



# FiT Scheme Application Procedures and Other Key Features and Aspects

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Senior Customer Installation Engineer  
HK Electric

# Contents

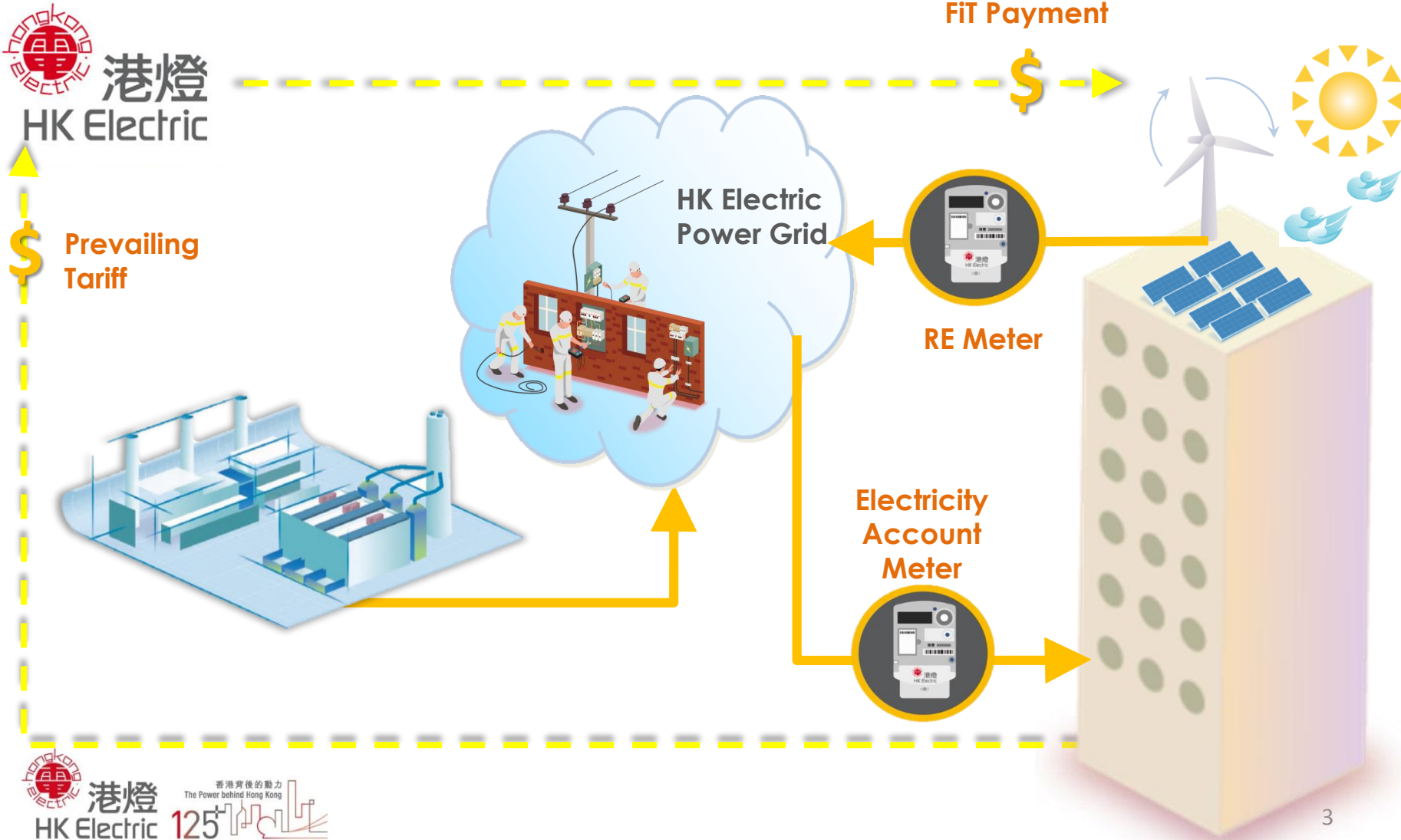
1. Application Procedures for Feed-in Tariff (FiT) Scheme
2. Common Departures

智惜用電  
smart  
power

上網電價  
FEED-IN  
TARIFF

# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

FiT Scheme :



# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Eligibility :

- ✓ A registered customer of HK Electric's electricity account
- ✓ RE Power System (REPS) is not owned by the Government

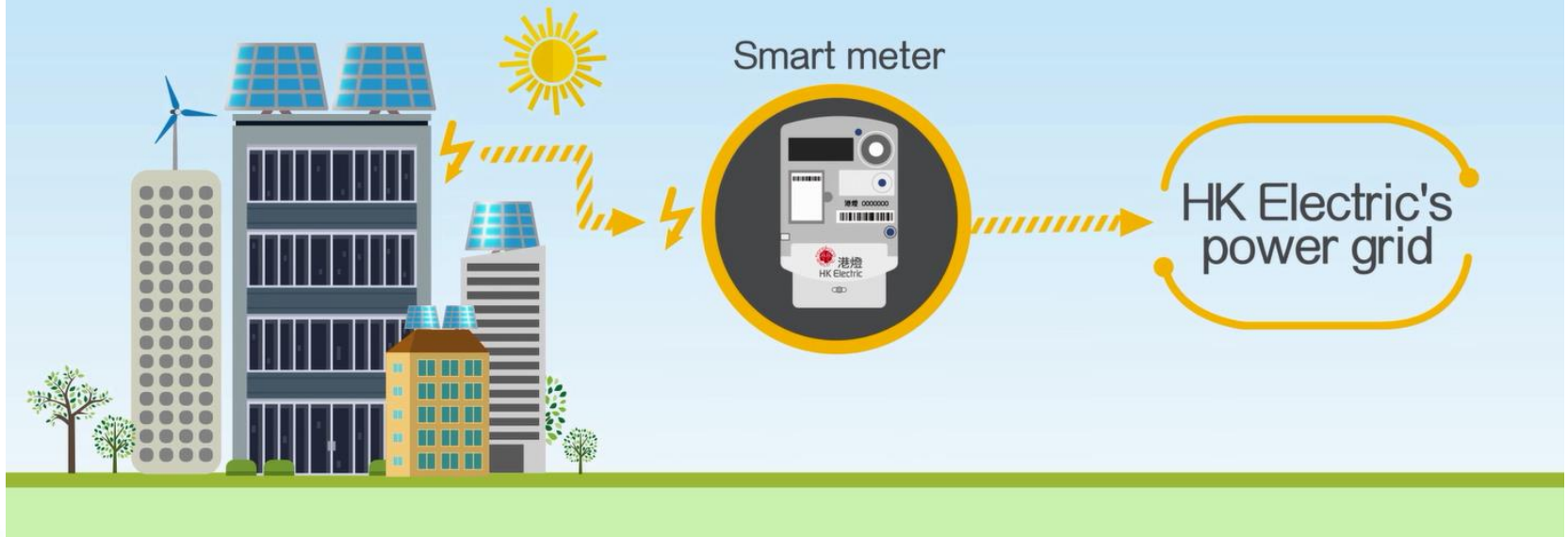


# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Grid Connection :

- ✗ Non-renewable energy source
- ✗ Energy storage facility

the system will be connected to  
**HK Electric's power grid** through a **smart meter**



# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## FiT Rates in 2019 :

- FiT rate will be fixed from the date when a REPS participates in the FiT Scheme

