

LCQ12: Feed-in Tariff

Following is a question by the Hon Martin Liao and a written reply by the Secretary for the Environment, Mr Wong Kam-sing, in the Legislative Council today (January 23):

Question:

To promote the development of renewable energy (RE), the Government has introduced the Feed-in Tariff (FiT). It has been reported that following the authorities' relaxation of the height restriction on the solar photovoltaic (PV) systems to be installed on rooftops of village houses, there has been a surge in the number of FiT applications. Nevertheless, quite a number of applications have been hindered by issues such as the proposed generating capacity has exceeded the current capacity of the power grids for supplying electricity to the customer or district concerned, resulting in certain FiT applications being approved with a lower generating capacity only. This has seriously upset the plans of the applicants and the relevant industries and even dampened their desire to develop RE for electricity generation. In this connection, will the Government inform this Council:

(1) if it knows, since the introduction of FiT, (i) the respective numbers of applications received by each power company, (ii) the vetting and approval status of the applications (including having been approved, being processed, having been rejected, etc.), (iii) the customer category to which the applicants belonged, (iv) the category of RE (i.e. solar energy or wind energy) involved, and (v) the number and details of the applications for which revisions to the scale of electricity generation were necessary (including the originally proposed generating capacity, the revised generating capacity as requested by the power company concerned, and the reasons for the revision);

(2) whether it envisaged, when considering and formulating FiT, the issue that the generating capacities of some applications need to be lowered as appropriate because they are too large; if so, of the details (including the percentage of the relevant cases and their impact on the output of electricity to be generated by RE) and the solutions;

(3) whether targeted improvement measures are in place to address the issues mentioned in (2); if so, of the details (including actions to be taken and the timetable); if not, the reasons for that; and

(4) as the Government has recognised that promoting the development of RE is an integral part of mitigating climate change, whether the authorities will consider adopting more aggressive measures to encourage the installation of solar PV systems in all suitable buildings and promote the healthy development of local RE industries like the solar energy industry, such as by making reference to the policies and measures implemented in other countries and regions for supporting the development of the solar power generation industry and streamlining the application procedure for installing solar PV

systems on building rooftops under the premise of conformity with the safety principles, offering tax concessions to households which have installed such systems, promoting the development of the leasing market for such systems, and setting up investment funds for subscription by the public for developing RE industries; if so, of the details; if not, the reasons for that?

Reply:

President,

(1) The CLP Power Hong Kong Limited (CLP) has started receiving applications for the Feed-in Tariff (FiT) Scheme since May 2018, and officially commenced the Scheme since October 2018. According to the information provided by CLP, as at end 2018, CLP has received over 1 400 FiT applications among which 98 per cent involve solar renewable energy (RE) systems and the remaining 2 per cent are wind and wind/solar hybrid RE systems. Among the applications received, over 70 per cent involve installation of RE systems at residential premises and over 20 per cent involve that at non-residential premises. Among the above-mentioned applications, the RE systems in 78 applications have already been connected to the CLP's network and FiT payment is being received for the electricity generated by such systems. For the remaining applications, CLP has initially approved (Note) about 80 per cent and has not rejected any applications as at today. In addition, among the applications received, the generating capacity approved in about 160 applications is lower than that applied with details as follows:

Reduction in the generating capacity approved when compared to the generating capacity applied	Percentage (About 160 applications in total)
> 0% – ≤ 40%	33%
> 40% – ≤ 70%	30%
> 70% – < 100%	37%

Note: Applications which have been initially approved refer to those applications which have been accepted by the power company and the applicants have been notified of the applicable FiT rates; and applicants can commence installing the RE systems.

CLP needs to adjust the generating capacity in individual applications mainly due to the following three reasons:

(i) The systems under application are located outside the existing network (such as uncultivated land). If a network has to be laid, the network may have to route through undeveloped land and road, and the works and applications involved will be complicated and time-consuming. Moreover, the addition of a network involves relatively large amount of investments, and must also take into account the maintenance of a safe and reliable power supply;

(ii) There are only basic power supply facilities (such as overhead electricity lines) in the areas where the systems under application are located and the capacity for supplying electricity of the network concerned cannot support the capacity of the systems under application. Enhancement of the network may also be subject to physical constraints (such as in cases where electrical cables have to be laid on private land, consent of the owner(s) of the site(s) concerned have to be obtained; and there may not be sufficient space to accommodate electrical cables with higher capacity if the underground space concerned has already been fully occupied by the facilities of other public utilities, etc.); and

(iii) Connecting RE system with a larger capacity or many smaller RE systems densely within the same area to a CLP's network will increase the supply voltage and may even exceed the allowable voltage limit of the existing power supply facilities within the area. This may result in voltage instability, and may ultimately affect the stability of power supply to other customers of the same area.

