

Supervisor's name: Ir. Dr. Siow Chun Lim

Faculty/RC: FOE (CEEA)

Project title: Environmental Feasibility Study of Large Scale Solar (LSS) Projects in Malaysia

Short summary of project:

Malaysia is currently implementing Large Scale Solar projects at rapid pace with the notion that it can reduce carbon footprint by reducing the reliance on power generation from fossil fuels. This is in line with the nation's aspiration of achieving 20% renewable energy power supply by 2030. However, such notion may not always hold true as such project involves deforestation at massive scale which in turn would reduce the rate of carbon sequestration. In this project, a feasibility study on the environmental impact of large scale solar system will be done. Case study on selected LSS projects will be conducted to analyse the impact of environmental indicator such as Global Warming Potential and Acidification Potential. The conclusion of this project will shed concrete light on the true environmental feasibility of LSS projects in Malaysia.

Domain: Engineering

Level: Masters

Funding: No

Preferred starting date: immediate

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Project title: Optimisation of Diversity Factor of Domestic Installations in Malaysia

Short summary of project:

According to the Electricity Supply Act of Malaysia, all electrical engineers are bound to specify the Diversity Factor according to the type of installation i.e. lighting and socket outlets. However, consulting electrical engineers often rely on their professional judgment as the values recommended by the Act tend to lead to significant overestimation which results in excessive sizing of breakers and transformer. Diversity Factor is an important parameter is an important parameter required to estimate the Maximum Demand of a particular installation. Then, circuit breakers can be designed accordingly based on the Maximum Demand. In this project, the main aim is to propose a range of acceptable Diversity Factor based on analysis of actual load profile of domestic users in Malaysia. Various definitions of Diversity Factor specifications from the Electricity Supply (Amendment) Act 2015, TNB's Electricity Supply Application Handbook and several other international standards will be investigated. Then, a systematic methodology will be devised to estimate the load profile of domestic users. Upon analysis of the load profile, an acceptable range of Diversity Factor will be proposed.

Domain: Engineering

Level: Masters

Funding: No

Preferred starting date: immediate

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