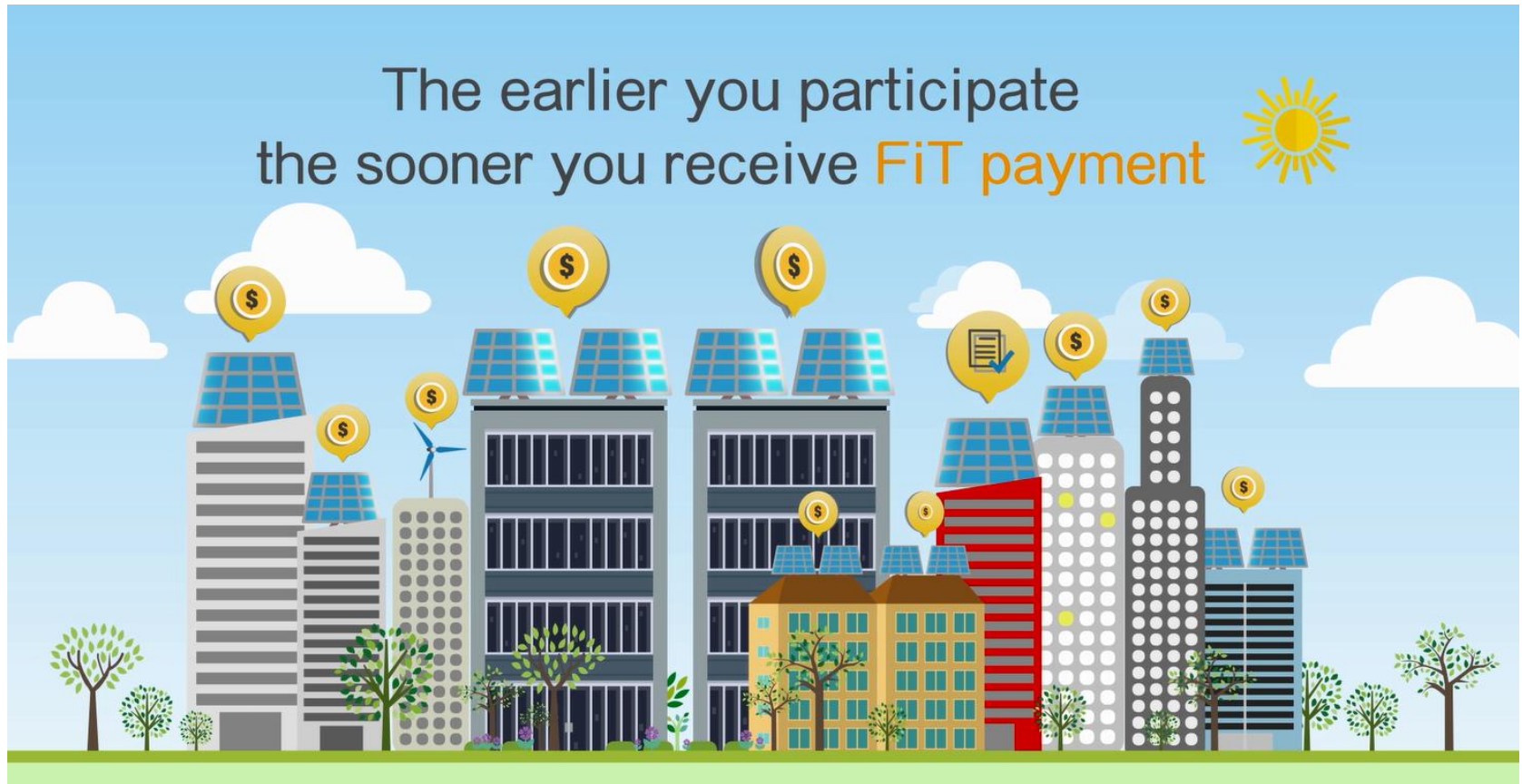
HK Electric will purchase all electricity generated from the system

Feed-in Tariff (FiT) Rates (per unit)			
System generation capacity	⚡ ≤10kW	⚡ >10kW - ≤200kW	⚡ >200kW - ≤1,000kW
FiT rate	\$5	\$4	\$3

# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Receive FiT Payment :

- Throughout the project life of the REPS or until 31 December 2033 (whichever is earlier)



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鼓勵客戶安裝可再生能源發電系統





# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

REPS Examples :



# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

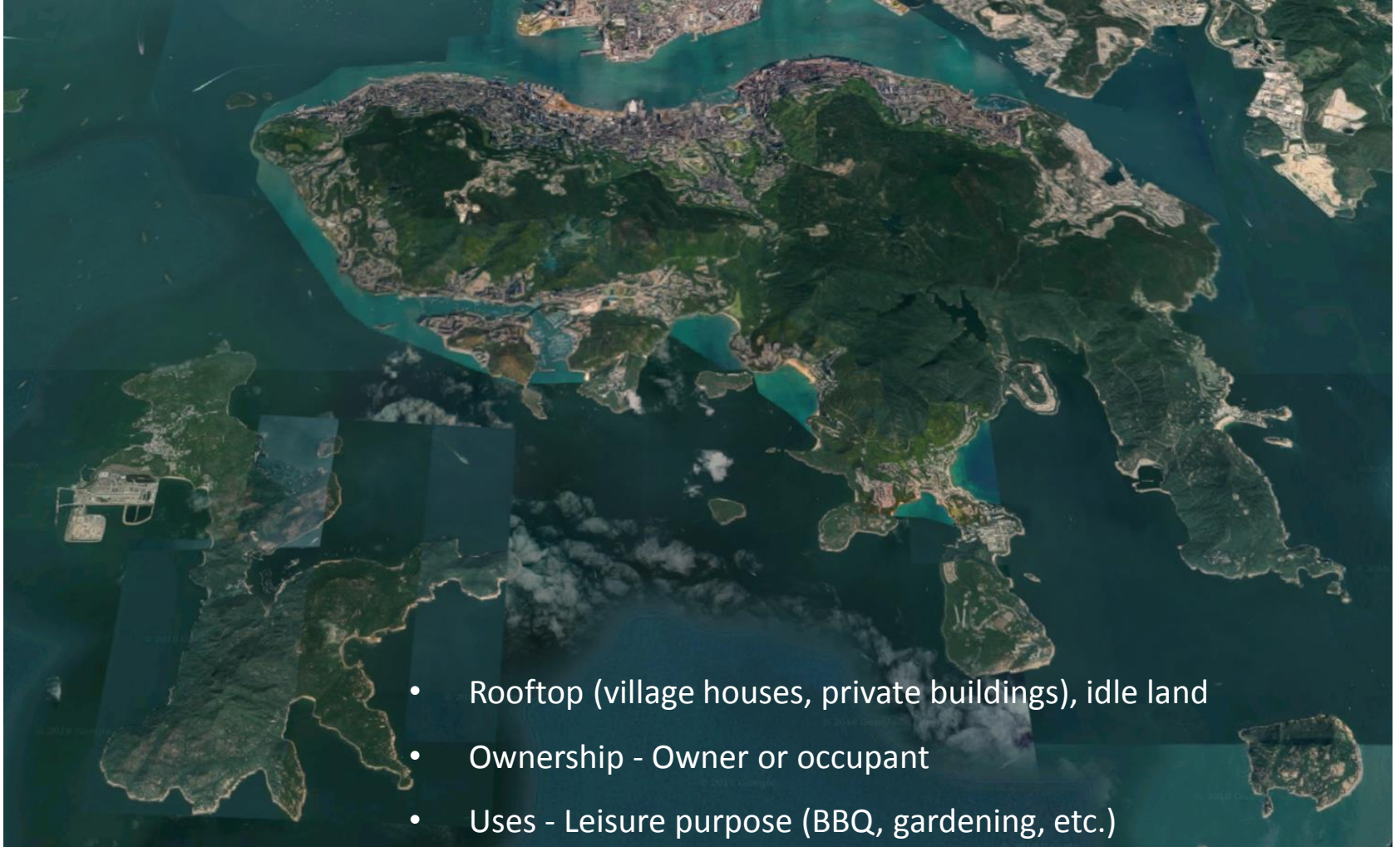
## REPS Examples :

- PV System on the rooftop of Polar Adventure at Ocean Power



# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

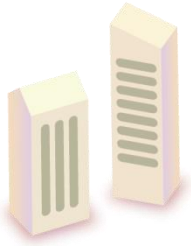
## Installation Locations :



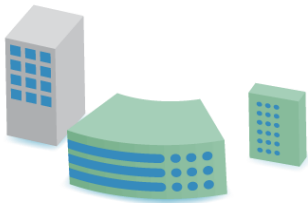
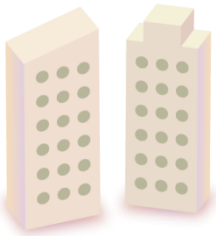
- Rooftop (village houses, private buildings), idle land
- Ownership - Owner or occupant
- Uses - Leisure purpose (BBQ, gardening, etc.)

# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Private Building Rooftop :



- Planned use
  - For solar PV system serves primarily as an ancillary facility for **supplementing power supply to the buildings or the households** therein, it is not in contravention of the relevant planned use
- Land use and lease conditions
  - PV systems in existing buildings should **conform / comply with the relevant land use and lease conditions**; otherwise, applications should be submitted to the LandsD subject to land lease conditions
- Deed of Mutual Covenant
  - **Restrictions may be stipulated in the Deed of Mutual Covenant**, owners/occupants are advised to obtain prior agreement from the Owners' Corporation, Mutual Aid Committee or the management company
- Fire safety
  - Should not affect the means of escape in case of fire
  - If the roof has been designed as a refuge floor, adequate refuge area should be maintained and proper fire separation should be allowed

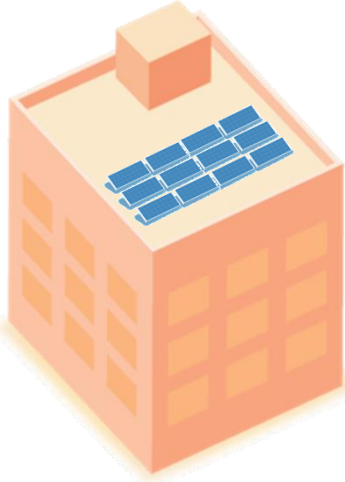


# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

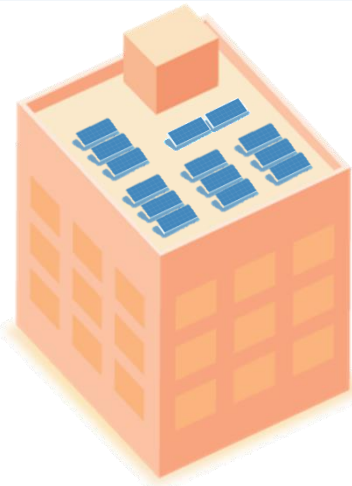
## New Territories Exempted Houses (NTEH, Village Houses) Rooftop :

