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(Fax No.: 2869 6794)
27 November 2018

Clerk to Public Works Sub-committee of the Legislative Council
Legislative Council Secretariat
Legislative Council Complex
1 Legislative Council Road
Central, Hong Kong
(Attn: Ms. Doris LO)

Dear Ms. LO,

Public Works Sub-committee of the Legislative Council
Organic Resources Recovery Centre Phase 2 – Supplementary Information

The supplementary information on the Organic Resources Recovery Centre Phase 2 (ORRC2) requested by the Chairman Ir Dr Hon LO Wai-kwok, Dr Hon Kwok Ka-ki, Hon CHAN Hak-kan and Hon CHAN Han-pan of the Public Works Sub-committee at the meeting on 14 November 2018 is provided below.

1(a) After providing electricity and heat to the ORRC and the nearby government facilities, how will the Government and/or the contractor of the ORRC decide whether to sell the surplus biogas to the gas company for production of town gas or to sell the electricity generated to the power companies? Please also provide the information on their cost-effectiveness.

It is stipulated in the tender documents of the ORRC2 that tenderers are required to state clearly in their tenders whether the surplus biogas will be sold to the gas company for production of town gas or the electricity generated will be sold to the power companies. They should also, having regard to their proposals, provide the design, construction and the 15-year operating costs involved in the export of surplus renewable energy (RE), and reflect the revenue received by the Government from the sale of RE in their "Technical Proposal" and "Tender Price".

The marking scheme for tender evaluation stated in the tender documents includes two parts, namely "Technical Proposal" and "Tender Price". Both carry equal weighting and each constitutes 50%. The marking scheme for the ORRC2 tender evaluation is set out in Enclosure 1.

As shown in Enclosure 1, the design for the surplus RE export has been included in Item 1.6 "Surplus Energy Export" under the "Technical Proposal" rating, and this item accounts for 2.5% of the total score. The construction cost involved in the export of surplus RE has been included in Item 2.1 "Capital and Operation Fees of ORRC2" under the "Tender Price" rating, and this item accounts for 47.5% of the total score. In addition, the income from the sale of energy has been included in Item 2.2 "Royalty Payment on Revenue" under the "Tender Price" rating, which accounts for 2.5% of the total score. To conclude, the surplus RE export model and the relevant sales income are an inseparable part of the tender proposals of the tenderers. The Government will accept a tender with the highest overall score in "Technical Proposal" and "Tender Price", and it does not need to consider the arrangement for exporting the surplus RE separately. We are of the view that this is the best way to protect the public interest for the construction of the ORRC2. As the contract has not been awarded at this stage, we are not able to provide any information on the cost-effectiveness provided by the tenderers.

Based on the average fuel price for electricity generation of the existing power companies, we estimate that the income from the sale of surplus electricity will account for 3% of the design, construction and operating costs of the whole project when the ORRC2 reaches its daily food waste treatment capacity of 300 tonnes. As such, the tender evaluation criteria set out in the tender documents have properly reflected the weighting of the income from the sale of surplus RE in the whole project.

We plan to sign the contract with the successful contractor soon after the funding application of this project is approved by the Legislative Council. The Government will work out the details of the export of surplus RE from the ORRC2 with the contractor to ensure the relevance and cost-effectiveness of the plan.

1(b) It is mentioned by the Government that the surplus electricity produced by the ORRC will be sold to the power companies at the fuel price. What are the justifications?

Regarding the setting of the sale price of the electricity produced by the ORRC, we will discuss the issue on the premise that the electricity generation cost of the power companies will not be affected and the tariff burden of the

public will not be increased. Therefore, we will use the marginal fuel cost of electricity generation saved by the power companies for purchasing such electricity as a base to set the sale price of electricity. If the Government increases the sale price, it is possible that the power companies will pass on the additional cost of purchasing the electricity to the consumers, resulting in a rise in tariff.

2. At the request of the Chairman and Dr Hon KWOK Ka-ki, the Government shall indicate whether penalty provisions with deterrent effect will be included in the proposed "Design-Build-Operate" Contract of the ORRC2, specifying that fines will be imposed or even the contract will be terminated if the performance of the contractor is unsatisfactory. If yes, what are the details of the penalty concerned?

Same as other public works contracts of the Government, penalty provisions with regard to contractor's performance will be included in the "Design-Build-Operate" Contract of the ORRC2. The relevant provisions include:

- If the contractor fails to complete the works within the specified time, the contractor shall pay liquidated damages to the Government, the amount of which is calculated on a daily basis for the delay period;
- If the contractor breaches an individual contract requirement during the validity period of the ORRC contract and fails to rectify the breach within a specified time, the Government may deduct the payment of fees for the relevant work processes; and
- The Government may terminate the contract according to the procedure stated in the contract as and when necessary, including in the event of excessive delay in works completion caused by the poor performance of the contractor.

Besides encompassing the above contract provisions, we will also monitor the performance of the contractor in accordance with the relevant requirements of the Development Bureau, including holding regular meetings with the contractor to follow up the progress of works and the problems arising during the construction, and carrying out quarterly assessment on the contractor's work performance, etc. If the contractor has poor performance or poor site safety record, has committed acts of misconduct, or has been convicted of breaching the laws of Hong Kong, the Government will take appropriate disciplinary actions depending on the seriousness of the event, such as deduction of the payment of fees for the related items, termination of contract, or even suspension of the contractor's eligibility to tender for government projects, etc.