The Hongkong Electric Company Limited (HEC) has started receiving applications for FiT Scheme since August 2018, and officially commenced the Scheme since January 2019. According to the information provided by HEC, as at end 2018, HEC has received over 60 FiT applications among which 98 per cent involve solar RE systems and the remaining 2 per cent are wind/solar hybrid RE systems. Among the applications received, applications involving installation of RE systems at residential and non-residential premises each accounts for about half of the applications. Among the above-mentioned applications, the RE systems in seven applications have already been connected to the HEC's network and FiT payment is being received for the electricity generated by such systems. For the remaining applications, HEC has approved about 20 per cent. As at today, HEC has neither rejected any application nor adjusted the generating capacity of any application.

(2) and (3) FiT is a newly introduced measure in Hong Kong and there are inevitably some issues which have to be dealt with by the power companies in the initial period of implementation. In introducing the FiT Scheme, power companies also have to maintain the safe and reliable power supply at the same time; and those individuals and organisations interested in the FiT Scheme would also need some time to familiarise with the Scheme's and operational details.

Before the introduction of the FiT Scheme, CLP has already expected that the generating capacity in some individual cases may be too large and have to be adjusted. Therefore, CLP has already clearly stipulated the eligibility requirements in the application information on its FiT Scheme, including the total generating capacity of the RE systems to be connected to the network should be up to 1 MW; and the systems can be connected to the CLP's network without the need to increase the capacity of or reinforce the network by CLP.

At present, the number of applications in which the generating capacity approved by CLP is lower than that applied amounts to about 10 per cent of the total applications received. There are different reasons for having to adjust the generating capacity in different cases. CLP has already arranged

dedicated customer service managers to follow up each application, and suggest different technical solutions with a view to resolving the matter, including carefully consider the electricity demand arising from the development of the areas concerned (including the demand for RE development) having regard to individual circumstances, and consider whether and if so how to lay or reinforce network. If the solution involves laying or reinforcing the network, apart from considerations on cost-effectiveness and impact on tariff, the works and applications involved will be complicated and time-consuming, and will not be completed within a short time frame.

We have already expressed concern on CLP's adjustment of the generating capacity in individual FiT applications, and are further obtaining information on their approval criteria and follow-up work. We will continue to closely monitor the implementation of the FiT Scheme and solicit the views of stakeholders, and proactively discuss with the two power companies to address the relevant issues with a view to improving the arrangements of the Scheme such that the Scheme can assist in combating climate change through facilitating the private sector in developing RE.

(4) We have already announced under the 2018 Policy Address that the Government will continue to take the lead to develop RE in a systematic manner so as to reduce carbon emissions thereby mitigating climate change.

For the public sector, we have earmarked \$1 billion to support the development of small-scale RE projects by bureaux and departments. As for large-scale RE projects, we are taking forward installation of large-scale solar photovoltaic (PV) systems at suitable locations in reservoirs and landfills.

For the private sector, we have been creating the conditions that are conducive to encouraging the private sector to consider adopting RE. Apart from providing financial incentives through the introduction of the FiT Scheme, we have also recently introduced a series of new initiatives to provide further support and facilitation to individuals and organisations who/which wish to develop RE. For example, we have suitably relaxed the restrictions such that subject to the fulfilment of specified conditions, solar PV systems including its supporting structures with height not higher than 2.5 metres can be installed on the rooftop of New Territories Exempted Houses without seeking the permission from the Lands Department or the Buildings Department (BD). As for owners of other private buildings, apart from erecting structures for supporting PV systems in accordance with the specific minor works items under the existing Minor Works Control System (MWCS), they may also appoint an Authorised Person to submit building plans for BD's approval on the erection of PV system supporting structures if such exceed the 1.5 metres height requirement under the MWCS. Subject to the design and relevant circumstances, BD may consider disregarding the space occupied by the systems in the calculation of total gross floor area. In addition, we are pursuing legislative amendments to provide exemption from the requirements to apply for business registration and pay profits tax in respect of participation in and the payments received under the FiT Scheme, introducing a programme to assist schools (except government and profit-making schools) and non-governmental welfare organisations in installing

small-scale RE systems, revamping the HK RE Net and setting up an enquiry hotline, etc.. We have also noticed that there are companies providing individuals or organisations with different models of investment in solar PV systems. Individuals or organisations who/which wish to develop RE may consider different modes of participating in the FiT Scheme having regard to their own circumstances.

We will continue to encourage stakeholders to participate in the development of RE, and liaise with them to understand the concerns of different sectors and formulate further facilitation and support measures to address these concerns such that we may better encourage the realisation of RE potential in different sectors of the community.