### Continuous-spread:

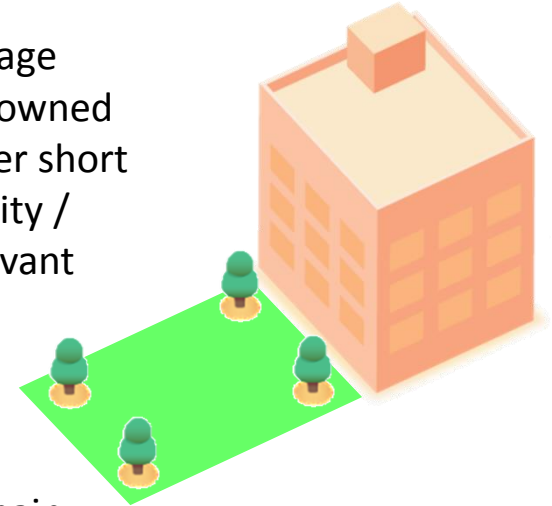
≤ 50% roofed-over area



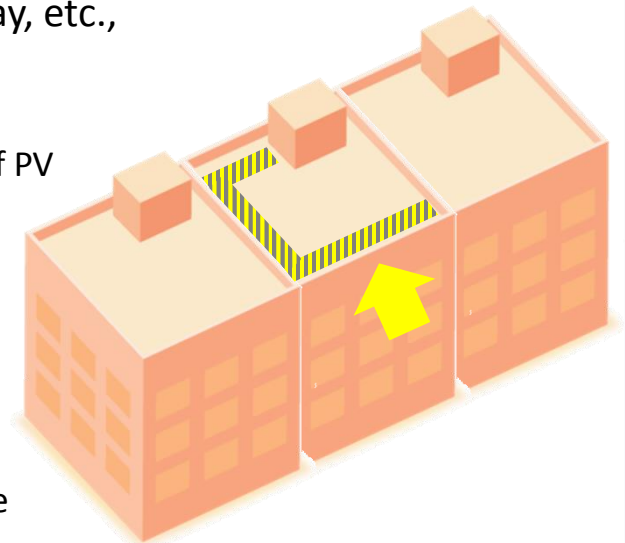
**Clusters:**  
each ≤ 5m<sup>2</sup>,  
separated  
from each  
other by  
≥ 1m



**Garden** adjacent to a village house which is privately owned or situated on a site under short term tenancy in conformity / compliance with the relevant land use and lease or tenancy conditions  
**At least one side of the roof** facing Emergency Vehicular Access (EVA)/main road/village passageway, etc., or not abutting adjoining building:



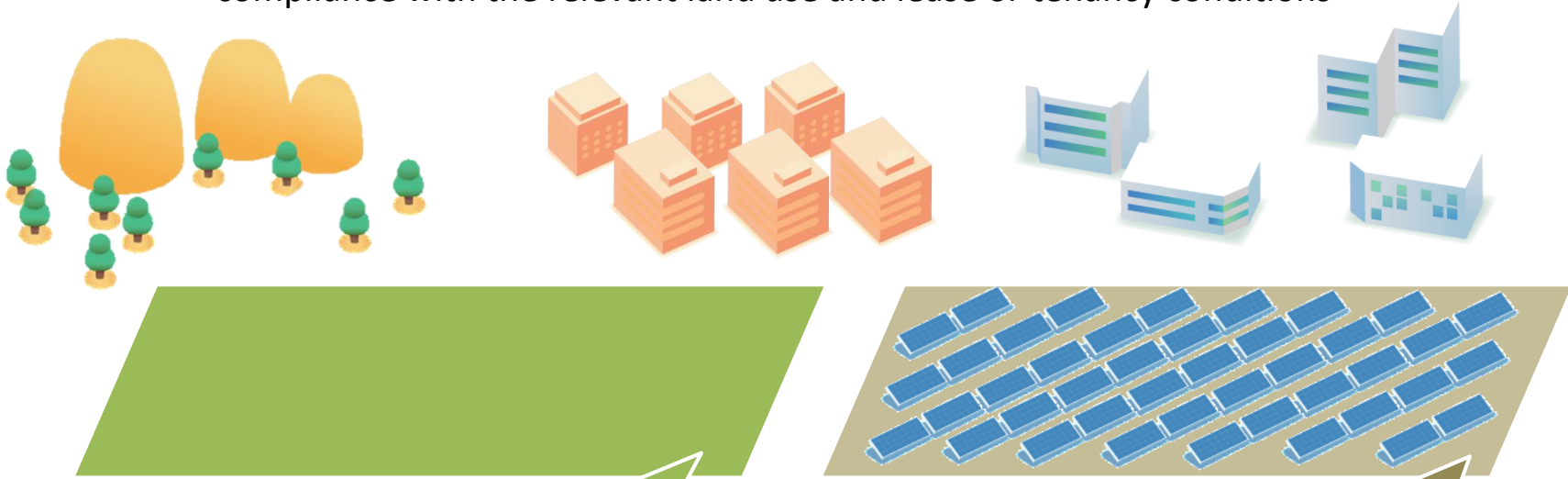
- Free from installation of PV panels by maintaining a setback of ≥1.05m measured from the parapet wall edge
- A passageway with a width of ≥1.05m from the roof exit to that side of roof



# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Idle Land :

Idle land which is privately owned or within an area of short term tenancy which is in conformity / compliance with the relevant land use and lease or tenancy conditions



The **wavier application fee** for setting up solar PV systems on **private agricultural land** is set according to the established fee level of the LandsD, and the fee for individual site depends on factors like its size, location and the land lease terms.

If a Solar PV system is installed as a stand-alone facility on idle land, it would be regarded as **“Public Utility Installation”**

# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Business Models :

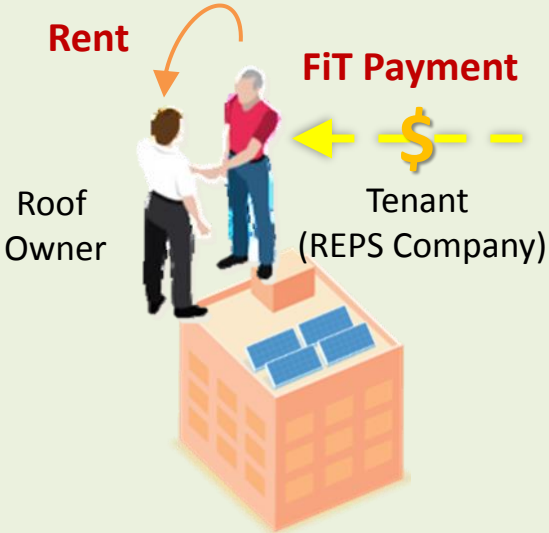
### Self-Owned

- Roof Owner (as a HK Electric customer) installs a REPS, participated in FiT Scheme



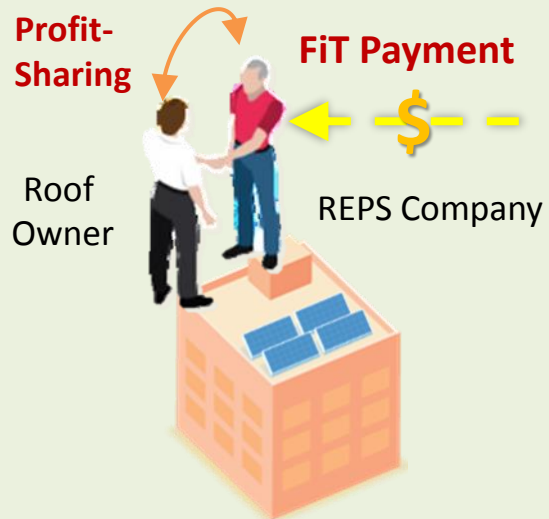
### Roof Leasing

- Roof Owner charges a fixed rent
- Tenant such as REPS Company (as a HK Electric customer) pays the rent, the cost of REPS system, and participates in FiT Scheme



### Solar Leasing (profit-sharing)

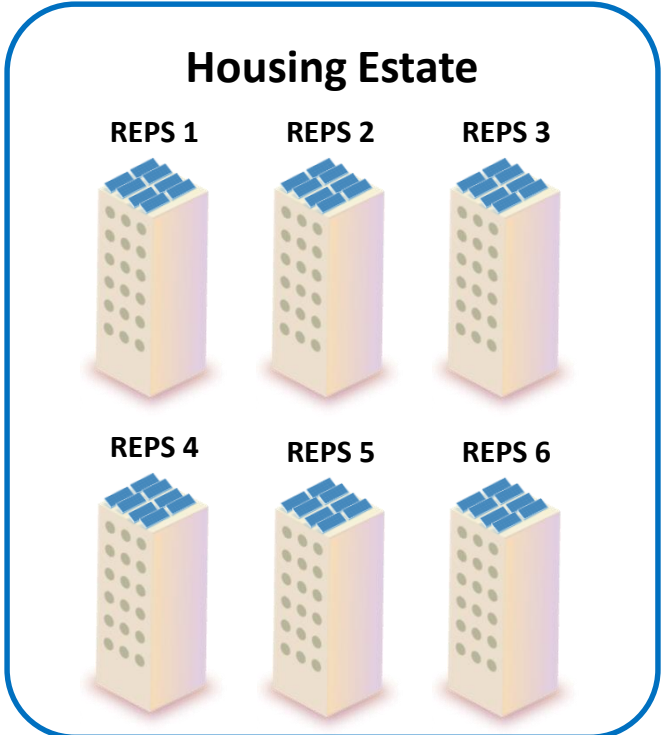
- REPS Company owns/shares the cost with Roof Owner for REPS system
- Roof Owner/Company (as a HK Electric customer), participates in FiT Scheme Profit-sharing of FiT Payment



# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

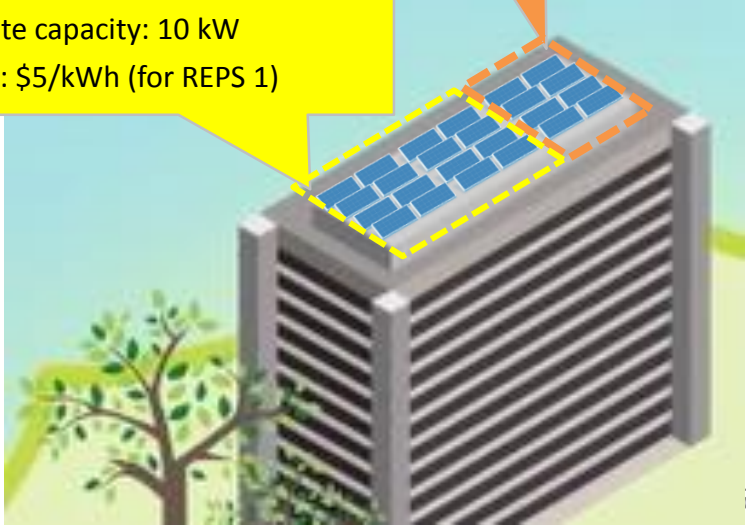
## REPS Capacity for FiT Rate Determination :

- If a Service Address covers several Premises (e.g. multi-residential blocks), the REPS installed on each Premises (e.g. rooftop of residential block) will generally be treated as a separate REPS
- The FiT rate for the new REPS will be determined based on the aggregate generation capacity of the new REPS and the existing REPS



Jan 2019: 10 kW PV system (REPS 1)  
Aggregate capacity: 10 kW  
FiT Rate: \$5/kWh (for REPS 1)




Oct 2019: 5 kW PV system (REPS 2)  
Aggregate capacity: 15 kW  
FiT Rate: \$4/kWh (for REPS 2)  
(\$5/kWh for REPS 1)





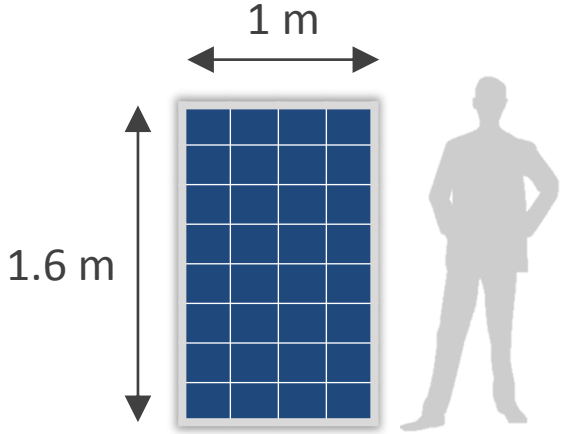
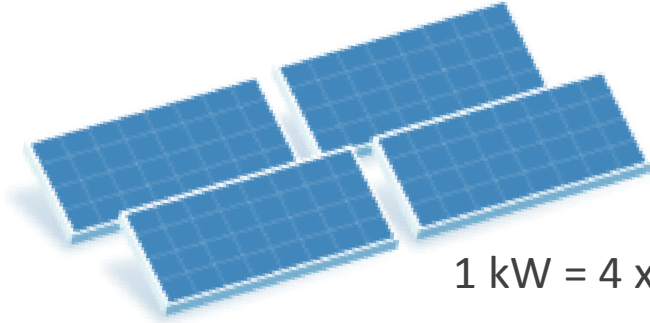
# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Typical PV Panels :

Monocrystalline	Polycrystalline	Thin-Film (TF)
		
<ul style="list-style-type: none"><li>• Highest efficiency</li></ul>	<ul style="list-style-type: none"><li>• High efficiency, similar to monocrystalline cells</li></ul>	<ul style="list-style-type: none"><li>• Low efficiency, around half of crystalline cells</li></ul>

# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

Quick Metrics for PV System in HK :



- Capacity factor of 10-12% (i.e. actual energy output is 10-12% of the hypothetical maximum energy output per annum)

Capacity / footprint required	1 kW (3-4 crystalline panels) / 10m <sup>2</sup> (100 sq. ft.)
Hypothetical maximum energy output	365 days x 24 hours x 1kW = 8,760 kWh
Actual energy output per annum (at 10-12% capacity factor)	8,760 kWh x 10% (to 12%) = 876kW (to 1,051 kWh) (say ~1,000 kWh)
Annual FiT payment at HK\$5/kWh	~HK\$5,000
Capital cost	HK\$30,000 – 50,000
Payback Period	~6-10 years (Note 1)

Note 1: Actual figures will be subject to site conditions and design of the REPS

# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## PV System Layout Considerations :

- Hong Kong lies at
  - Latitude:  $22^{\circ}08' \sim 22^{\circ}35' \text{ N}$
  - Optimum orientation and tilt angle

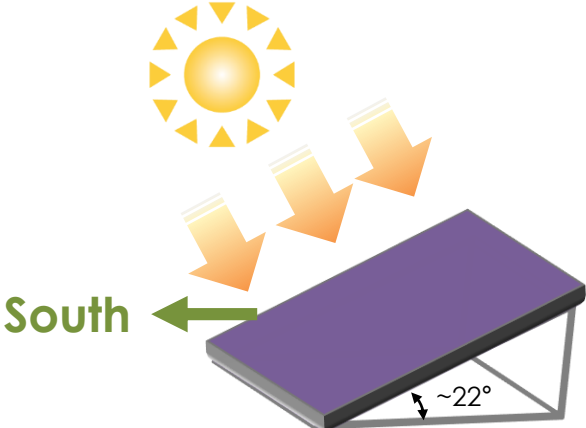
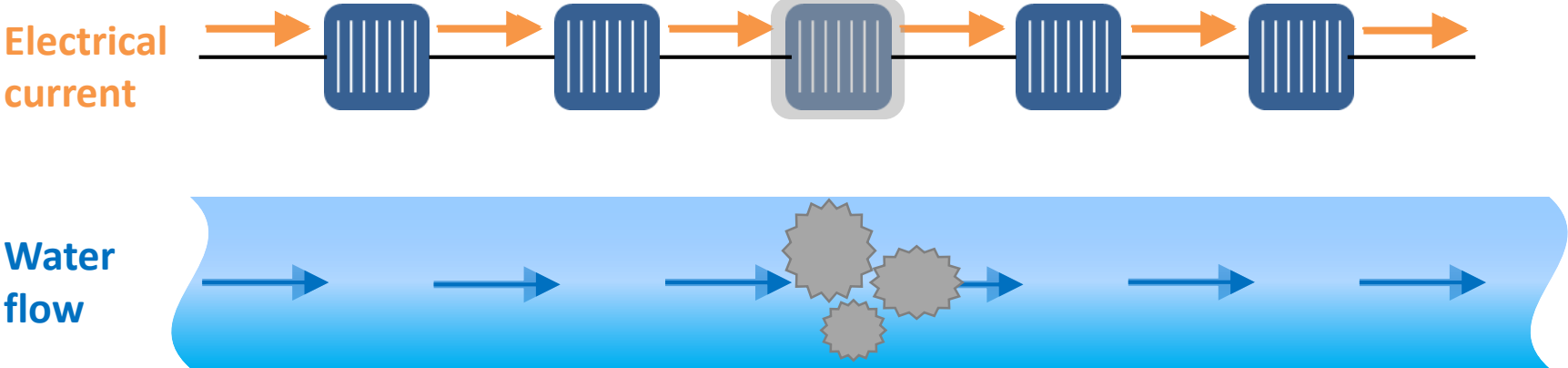


Image: Google Map

# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## PV System Layout Considerations :

- Avoid shading from rooftop facilities, fence, wall, nearby building, trees, etc.








