019.

John H. Schnatter Center Summer Research Grant, summer 2018.

John H. Schnatter Center Summer Research Grant, summer 2017.

College of Business Summer Research Incentive Grant, summer 2017.

College of Business Summer Research Incentive Grant, summer 2016.

College of Business Summer Research Incentive Grant, summer 2015.

College of Business Summer Research Incentive Grant, summer 2014.

College of Business Summer Research Incentive Grant, summer 2013.

Lawrence R. Klein Award (with Jim Spletzer) for best article in the *Monthly Labor Review*, May 2005.

University Fellow, Northwestern University 1995/96.

Anson Scholarship, Auburn University Department of Economics, Spring 1995.

Ben Sussman

Associate Partner

Ben leads ERM's North America Visual Services Group, which provides visual simulations and assessment of the visual impacts of major capital projects in the renewable and conventional energy, electrical transmission, and other sectors nationwide, consistent with BOEM, BLM, USFS, and state equivalent visual impact assessment methodologies. Ben also has experience evaluating socioeconomic, land use, recreation, and transportation impacts.

EXPERIENCE: 25 years' experience managing and providing visual and other subject matter expertise for capital projects in power generation, transmission, renewables, public infrastructure, oil and gas, and mining worldwide.

LINKEDIN: https://www.linkedin.com/in/bwsussman

EMAIL: ben.sussman@erm.com

EDUCATION

- MCRP (City and Regional Planning), Georgia Tech, USA, 2002.
- B.S., Science, Technology, and Society, Stanford University, USA, 1998.

LANGUAGES

- English, native speaker
- French, proficient
- Spanish, basic

FIELDS OF COMPETENCE

- Visual Impact Assessment
- NEPA and state equivalent analyses
- IFC-compliant Environmental and Social Impact Assessments
- Socioeconomic impacts
- Public Scoping and public comment management

KEY INDUSTRY SECTORS

- Power/Renewables
- Transportation
- Government/Infrastructure
- Mining
- Oil & Gas
- Chemicals

KEY PROJECTS

Expert Witness Testimony

Ben has provided expert witness testimony on visual resources and visual impacts for cases before the Virginia State Corporation Commission (SCC) regarding electrical transmission projects, as well as the West Virginia Publiic Service Commission regarding renewable energy projects. Ben has also presented to numerous boards of elected and appointed officials (e.g., planning commissions, boards of county commissioners) regarding comprehensive land use plans.

Dominion Energy: Electrical Transmission Routing Studies

Senior reviewer of all Routing Study documents submitted to the Virginia State Corporation Commission (SCC). Responsible for overall structure and language in each Routing Study document. Developed a Dominion-specific Style Guide for Routing Studies and collaborated with project management teams to streamline Routing Study preparation.

As visual SME, responsible for visual impact assessments and transportation impact assessments as part of routing studies, often in support of new data center and high-technology development. Work includes coordination of the photo documentation of existing conditions and photosimulations of future conditions, as well as written analysis of existing conditions and impacts.

Multiple Clients: Visual Simulations for Solar Energy Projects

As Visual Services Group leader, coordinate selection of key observation points (KOPs), field photography, production of visual simulations, and preparation of visual impact assessments (typically responding to or consistent with Bureau of Land Management Visual Resource Management requirements) for proposed utility-scale solar projects. Work includes projects with and without battery energy storage system (BESS) components nationwide, including multiple projects in the desert southwest and mountain west.

NextEra Transmission: MidAtlantic Resiliency Link (MARL)

Senior subject matter expert for socioeconomic resources, including land use, economics, and transportation for NextEra's proposed multi-state 500 kV transmission line project. Directed a diverse team of authors in characterizing existing conditions and evaluating the impacts of the project's route alternatives, in support of an end-to-end impact assessment, as well as routing studies submitted as part of CPCN permitting processes in Pennsylvania, West Virginia, Maryland, and Virginia. Assisted in coordination of baseline photography for preparation of simulations of the Project.

Bureau of Ocean Energy Management:
Third-Party Environmental Impact Statements for U.S. Wind (MD), New England Wind (MA), and Vineyard Wind 1 (MA and RI) Projects

Senior subject matter expert responsible for socioeconomic resources including visual resources, economics, environmental justice, navigation, transportation, and visual resources, including coordination with BOEM SMEs for three projects totaling more than 5 GW of renewable energy. As the visual resources SME, assisted BOEM staff in piloting (for Vineyard Wind) and implementing (for U.S. Wind and New England Wind) the agency's cumulative Seascale, Landscape, and Visual Impact Assessment (SLVIA) methodology, which evaluates the impacts of offshore wind projects on seascapes and landscapes, as well as human observers. Also developed a Historic Resources Visual Effects Assessment to support the NHPA Section 106 evaluations for these projects.

Confidential Client: ESIA for Gas-fired Power Plant and Natural Gas Pipeline

Senior SME for Visual Resources and Transportation sections of an Environmental and Social Impact Assessment (ESIA) supporting construction and operation of a new, gas-fired power plant and associated natural gas pipeline in the U.S. gulf coast region. The power plant is intended to support proposed industrial development. Supervised photography, preparation of legally-defensible simulations, and written analysis of the project's visual impacts. Also supervised analysis of transportation impacts, based on a Traffic Impact Study prepared by a subconsultant.

Dominion Resources: Atlantic Coast Pipeline Visual Impact Assessment, VA and WV

Subject matter expert responsible for preparation of a Visual Impact Assessment, consistent with the U.S. Forest Service's Scenery Management System (and accepted by USFS in its November 2017 Record of Decision), for portions of a then-proposed natural gas pipeline traversing the Monongahela National Forest in West Virginia and George Washington National Forest in Virginia.

FERC: Alaska LNG EIS

Senior subject lead responsible for analysis of impacts on land use, visual impacts, recreation, and terrestrial and marine transportation for the proposed Alaska LNG project. The project included a Gas Treatment Plant and associated facilities in Prudhoe Bay and a LNG export terminal on the Kenai Peninsula, connected by a 806-mile, 42" diameter buried natural gas pipeline that transects the state. The visual impact assessment reflected BLM's Visual Resources Management (VRM) methodology, as well as emerging National Park Service visual impact assessment guidance. The project was the largest and most complex EIS in FERC history.

NextEra Energy: Mount Storm Wind Force Project Viewshed Impact Evaluation, WV

Prepared a viewshed impact evaluation, which updated a similar study prepared for the project's 2002 Siting Certificate Application. The Impact Evaluation report described existing visual conditions within the project's viewshed and analyzed the visual impacts from four Key Observation Points, selected as representative of areas potentially sensitive to changes in visual resources. Testified before the West Virginia Public Service Commission in support of the project's application.