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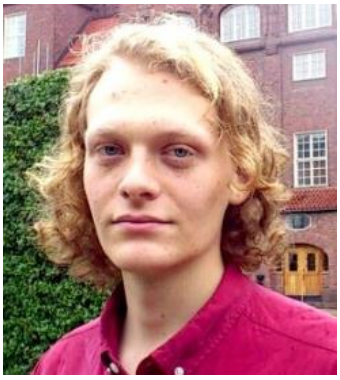

TOPIC 5: THE ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

After studied the online course at Bilda, and after studied four years at the civil engineer program Energy and Environment, I am convinced that sustainability will be the most important word for the next century. I have been drawn to learn more about sustainability ever since I read the book *Plan B. 4.0 Mobilization to save the planet* by prof. Lester. R. Brown – a book I think everyone should read. Thus, in my mind, education of sustainability will be vital in the future. Therefore, it is intriguing to read about the environment and sustainable work of KTH. They seem to have understood the need and importance of sustainability and have to continue, enlarge and improve they work to get everyone at KTH onboard the train. I, as an Energy and Environment student, have received my fair share of knowledge on this topic and my interest and attention is easy to catch. The trick is to include those who aren't as interested from the start, and this goes for both students and professors alike. Sustainability is too important to be regarded as general reflections between "good" and "bad" and we don't afford people feeling bored and turning their back on sustainability discussions.

Electrical engineers will both work with and contribute to sustainability in the future and has a responsible doing so. Human actions now affect the stability of the Earth's climate for the first time and it is therefore vital to stop our CO_2 emissions and develop new and clean energy sources. As an electrical engineer, the concern of energy will be the first key issue to attend to when working with sustainability. Now more than ever, the world needs new technologies, new thinking and perhaps a complete new way of living. Hence, everyone have a responsible to learn and reflect about their part for a sustainable world. It cannot be left for only environmentalist and political scientist to study; they need the input from electrical engineers as well as we need theirs.

The role of an engineer is to solve problems based on scientific and technical knowledge. In the future, engineers will in far larger extent work multidisciplinary on a system level and adapt technical solutions to environmental, social and economic realities. For instance, an electrical engineering constructing turbines for wind power applications have to take into account the material used and environmental and social impact of those. Furthermore, the wind power must be controllable on the system level concerning grid constraints and costumers demand using for instance digital control. Lastly, the wind power turbines must be socially accepted, technical efficient and economical viable. The main learning from this and from my education at KTH is to always remember the connections within sustainable development and not forget the big picture. Would, for instance, replacing all cars with electrical ones be a good idea for the climate? It would of course reduce emissions but would it be a sustainable idea?