

## SPD5152 Industry-Based Student Project

<http://ibse.hk/SPD5152/>

### Proposed Topics (2016-2017)

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Title:	Study on the living environment of public housing in Hong Kong
Description:	At present, around 1/3 of people are living in the public housing in Hong Kong. Due to the high population density, the living environment is sometimes not satisfactory. This study will investigate the indoor and outdoor environment of the public housing through on-site measurements and survey so as to develop some guidelines to improve the living environment of the public housing.

Title:	Feasibility study of PV power generation on THEi Building (Tsing Yi)
Description:	Although Hong Kong is short of fossil fuels, it possesses pretty good renewable energy resources, such as solar energy. The annual solar irradiation in Hong Kong is about 1400 kWh/m <sup>2</sup> , which is higher than that in Japan and is much better than Germany. Take THEi Building (Tsing Yi) as an example, the study aims to investigate the feasibility of PV power generation and analyze the economic payback with the PV system installation.

Title:	Analysis of potential power generation from fresh water supply system in high-rise residential buildings
Description:	Hydropower is an extremely flexible technology for power generation. The water supply system in high-rise residential buildings has a great potential to generate power with the use of surplus pressure. Therefore, this study aims to examine the power generation potential in a typical residential building and analyze the costs and benefits. A suitable turbine will be selected through the investigation.