

Topic #5 The Environment and Sustainable Development

EH2220 The Sustainable Electric Power Engineer

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The issues of sustainability will have direct consequences for me as an electric engineer. For the foreseeable future I will be working for a transformer manufacturing company in China, I know from experience that environmental sustainability is not high on many Chinese people's priority list. For most companies in China economical profit is the one and only driving force. I think for me and most engineers sustainability issues will become a more and more evident problem and needs to be considered.

When working in the transformer manufacturing biz there are countless measurements that can be taken to minimise the ecological footprint that the company leaves behind. For example when buying chemicals for making insulation one can chose a more environmentally friendly supplier that ensures that the chemicals were extracted in a good way. These suppliers are almost always more expensive so it is up to the buyer to give strong arguments to managers for buying these chemicals instead of cheaper alternatives. This is extremely difficult because it means that the product will be more expensive than the competitors and the risk of losing business increases. There is only one way to get around this problem and that is that the government steps in and takes responsibility. For example to give economical incentives for companies that has good environmental policies. Then the price difference between the good and bad supplier would become more even. Also in many governments corruption is present and could cause environmentally beneficial reforms to be voted down. Luckily this is a knot for politicians to untie.

I would say that the issues with sustainability greatly benefits my future. For example I will work with inductive components installed on trains. It is widely known that trains are good for the environment (depends on where to power is generated) so when government build more tracks more trains needs to be built and that in turn leads to more transformers are sold. Very good.

It is difficult to directly apply something from the course material in the future. It is more like an attitude towards the environment that can be taught to less educated people. Thus spreading the knowledge of how to make decisions while thinking of the environmental impacts.

In the bachelor courses we learnt nothing about sustainability. In the master there is more of an awareness from teachers to include aspects of the environment in the courses and how the course material can be seen from an environmental point of view. There has also been courses that exclusively contain issues of environment. This is very valuable for soon to become electric engineers and is important for the society as a whole. Although I believe engineers can do a lot about the issues humanity faces, it is up to politicians to work together to make reforms that will change on a bigger scale.