- Glint and glare

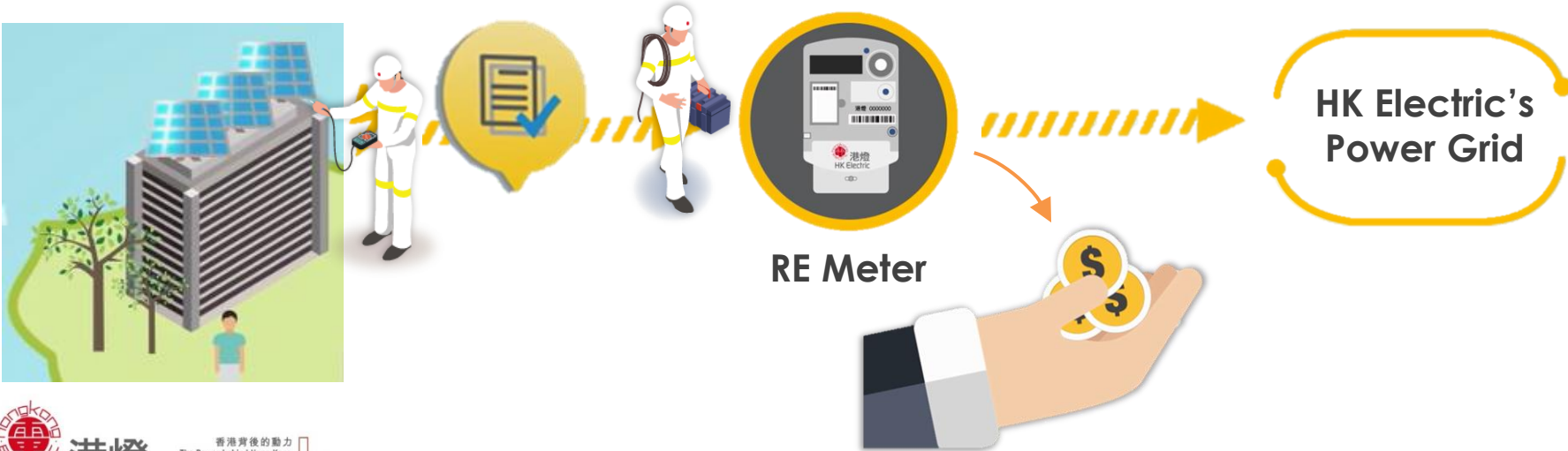


Source: [將軍澳醫院天台光害擾民](#), 17 Aug 2013, Orient Daily

# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Participation in FiT Scheme :

- 1**  Submit application form and technical information
- 2**  Install REPS after obtaining HK Electric's consent
- 3**  Perform system tests, submit results and other necessary information
- 4**  HK Electric to connect REPS to power grid and install RE meter upon satisfactory site inspection
- 5**  Receive FiT payment based on metered system output



# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Required Submission for FiT Application :

1



**Submit  
application  
form and  
technical  
information**

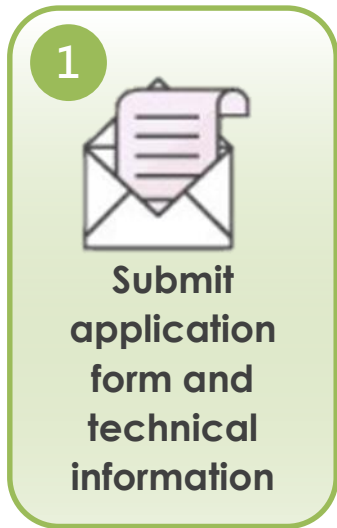
- Duly completed application form
- Identity Verification Document (e.g. BR copy)
- Technical Drawings
- Major Components Technical Information

(Application with incomplete documents will not be processed)

# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Required Submission for FiT Application :

1. Duly completed application form
  - Applicant Information



### Feed-in Tariff (FiT) Scheme Application Form

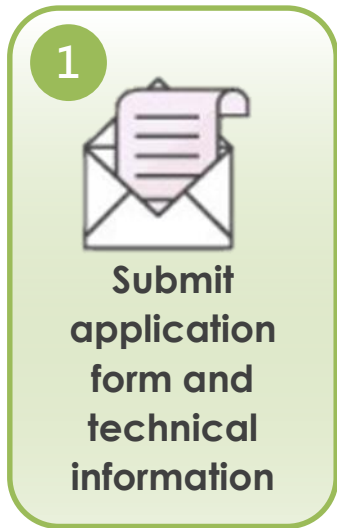



Applicant Information	
Electricity Account Number	
Name of Registered Customer <sup>(a)</sup>	English <input type="text"/> 中文 <input type="text"/>
Type of Customer	<input type="checkbox"/> Person (HKID/Passport Number: <input type="text"/> ) <input type="checkbox"/> Company (Business Registration Number/Certificate of Incorporation Number: <input type="text"/> ) <input type="checkbox"/> Other entities (Other Registration/Incorporation Document Number: <input type="text"/> )
Name of Contact Person (if different from the above)	English (Surname first, then other names) <input type="text"/> 中文 <input type="text"/>
Contact Details	Phone Number: <input type="text"/> Email Address: <input type="text"/>
Service Address <sup>(b)</sup> (where the REPS under this application is or will be installed)	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Flat/Room/Shop Floor Block Name of Building/Estate
	<input type="text"/> <input type="text"/> <input type="text"/> Number and Name of Street (or Village) District
Correspondence Address (to be the same as the correspondence address for the electricity account)	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Flat/Room/Shop Floor Block Name of Building/Estate
	<input type="text"/> <input type="text"/> <input type="text"/> Number and Name of Street (or Village) District
Preference for Receiving FIT Credit Balance <sup>(c)</sup>	<input type="checkbox"/> Credit to the above electricity account <input type="checkbox"/> A cheque made payable to the registered customer to be sent to the above correspondence address <input type="checkbox"/> Transfer to the registered customer's bank account Bank account number of the registered customer: <input type="text"/> [Please provide proof as detailed in Clause 15.5(c) of the Terms & Conditions of FIT Scheme]

# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Required Submission for FiT Application :


1. Duly completed application form
  - Information of REPS under this Application






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### Feed-in Tariff (FiT) Scheme Application Form



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HK Electric



Fillable Form
Reset
Print
Save
Submit

Information of REPS under this Application					
Installation Location <sup>(a)</sup>	<input type="checkbox"/> Rooftop <input type="checkbox"/> Land <input type="checkbox"/> Others (please specify _____)				
Nature of Application	<input type="checkbox"/> Application for FIT Scheme participation of new REPS <input type="checkbox"/> Application for FIT Scheme participation of grid-connected REPS (HK Electric's letter date: _____ Ref. no.: _____)				
	<input type="checkbox"/> Transfer of FIT Agreement (Completion Letter date: _____ Ref. no.: _____)				
RE Technology	<input type="checkbox"/> Solar Photovoltaic (PV)	<input type="checkbox"/> Wind Power		_____ V    _____ Hz	<input type="checkbox"/> 1-phase <input type="checkbox"/> 3-phase
Generation Capacity <sup>(a)(i)</sup>	kW	Aggregate Generation Capacity of all RE Power systems at the Installation Location <sup>(a)</sup>		kW	Expected Generation <sup>(ii)</sup> _____ kWh/year
Expected Installation Start Date (DD/MM/YYYY)				Expected Commissioning Date (DD/MM/YYYY)	
Major Equipment Details		<input type="checkbox"/> Solar PV Panel	<input type="checkbox"/> Inverter	<input type="checkbox"/> Wind Turbine	
Manufacturer/Brand/Model No.					
Country of Origin					
Standard of Compliance					



# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Required Submission for FiT Application :

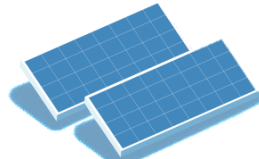
1. Duly completed application form
  - Information of REPS under this Application

- Generation capacity: either the aggregate of the maximum power rating of each solar PV panel/wind turbine of the REPS, or the aggregate of maximum power rating of each inverter of the REPS, whichever is lower

1



Submit application form and technical information

	 <span style="color: red; font-weight: bold;">4kW</span>	 5kW	REPS Generation Capacity
Maximum Power Output	<span style="color: red; font-weight: bold;">4kW</span>	5kW	<span style="color: red; font-weight: bold;">4kW</span>
	5kW	<span style="color: red; font-weight: bold;">4kW</span>	<span style="color: red; font-weight: bold;">4kW</span>

# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Required Submission for FiT Application :

1. Duly completed application form
  - Contact Information and Endorsement

1



Submit  
application  
form and  
technical  
information



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**Feed-in Tariff (FiT) Scheme  
Application Form**



Fillable Form
Reset
Print
Save
Submit

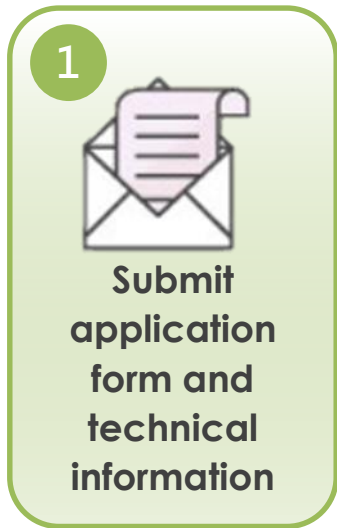
Contact Information of Applicant's Contractor		
<b>Company Name</b>		
<b>Name of Contact Person</b>	English (Surname first, then other names)	中文
<b>Contact Details</b>	Phone Number:	Email Address:
Emergency Contact (if different from the Applicant)		
<b>Name of Contact Person</b>	English (Surname first, then other names)	中文
<b>Contact Details</b>	Phone Number:	Email Address:
<b>Applicant Declaration</b>		
I/We declare that the information provided in this form is true and correct. I/We have read and agree to be bound by the Terms and Conditions of FiT Scheme (as may be revised from time to time). I/We also acknowledge that I/We have read and understand the Important Notes section of this application form and the Personal Data Collection Statement above.		
<b>Name of Applicant *</b>	<b>Signature and Company Chop (if applicable)</b>	
<b>Job Title (if applicable)</b>	<b>Date</b>	

# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Required Submission for FiT Application :

### 2. Identity Verification Document

- Copy of HKID Card/Passport (for a person)



- Business Registration Certificate / Certificate of Incorporation (for a company)



# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Required Submission for FiT Application :

### 3. Technical Drawings

- Layout Plan for REPS

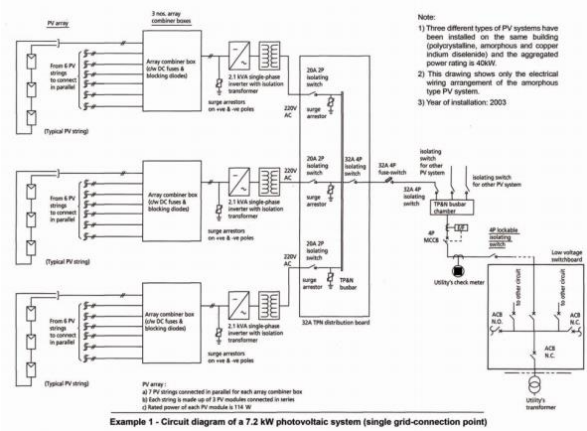
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**Submit application form and technical information**



- REPS Schematic Diagram



# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Required Submission for FiT Application :

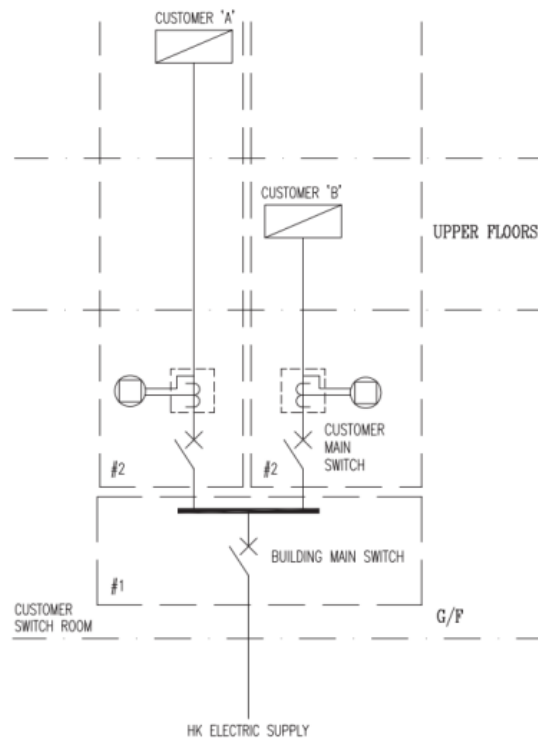
### 3. Technical Drawings

- Main Electrical Schematic Diagram, if applicable

1



Submit application form and technical information



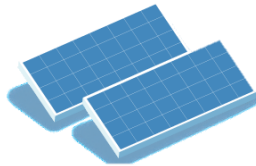
# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Required Submission for FiT Application :

### 4. Major Components Technical Information

– Catalogue for:-

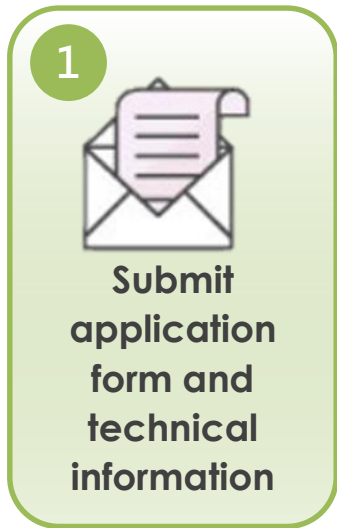
- PV Panel/Wind Turbine



- Inverter



- Isolation Transformer



# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Required Submission for FiT Application :

- Submit FiT Application
  - via online application

- HK Electric FiT Homepage:  
[www.hkelectric.com/FIT-en](http://www.hkelectric.com/FIT-en)

Home > Customer Services > Smart Power Services > Feed-in Tariff (FIT) Scheme

Feed-in Tariff (FIT) Scheme

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To develop a greener Hong Kong, let us support the development of renewable energy and help combat climate change. HK Electric will purchase electricity generated by the grid-connected renewable energy power systems of customers at Feed-in Tariff rates.

Effective Date 1 January 2019

Enquiry  
Hotline 2843 3228  
Email RE@hkelectric.com

Apply Online >

- HK Electric Low Carbon App



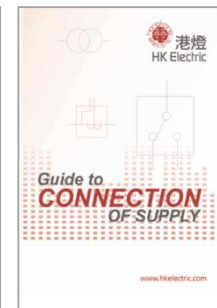
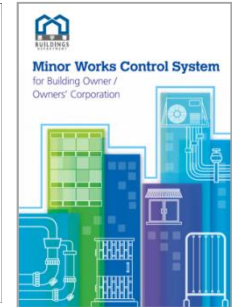
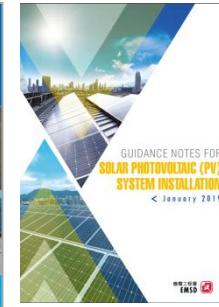
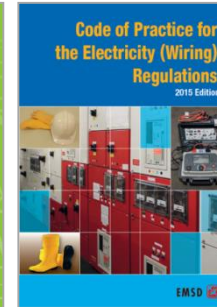
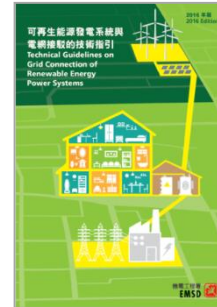
- Email to [RE@hkelectric.com](mailto:RE@hkelectric.com)
- By post to Head of Customer Business Development, Customer Services Division, 31  
4/F, Hongkong Electric Centre, 44 Kennedy Road, Hong Kong

1

Submit  
application  
form and  
technical  
information

# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

- PV system owner shall ensure REPS design, installation, operation and maintenance comply with all applicable laws, regulations, codes of practice, guidelines, safety and technical requirements including:
  - Technical Guidelines on Grid Connection of Renewable Energy Power System;
  - Registration of Generating Facility in accordance with the Electricity Ordinance
  - **EMSD Guidance Notes for Solar Photovoltaic (PV) System Installation**
  - Minor Works Control System
  - HK Electric Technical & Interface Requirements
- PV system owner shall engage qualified service provider (e.g. Registered Electrical Contractor) to design and install solar PV system
  - Lists of RE equipment suppliers and contractors are published on EMSD website [re.emsd.gov.hk](http://re.emsd.gov.hk) (EMSD hotline: 6395 2930)

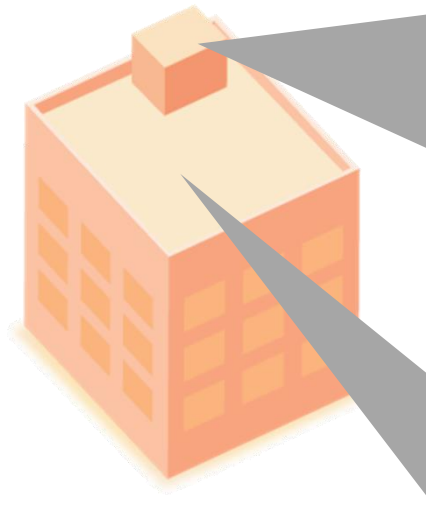




# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Building/Structural Requirements Village Houses :

- The roof on which the system would be installed should be **cleared of all unauthorised building works (UBWs)**
- The space underneath the system **should not be enclosed**
- It should be properly installed and **should not adversely affect the structural safety** of the building
- For a system **exceeding 1.5m** high measured from the roof level, it should be **certified by an Authorized Person** registered under the Buildings Ordinance (BO) for submission of a safety certificate to LandsD for record.
- Such facilities should **not be installed on the canopy**



### Stairhood

- The system including its supporting structure should be  **$\leq 2.5\text{ m}$**  measured from the level of the roof of the stairhood
- The average loading imposed should be  **$\leq 75\text{kg/m}^2$**
- It should not project  **$> 750\text{mm}$**  from the edge of the roof

### Main roof

- The system including its supporting structure should be  **$\leq 2.5\text{ m}$**  measured from the roof level
- The average loading imposed should be  **$\leq 150\text{kg/m}^2$**
- It should not project  **$> 750\text{mm}$**  from the external wall

# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Building/Structural Requirements – Private Buildings & Idle Land :

