2. Describe the unique qualities that attract you to the specific undergraduate College or School (including preferred admission and dual degree programs) to which you are applying at the University of Michigan. **How would that curriculum support your interests**? (550 words)

The once vibrant orange donkey pump was now rusty and stagnant, and the once flourishing ‘petroleum residential camp’ it stood in became a dreary, empty set of houses, no longer resembling a neighborhood. After the oil price plunged in 2016, I revisited my childhood home, Brunei, and witnessed how the downfall of petroleum could impact a country's social setting. At this point, I knew that it was time for the rise of a new form of energy: sustainable energy.

My drive to find a feasible form of renewable penetration to the grid led me to research the benefits of smart grid technology on the sustainability of the power grid, which I hope to continue pursuing at UMich. I am particularly excited to explore the Michigan power and energy lab, specifically in tandem with the Grid Integration of Alternative Energy Sources - EECS 498 course. It is clear that the implementation of more renewable energy sources would benefit the environment, but through this course, I am keen to dive into the less obvious aspects of renewable integration such as its limitations and working with variability.

Implementing my knowledge from the EECS 498 course, I look forward to joining UMich’s *GRID Students for Sustainable Energy.* As an advocate for renewable energy use, it is exciting to be able to implement learning in the classroom to work towards a more sustainable campus with like-minded people. I hope to make meaningful conversations about the potential of using smart meters in tandem with solar photovoltaics to create a more consumer friendly grid.

To expand my knowledge on the feasibility of solar photovoltaics on a large scale, I aspire to work under Prof. Stephen Forrest on his research on organic solar cells. Knowing that efficient, organic solar cells can soon be commercially viable brings me optimism towards the widespread use of more sustainable power usage. Having found renewable penetration to be more cost-effective than fossil fuels, I want to develop a method to reduce the power loss of solar cells and be at the forefront of this research- which I will be able to pursue at UMich.

I believe the interests of UMich align with my interests; the practical nature and ability to create environmental change has driven me to pursue engineering. UMich would enable me to fulfill my desire to contribute to the development of electrical innovations to improve the grid.