

Smart JAMP(2021) Pre-feasibility Study on the Introduction of an Advanced Urban Service System in ASEAN

Category of Issues
in the Area



- Target Area**
 - Cambodia (Urban Area: near Phnom Penh)
- Background and Purpose**
 - In the energy field of Cambodia, there are issues of power shortage and high cost, and at present, the development and sufficiency of the power grid are being prioritized. There are expectations for investment from Japan and new technologies in Japan among them.
 - Therefore, in this work, we examined the feasibility of commercializing solar power generation by using the housing estate development area handled by a Japanese company and others as the case study field.
- Related Organization**
 - Ministry of Minerals and Energy (MME), Government of Cambodia
- Project Stage**
 - Pre-FS
- Contents and Results**
 - The Cambodian Energy Corporation (EDC) serves the power grid in the urban area; we proposed a business model that is EDC or any entities under EDC deploys the solar power generation business utilizing the roof space of a housing complex.
 - By utilizing surplus solar power generated in the daytime as an energy source for mobility, it is possible to contribute to carbon neutrality and solve the power shortage.
 - The electricity obtained from solar power generation is sold in the housing complex. A considerable part of the power generation is used to charge the battery for vehicles on the spot.
 - As a result of the above examination, the following three points were confirmed.
 1. Benefits of housing estate owners
While purchasing electricity at the market price, they can earn income from the roof rental fee from the power generation entity.
 2. Benefits of power generation companies
Combining solar power generation and power supply to mobility maximizes the power generation capacity.
 3. Possibility of utilization for EV mobility power supply
Battery-replaceable electric motorcycles are becoming widespread. It may also promote the spread of EV buses and trucks as part of its carbon-neutral efforts.

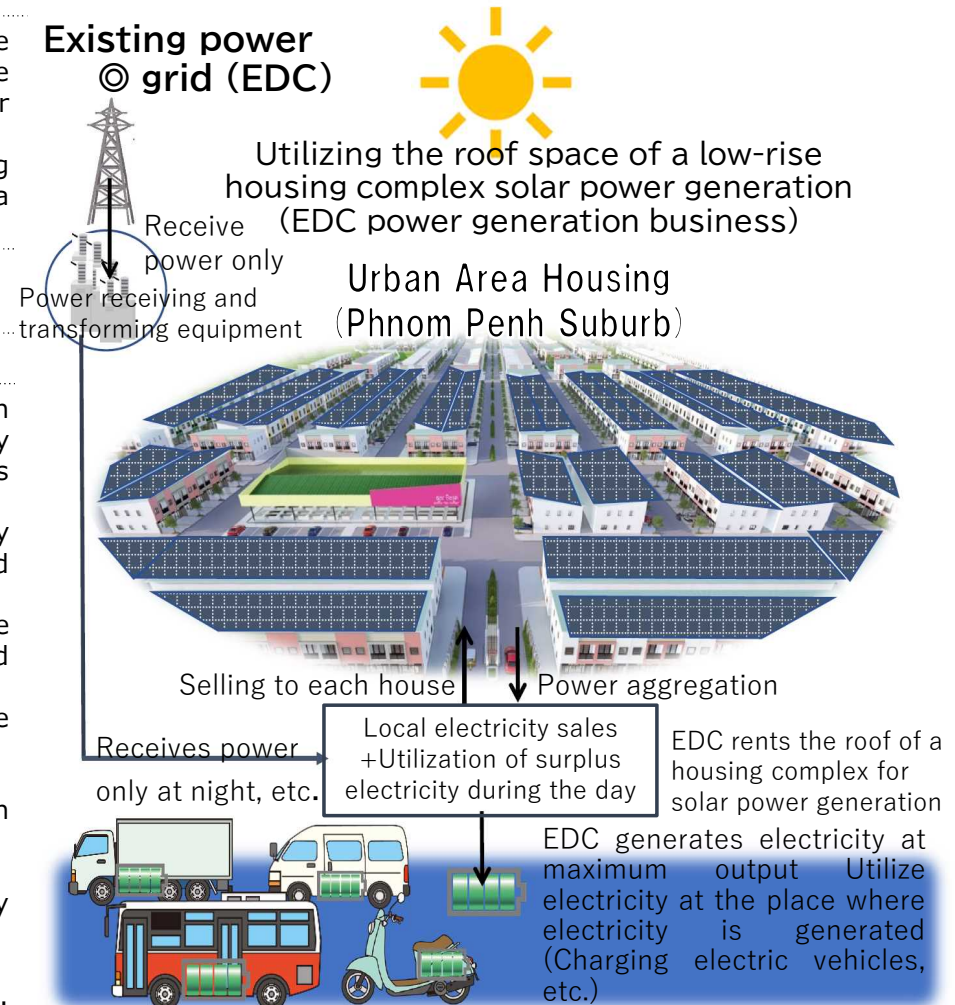


Fig.1 : [Details of proposal for Urbanized Area PV System Utilizing Rooftop Space]