### Relevant building works are minor works

Class I
<b>1.19</b>

Erection/ Alteration
<ul style="list-style-type: none"><li>• Height of structure <math>\leq 1.5\text{m}</math></li><li>• Designed for the photovoltaic system with at least 1 module <math>&gt; 200\text{kg}</math></li></ul>

Class III
<b>3.15</b>

Erection/ Alteration/ Removal
<ul style="list-style-type: none"><li>• Height of structure <math>\leq 1.5\text{m}</math></li><li>• Designed for the photovoltaic system with module each <math>\leq 200\text{kg}</math></li></ul>

Prescribed Building Professional to:

- submit form MW01, documents, photos 7 days before commencement of work
- submit form MW02, documents, photos within 14 days after completion of work

Prescribed Registered Contractor to:

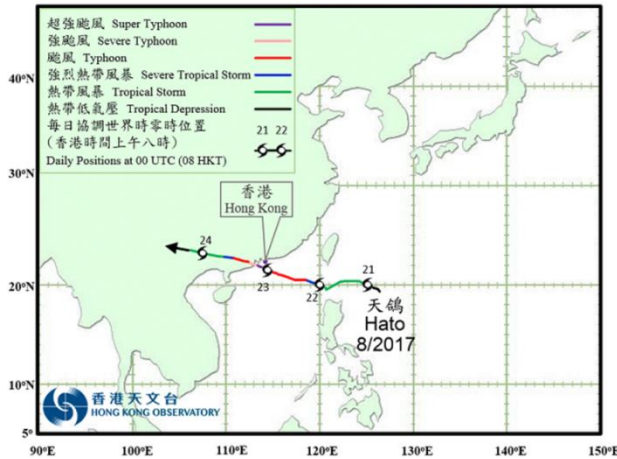
- Submit form MW05, documents, photos within 14 days after completion of work

### Relevant building works are not exempted building works or minor works

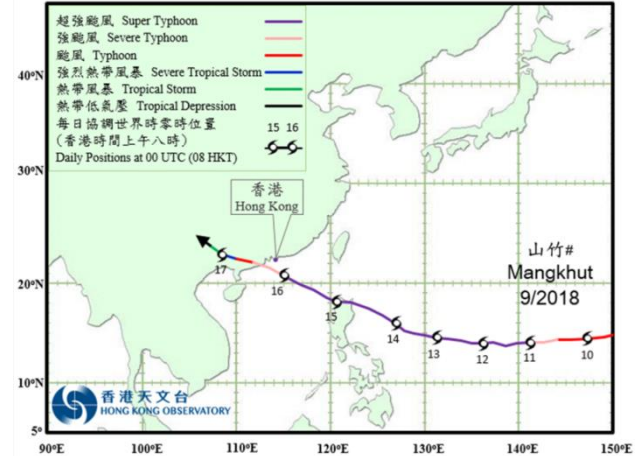
- The landlord or tenant concerned should **appoint an authorized person to submit building plans to the BD** in accordance with the Buildings Ordinance;
- and the works should be commenced only after obtaining **prior approval for and consent** to the commencement of works from the BD

# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

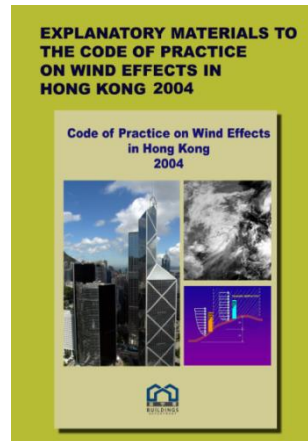
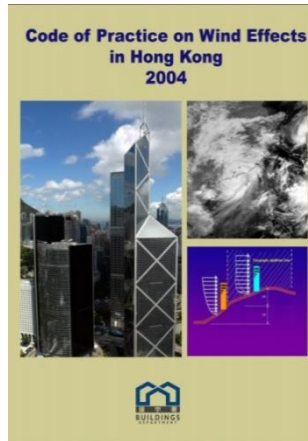
## Building/Structural Requirements – Wind Effect :



Source: HK Observatory



#山竹的有關數據只經初步品質檢查。  
Only minimum quality check have been applied for data of Mangkhut.



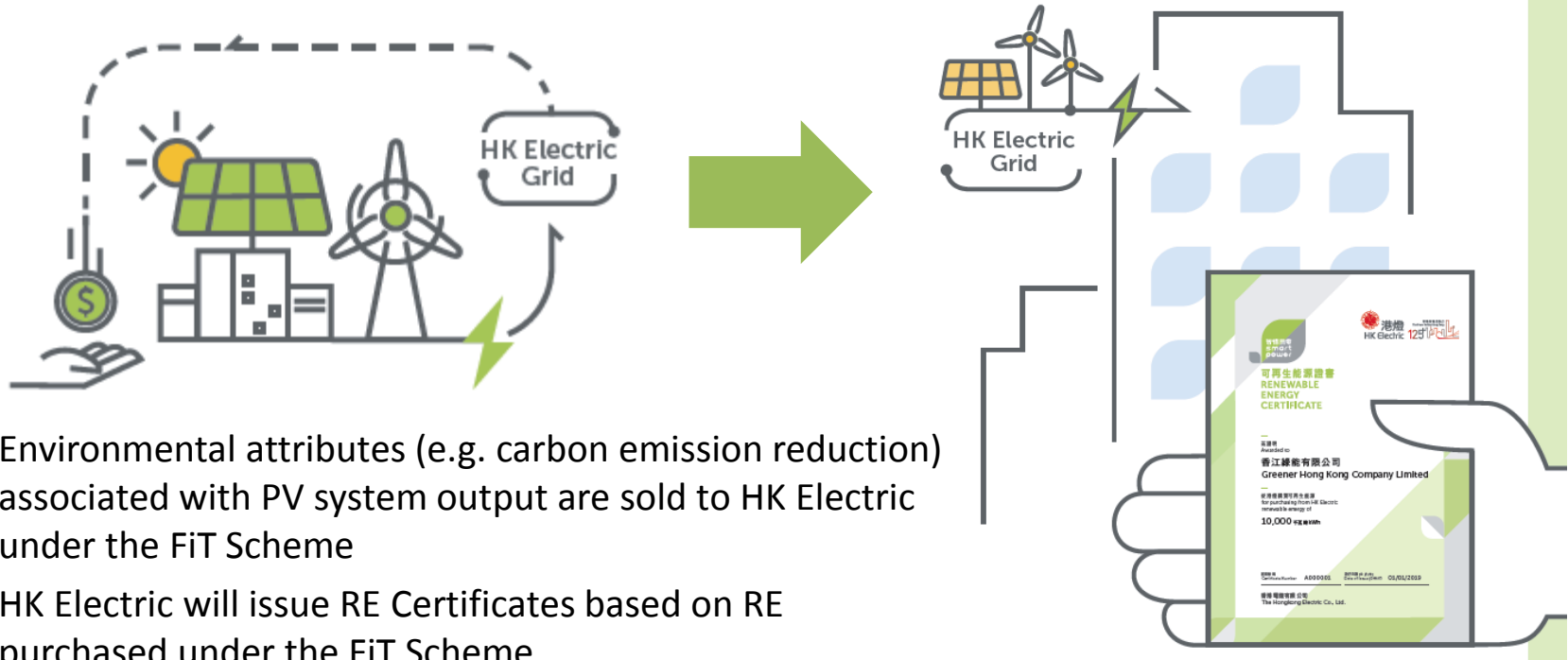
Sources: [Code of Practice on Wind Effects in Hong Kong 2004](#) (BD); [Explanatory Materials to The Code of Practice on Wind Effects in Hong Kong 2004](#) (BD)



Source: [耐17級風攏是假 國小太陽能板9級風就垮了](#), 28 Sep 2016, Taiwan Apple Daily

# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

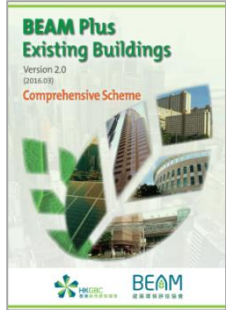
## Environmental Considerations :



- Environmental attributes (e.g. carbon emission reduction) associated with PV system output are sold to HK Electric under the FiT Scheme
- HK Electric will issue RE Certificates based on RE purchased under the FiT Scheme
- FiT Scheme participants shall not claim:
  - the use of the sold electricity from the REPS; and
  - the associated environmental benefits (e.g. for deducting the GHG Protocol Scope 2 emission by use of RE; for earning credit in green building certification)

# 1. Application Procedures for Feed-in Tariff (FiT) Scheme

## Environmental Considerations :



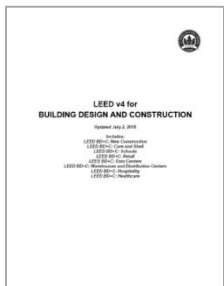
### BEAM Plus (Existing Buildings V2.0) – Comprehensive Scheme

- 1 bonus credit where at least 0.2% of building consumption in communal area is obtained from renewable energy sources



### BEAM Plus (New Buildings V1.2) – Energy Use (EU) 6

- 1 to 5 credits for 0.5% to 2.5% of building energy consumption is obtained from RE sources or 20% to 100% of the building footprint is being covered/used by PV panels and/or other RE facilities with equivalent output

