

EH2220- THE SUSTAINABLE ENGINEER

TOPIC 5

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1 Sustainability

Living in the year 2015 and seeing the effects mankind has had on the world only in the past 100 years will make anyone see a need to be more sustainable in everything they do. A major point to keep in mind is that the world and nature in general does not need mankind but mankind needs nature. It is up to us to see that we can survive and thrive in the world with what resources nature gives to us.

As an engineer in order to optimize ones solution one must take sustainability into consideration. Even if you have created the newest, best source of energy nothing will matter if the world is not capable of producing what is needed to create this energy and your solution will be redundant anyway. Ways of finding solutions to creating products that are more ecofriendly from the start of production with the raw materials through the manufacturing to the usage and recycling stages are what is needed to help create products that coincide with what our planet is capable of producing.

Working with electrical power engineering one has a huge role to help influence the sustainability of the society through technology. The energy that is used to power cities has a huge impact on the world. Lately it has been an issue of how much one is willing to pay in order to use clean greener CO_2 free energy sources but in the future maybe this will not be a choice but the only way of life. Advancing technology with wind and solar energy in order to have it excess-able to everyone and not just the ones that are willing to pay the extra grid tariffs etc. that result in a higher energy price will be essential.

In the course material a strong emphasis was put on the limits that the planet is capable of producing with the needs of how humans live their lives today. I think this is the most important point in the text. I think most people are so used to living their lives how they are used to and don't think about how much over consumption we are putting our eco system through. In the future this might have a drastic effect on the quality of life on earth if one day ones life must drastically change due to the fact that we simply can't live how we are used to due to lack of resources. As a working engineer and just as a human being living on earth all

one does should be taking this into consideration on a day to day basis. No matter how much money you have you still will not be able to buy food if the earth is not capable of supplying you with it.

Throughout my studies at KTH there always has been a strong influence on sustainability and what one should be considering as an engineer in the future. Especially once starting to study electrical power engineering we have analysed much on sustainability. Incorporating wind and hydro power into power systems and what effect this has on the consumers as well as the producers with different kinds of tariffs and taxing systems has been a huge issue. I believe KTH has done a good job with preparing its students for working with sustainability because as a student I try to learn what is essential for me to strive and be successful with what is expected from me for KTH. Even if I myself had not known what all the issues about sustainability were in my line of work it is definitely something I think about all the time. And that is because of the knowledge and ways of thinking that is presented to me from such a forward thinking country like Sweden and KTH as a school.