## Mohamed Abuella

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## **Cover Letter**

July 29, 2023

Dear Sir/Madam,

I am Mohamed Abuella, who received a B.Tech from College of Industrial Technology, Misurata, Libya, and M.Sc degree in Electrical and Computer Engineering from Southern Illinois University Carbondale in 2012, and a Ph.D degree in Electrical Engineering from the University of North Carolina at Charlotte in 2018.

I am currently working as a Postdoctoral Researcher at the Center for Applied Intelligent Systems Research (CAISR) at Halmstad University since 2022. In my current role, I am actively involved in AI for Sustainability by applying ML techniques to improve energy efficiency in Short-Sea Shipping. I have a strong passion for working in a diverse environment and conducting interdisciplinary research. My expertise lies in the economic planning and technical operation of electrical power systems. Throughout my academic journey, I have gained valuable experience in various aspects of this field. During my undergraduate program, I extensively studied NEPLAN, a software for electric power systems design and analysis. I also utilized MATLAB to simulate power flow calculations and fault analysis of power systems.

For my M.Sc thesis, I focused on optimization applications for electric power systems, specifically on economic dispatch and optimal power flow, with a special emphasis on systems incorporating wind energy resources.

During my Ph.D studies, I delved into Energy Markets and Energy Analytics, examining their economic and technical aspects. Additionally, I applied statistical and predictive analytics to address the variability challenges associated with variable renewable energy (VRE) resources. My research aimed to develop an approach that leverages situational awareness tools for optimal trading and integration of these VRE resources.

I am writing to express my keen interest in the opening position and my desire to collaborate and work with the experts in this field.

Please find attached my application package for your reference at your convenience. If you have any questions, please do not hesitate to contact me.

Thank you for your cooperation and attention.

Yours sincerely, Mohamed Abuella