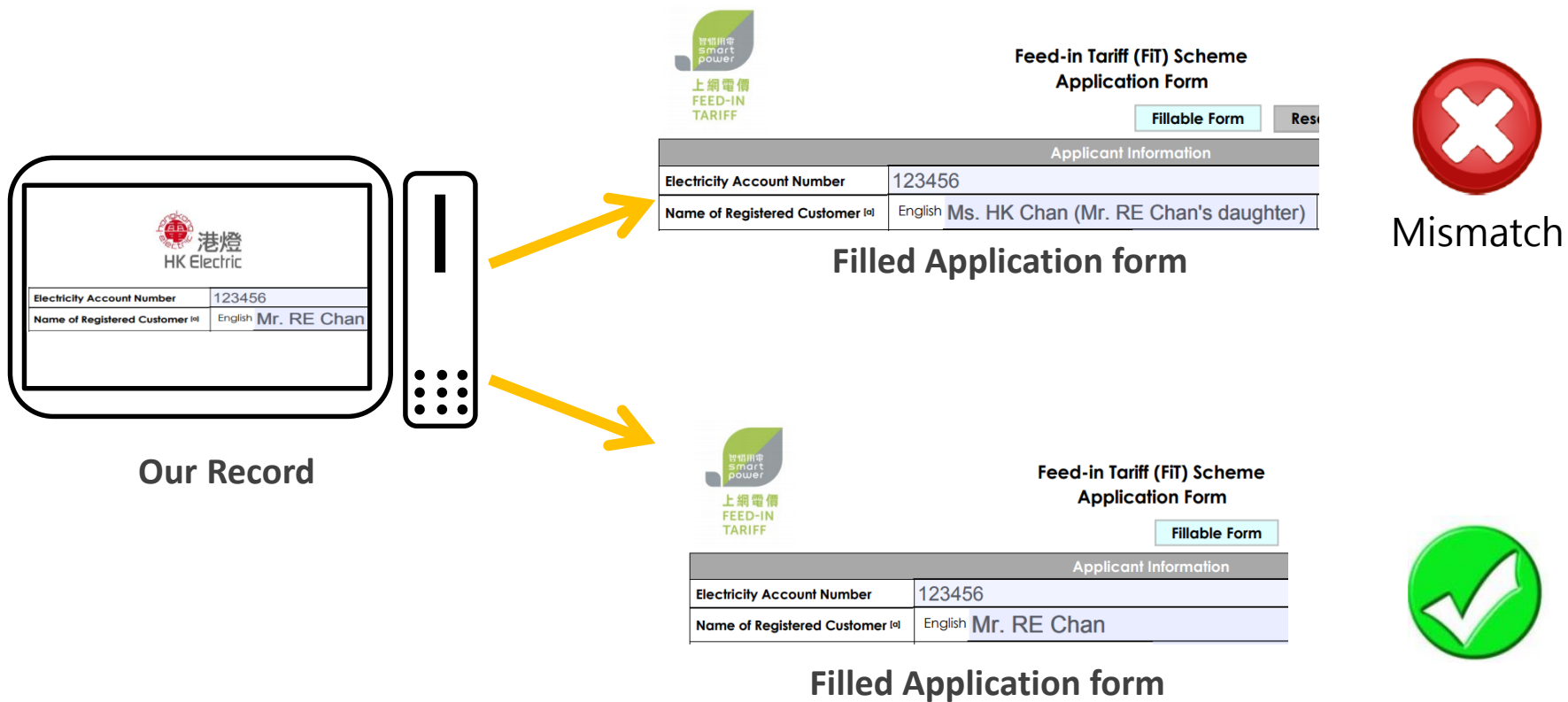


### LEED (v4 for Building Design & Construction) – Renewable Energy Production

- 1-3 points for the equivalent cost of usable energy produced by the renewable energy system accounts for 1%/5%/10% of total building annual energy cost

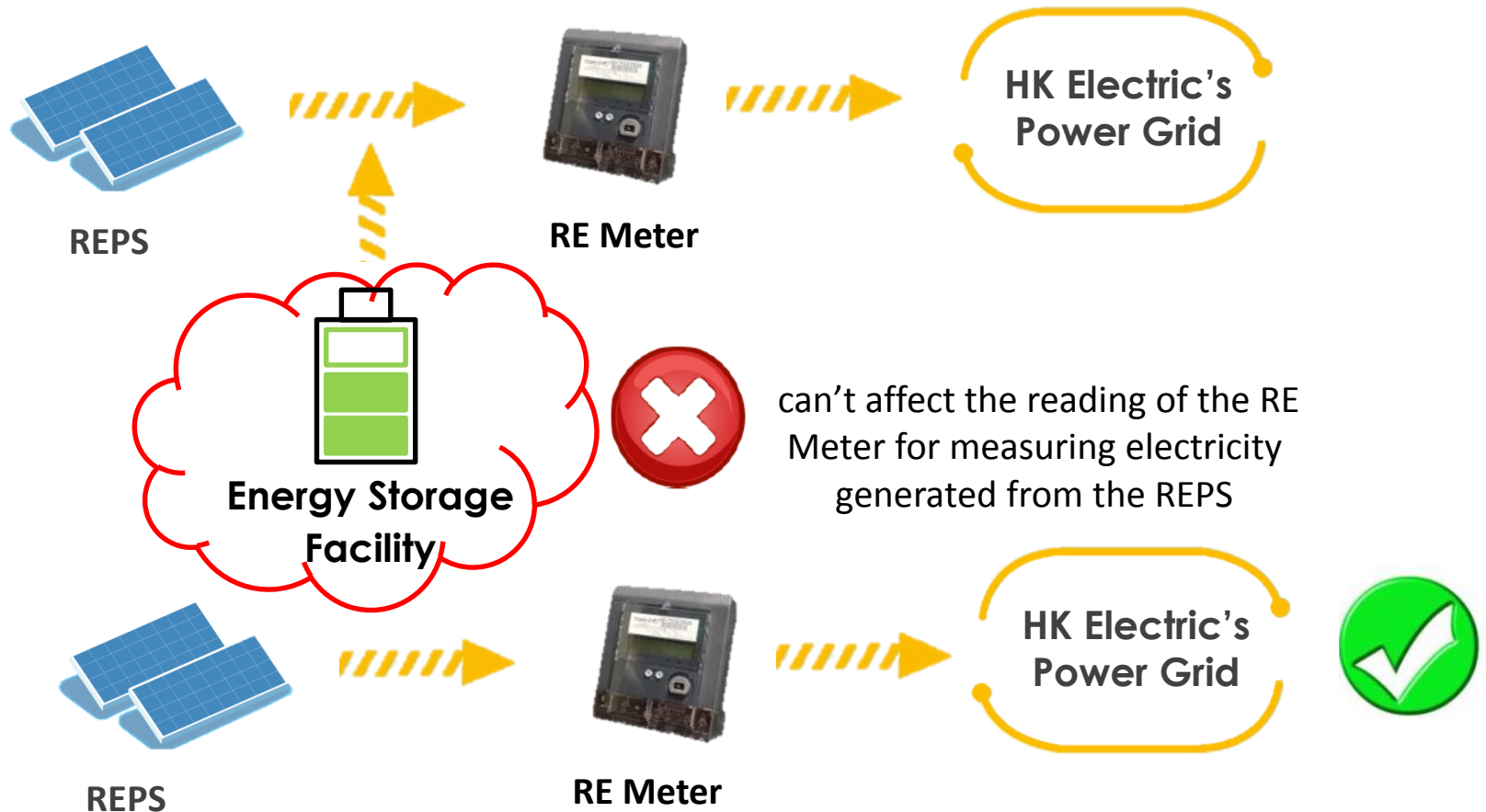
## 2. Common Departures

Name of Register Customer in the application form:-



## 2. Common Departures

REPS with Energy Storage Facility:-



# Enquiry/Application

締造綠色香港 構建智慧城市  
Smart Power for Smart City



查詢 / 申請  
Enquiry/Application



智惜用電樓宇基金 Smart Power Building Fund

✉ SPBF@hkelectric.com 🌐 www.hkelectric.com/SPBF

智惜用電能源審核 Smart Power Energy Audit

✉ SPEA@hkelectric.com 🌐 www.hkelectric.com/SPEA

智惜用電貸款基金 Smart Power Loan Fund

✉ SPLF@hkelectric.com 🌐 www.hkelectric.com/SPLF

智惜用電關懷基金 Smart Power Care Fund

✉ SPCF@hkelectric.com 🌐 www.hkelectric.com/SPCF

智惜用電教育基金 Smart Power Education Fund

✉ SPEF@hkelectric.com 🌐 www.hkelectric.com/SPEF

上網電價計劃 Feed-in Tariff Scheme

✉ RE@hkelectric.com 🌐 www.hkelectric.com/FIT

可再生能源證書 Renewable Energy Certificates

✉ REC@hkelectric.com 🌐 www.hkelectric.com/REC





**Thank you**