# Sustaining the Use of Solar Energy After the End of the Hong Kong Feed-in Tariff Scheme in 2033

***Mr SIAK Law Lung, BEng (Hons) in Building Services Engineering,***
***Faculty of Science and Technology***
***Supervisor: Ir Dr YU Philip, Lecturer***

## Background

In the Oct 2021 Policy Address, the Chief Executive announced the Hong Kong government will proactively pursue strategies and measures to reduce carbon emissions to achieve carbon neutrality before 2050 and set a target of generating 10% of Hong Kong's electricity from renewable sources by 2030.


To reach this goal, Agro-photovoltaic would become another way of the future of renewable energy solar systems development after 2033, and it must meet the laws, such as the Town Planning Ordinance of Hong Kong governing land designation and development.

## Research Objectives

The central aim of this report is to explore the potential of solar energy for sustainable power generation and analyze the 3 key factors enabling its large-scale adoption.

- To Adopt sustainable sources of energy to mitigate climate change and environmental degradation.
- To support both development and de-carbonization goals.
- To provide affordable electricity access to underserved communities.

## Methodology

Four actions were carried out for the data collection and analysis:

**1 Research articles**

HK Government news, laws, example applications in other countries, etc.

**2 Survey**

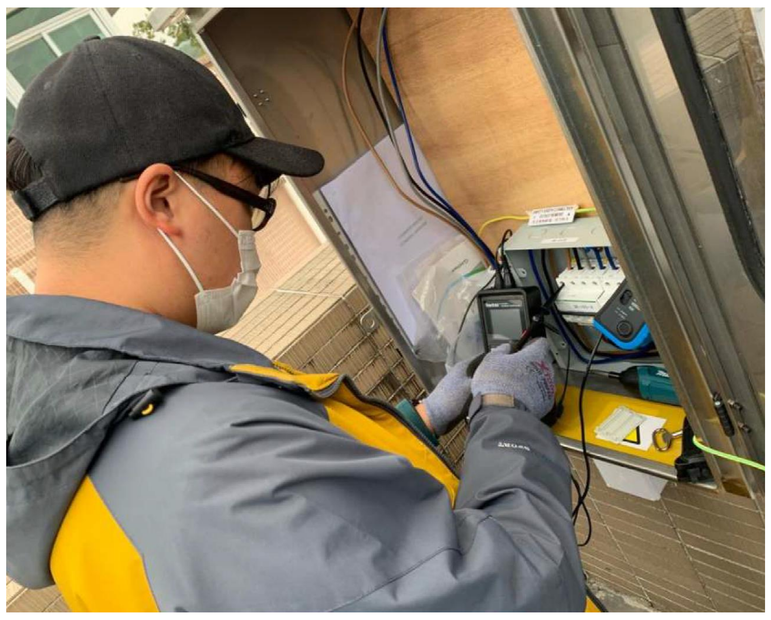
Interview with specialists and conducting questionnaires.

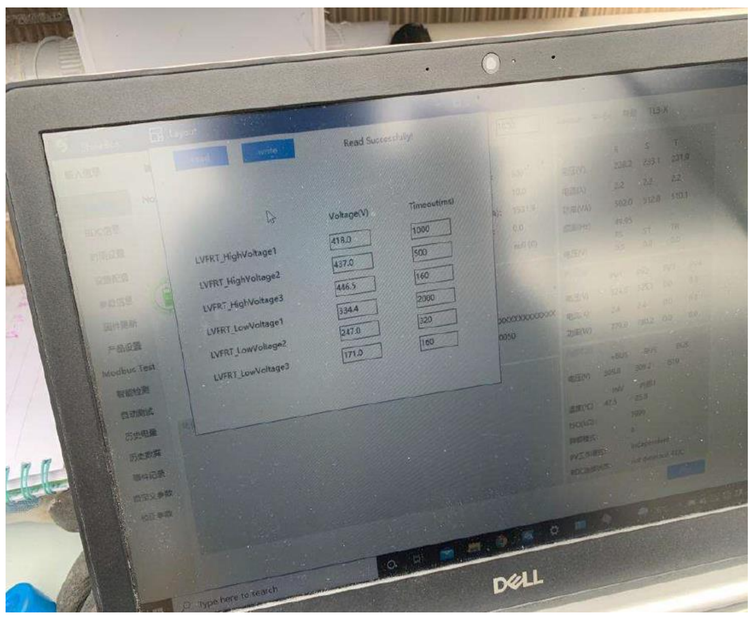
**3 Site visit**

Visit the operating solar energy system on site.

**4 Software analysis**

Analysis using the software.






## Findings

Agro-photovoltaic systems with solar panels installed over agricultural land offer an innovative approach for sustainable land and resource use in densely populated cities like Hong Kong. By combining solar energy and food production, Agro-photovoltaic optimize limited land areas, ensure food-energy security and advance environmental protection for green growth.

## Conclusion

The benefits of Agro-photovoltaic systems include productive dual land use, improved land access for critical production, higher productivity, cost savings, jobs, and a lower carbon footprint.

- Mechanisms facilitate power purchase agreements or trading excess solar power for revenue, improving viability.
- With progress, Agrivoltaics can significantly impact Hong Kong's sustainability, resilience, and prosperity, given the limited resources.
- Widespread adoption can enrich ecology, food/energy security, economic prosperity, quality of life, and climate action.