(3) At the request of Hon AU Nok-hin, the Government shall provide supplementary information on what measures are in place to expedite the implementation of separation and recycling, as well as the ultimate treatment of domestic food waste, the timetable of implementing such measures and the overarching blueprint for implementing food waste management measures such as developing the remaining ORRCs.

According to "A Food Waste & Yard Waste Plan for Hong Kong 2014-2022" announced in 2014, the Government will develop an ORRC network comprising 5 to 6 ORRCs in phases. ORRC Phase 1 (O • PARK1) in Siu Ho Wan of Lantau commenced operation in July 2018, with a daily treatment capacity of 200 tonnes of food waste. In addition, the facility for the food waste/sewage sludge anaerobic co-digestion trial scheme located in Tai Po will come into operation in the first half of 2019, with a daily treatment capacity of 50 tonnes of food waste.

As set out in the Chief Executive's 2018 Policy Agenda, a pilot scheme will be introduced to examine the feasibility of implementing government-run food waste collection services in the long run. We plan to launch a two-year free food waste collection pilot scheme by using O • PARK1 and the facility for food waste/sewage sludge anaerobic co-digestion in Tai Po. Mainly commercial and industrial (C&I) food waste will be collected in this pilot scheme. We will explore the feasibility of implementing the food waste collection services across all sectors in Hong Kong free of transportation and handling fees.

At the same time, the Government has commenced a study on implementing territory-wide separation and collection of domestic and C&I food waste. A collection plan and the required ancillary facilities will be formulated based on the actual local situation to cater for the needs for making future arrangement for large-scale collection and delivery of food waste from domestic and C&I sectors to the relevant treatment facilities. The study will be completed in the first half of 2019. To facilitate the study, the Government is now taking forward another pilot scheme to treat the domestic food waste collected from the free collection service at the Sha Tin Sewage Treatment Works (STSTW) under the food waste/sewage sludge anaerobic co-digestion trial scheme. The pilot scheme is scheduled to commence in 2021/22, under which 50 tonnes of domestic food waste will be collected and treated daily. Subject to the demand, we will allocate part of the treatment capacity of ORRC2 to treat the domestic food waste collected from the free collection service in nearby areas. Moreover, we will consider allocating part of the treatment capacity of O • PARK1 and the facility for food waste/sewage sludge

anaerobic co-digestion in Tai Po to treat the household food waste collected from the free collection service, subject to the operation and the actual quantity of food waste treated at these two facilities which are designed to treat C&I food waste primarily. In this regard, food waste from housing estates with experience in separating and recycling food waste will be accorded a higher priority.

In addition, we are conducting an environmental impact assessment and an engineering feasibility study for the ORRC Phase 3 in Shek Kong, Yuen Long, which is expected to have a daily treatment capacity of 300 tonnes of food waste. We will continue to identify land for developing the remaining ORRCs. Moreover, we will review the experience of the two food waste/sewage sludge anaerobic co-digestion trial schemes and extend the application of this technology to other suitable sewage treatment works, with a view to boosting Hong Kong's overall capacity for food waste treatment as soon as possible, and providing domestic food waste collection services for more residents.

Yours sincerely,

(Samuel H.K. CHUI)
for Director of Environmental Protection

Enclosure 1

Organic Resources Recovery Centre Phase 2
Summary of the Marking Scheme

The marking scheme for tender evaluation includes two parts, namely "Technical Proposal" and "Tender Price". Both carry equal weighting and each constitutes 50%. The details of the evaluation criteria are as follows.

1. "Technical Proposal" – rating and criteria		**50%**
1.1	**Tenderer's Experience Record** Experience in carrying out design-and-build (D&B) or design-build-operate (DBO) contract; experience in design and installation of the electrical and mechanical works for Organic Waste Treatment Plant adopting anaerobic digestion process; experience in operation and maintenance of Organic Waste Treatment Plant adopting anaerobic digestion process; experience in design and installation of the electrical and mechanical works for Organic Waste Treatment Plant adopting composting process; and experience in operation and maintenance of Organic Waste Treatment Plant adopting composting process.	**(2%)**
1.2	**Project Management and Human Resources** Outline Project Management and Human Resources Plans	**(3.3%)**
1.3	**Design and Construction of the Works** Outline Design and Works Plans	**(23.4%)**
1.4	**Operation** Outline Operation, Asset Management and Handback Plans	**(14.0%)**
1.5	**Environmental Management, Quality, Safety and Health Plans** Outline Environmental Management, Quality, and Safety and Health Plans	**(2.7%)**
1.6	**Surplus Energy Export** Design for the system to export Surplus Energy	**(2.5%)**
1.7	**Past Performance** Workmanship; Operation; Progress; Site safety; Safety rating; General obligations; Environmental monitoring and pollution control; Attitude to claims; and Record against convictions under the Immigration Ordinance, Employment Ordinance or other site safety, environment related and road opening offences	**(2.1%)**
2. "Tender Price" – rating and criteria		**50%**
2.1	**Capital and Operation Fees**	**(47.5%)**
2.2	**Royalty Payment on Revenue** (i.e. the income from the sale of biogas and electricity)	**(2.5%)**
TOTAL		**100%**