**Candidate Essay:**

In my work at UL Standards & Engagement (ULSE), I have come to appreciate the essential role that standards development plays in our future and in responding to climate change. Renewable energy sources are growing in prevalence as the world seeks more ways to respond to climate change and reduce carbon emissions. In my current role, I have witnessed the key challenge to this growth, which is ensuring that the products and systems used to generate and distribute renewable energy meet all necessary safety, quality, and environmental requirements that are found in standards. Through the increased use of renewable energy systems, more standards will become necessary to lower global trade barriers, increase acceptance of these products into regulations, offset ecosystem disruption, and most importantly advance global safety.

I have personally appreciated the global focus on wind turbines, hydroelectric turbines, and photovoltaic arrays that require comprehensive safety, performance, monitoring, vibration, and noise requirements that have been incorporated into standards. The International Electrotechnical Commission (IEC) has developed the IEC 61400, IEC 62600, and IEC 62548 standards series, respectively to consider the hazards from assembly to long-term ecological impact and look to mitigate any damage where possible. In my time at ULSE, hazard-based safety engineering is an approach that our organization uses to ensure that the right safety considerations are addressed in these types of documents. For example, hazard assessments are critical to standards because identifying potential sources of harm and then developing robust technical requirements ensures that the standards are both relevant and technically efficient. As the project manager for UL 723 (the Standard for Surface Burning Testing of Building Materials), I am working with our engineering and research counterparts to understand the testing procedures for the Steiner Tunnel Test, which is a test designed to address the hazard of flame spread or reaction to fire for building materials. This test has been in existence for over 75 years and while it is still relevant today, our organization has identified opportunities to strengthen the test to be relevant to the new materials used in the built environment. As standards professionals, this type of engagement is critical to ensuring that the requirements in our standards are responsive to our evolving world such as new materials and technologies.

In addition to ensuring the safety and quality of standards, my work in standards development has allowed me to promote the application of safety science principles to advance these documents. Through the use of consensus-based standards, we as a standards development organization (SDO) and others can reduce trade barriers through standards harmonization, adoptions, or memorandums of understanding (MOUs) across countries, helping to advance renewable energy in new markets. The enhanced reliability, security, and understanding afforded by these standards help to propel renewable energy forward globally.

In conclusion, as the world continues to transition to a low-carbon economy, renewable energy sources and evolving building materials will play a growing role in the advancement of standards. In addition to my work at ULSE, I look forward to having the opportunity to bring my expertise to the IEC Young Professionals program in order to strengthen my ability to provide safety science input which is an integral component of global standards development activities.