Professional Qualifications
Justin M. K. Bowers

HANKARD ENVIRONMENTAL
ACOUSTICS AND VIBRATION CONSULTING

Education:

B.S. Engineering Physics
University of Illinois at
Urbana-Champaign, 2017

Professional Affiliations:

Acoustical Society of America

Institute of Noise Control Engineering

Agency Experience:

Public Service/Utility Commissions
(NY, WI, MN, SD)
Numerous cities and counties

Skills:

MATLAB, GIS, SoundPLAN, Python

MS Office (Word, Excel, VBA, PowerPoint)

Summary:

I am a graduate of the University of Illinois at Urbana-Champaign with a B.S. in Engineering Physics and a concentration in acoustics. My academic path was born of my passion for music and sound. I have been working in the field of acoustical consulting since 2018, primarily dealing with renewable energy facilities and gas-fired power plants. I have also done work for live concerts, agricultural facilities, and land development. My responsibilities include analyzing and processing data, conducting field measurements, and writing technical reports. I am currently a graduate student at Penn State University, pursuing a M. Eng. Degree in acoustics with a 2024 expected graduation date. Additionally, I am currently enrolled in Noise Control Engineering Courses through the Institute of Noise Control Engineering.

Field Measurements

Ambient and compliance noise measurement surveys are a common requirement in the permitting process for industrial, commercial, and environmental facilities. I have successfully conducted both ambient and compliance noise measurement surveys for a wide range of industrial projects including wind turbine energy facilities, gas-fired power plants, and solar energy facilities. I am well-versed with various measurement standards and their application to projects (ANSI S12.9, ANSI S12.18, and ISO 9613-2:1996).

Modeling

I have modeled (predicted) noise emissions from wind turbine energy facilities, gas-fired power plants, battery energy storage systems, high-voltage direct current power stations, liquefied natural gas facilities, and solar energy facilities. In addition, I have been involved in the assessment and mitigation of noise impacts from such facilities, utilizing computer models to compare alternative noise reduction scenarios.

Data Analysis and Technical Reporting

I'm responsible for data processing, analysis, and drafting technical reports for industrial projects and facilities. In support of these projects I have worked closely with engineers, facility managers, equipment operators, and attorneys to ensure accuracy in every step of the analysis and reporting process.

Representative Projects

Lake Winds Energy Park, MI: Compliance measurements (2018)
Freeborn Wind Energy Project, MN: Noise emission modeling (2018)
South Fond du Lac CT Facility, WI: Compliance measurements (2018)
Bull Run Wind Energy Project, NY: Noise emission modeling (2018-2023)
Alle-Catt Wind Energy Project, NY: Noise emission modeling (2018-2024)
Canisteo Wind Energy Project, NY: Noise emission modeling (2018-2023)
Phish Outdoor Rock Concerts, CO: Sound level monitoring (2019)
Allegheny Energy Center, PA: Ambient noise measurements and modeling (2019)
Lackawanna Energy Center, PA: Compliance measurements (2019)
Paris Solar Farm, WI: Ambient measurements and modeling (2019-2024)
Darien Solar Farm, WI: Ambient measurements and modeling (2020) Badger
Hollow Solar Farm, WI: Noise emission modeling (2020)
Nelson Energy Center, IL: Noise measurements and modeling (2020)
TMEIC Solar Ware Ninja Inverter, OH: Operational emission measurements (2020)
Pleasant Prairie Solar Farm, OH: Ambient measurements and modeling (2020-2021)
Yellow Wood Solar Farm, OH: Ambient measurements and modeling (2020-2021)
Cadence Solar Farm, OH: Ambient measurements and modeling (2020-2021)
Hardin III Solar Farm, OH: Ambient measurements and modeling (2020-2021)
Grand Ridge Energy Storage Facility, IL: Operation emission measurements (2021)
Custer Street Energy Station, WI: Noise measurements and modeling (2021)
Blackrock Wind Farm, WV: Measurements and modeling (2022)
High Noon Solar, WI: Solar and Battery Storage modeling (2022)
Juno Power Express, NY: HVDC Station, measurements and modeling (2022)
Clean Path, NY: HVDC Stations, measurements and modeling (2022-2023)
Rock Creek Wind Farm, WY: Noise Modeling (2021-2023)