



**Islands District Council
Paper IDC 125/2012**

**Ground Investigation Work
at 3.5 km South-west of Lamma Island**

1. Purpose

The Hongkong Electric Co., Ltd. (HK Electric) has applied to the Government for carrying out the offshore Ground Investigation (GI) work for the proposed Offshore Wind Farm at the South-west of Lamma Island. The proposal is now submitted for Members' comments prior to Lands Department arranging for gazetting the GI works under the Foreshore and Sea-bed (Reclamations) Ordinance (Cap 127) ("the Ordinance").

2. Background of the GI Work

A 1-year wind monitoring campaign has commenced since early March 2012 to investigate the wind potential at an offshore area approximately 3.5km southwest of Lamma Island to explore the feasibility of utilizing wind energy for power generation. Given the proposed wind farm site is located in an open sea in which the seabed materials are composed of thick layers of very soft clays and silts like marine mud and alluvium, HK Electric intends to conduct further feasibility study to investigate the soil conditions at the above site in order to review the conceptual design on foundation and array layout for the development. In this connection, HK Electric has submitted to the District Lands Office in February 2012 seeking for permission to proceed with the GI work.

3. EIA Study of Offshore Wind Farm

The Environmental Impact Assessment (EIA) for HK Electric's Offshore Wind Farm project has been approved by Environmental Protection Department (EPD) on 14 May 2010 with the corresponding Environmental Permit (EP) issued on 8 June 2010. The EIA assessed the potential impacts on water quality, marine ecology and fisheries and has confirmed that there would be no unacceptable residual impact associated with the project.

4. Ground Investigation Work and Gazetting under the Ordinance

Lands Department has processed the application for permission to enter upon Government land for carrying out the GI work.

The information of the GI work has been circulated among relevant Government departments and no adverse comments have been received. Departmental comments have been considered and addressed in the design and future investigation works as appropriate. Lands Department considered that before granting permission of the GI

work, HK Electric has to obtain the authorization of the GI works from the Chief Executive in Council under the Ordinance.

5. **The Proposed Ground Investigation Work**

a. Scale of ground investigation	:	<p>Borehole drilling and soil sampling is planned at approximate 35 discrete locations within the proposed offshore area in two stages. During the drilling of borehole at each location, the area affected at seabed is approximately 0.5 sq.m.</p> <p>Stage 1 involving around 10 boreholes with the data collected to form the basis for preliminary foundation and array design for the wind power generators.</p> <p>Stage 2 involving the remaining 25 boreholes with the data collected to form the detailed foundation and array design of the wind power generators.</p>
b. Method of investigation	:	<p>Drilling barge or jacking-up platform will be mobilized for carrying out of the works. Borehole drilling and soil sampling involve the temporary installation of a 250mm diameter thinned-wall steel casing down to the seabed and collect samples at specified levels with the help of special drill bits within the casing. No backfilling to the boreholes will be required after soil sampling.</p>
c. Timetable	:	<p>The GI work will be commenced after obtaining of the authorization from the Chief Executive in Council under the Ordinance.</p> <p>Stage 1 GI work is targeted to commence in the 2nd quarter of 2013 the latest. The work at each borehole location is estimated to take 7 days and the whole ground investigation period for Stage 1 is expected to last for 2 to 3 months depending on weather conditions.</p> <p>Upon review of the soil data obtained from Stage 1 GI work, Stage 2 GI work is targeted to commence in the 3rd quarter of 2013 the earliest. This second stage period is expected to last for 4 to 6 months, depending again on the weather condition.</p>

Please see Appendix 1 for the preliminary locations of ground investigation work. Exact locations of the boreholes shall be subject to engineering confirmation.

6. Liaison with Stakeholders

HK Electric has set up two stakeholder groups for the Offshore Wind Farm project to maintain close dialogues with relevant stakeholders and fishery sections to hear their views and concerns with regard to matters such as design, construction and operation of the wind farm and future fishing arrangement and fisheries improvement plan, etc. Regular meetings have been conducted under a Stakeholder Liaison Group and a Fisheries Review and Consultation Committee in the past year. No adverse comments on the ground investigation work have been received by all stakeholders engaged.

7. Conclusion

Under Section 6 of the Ordinance, any person who considers that he has an interest, right or easement in or over the foreshore and sea-bed may, by notice in writing delivered to the Director of Lands before the expiration of such time begin not less than 2 months as shall be specified in the notice, object to the proposed ground investigation works.

HK Electric is now seeking for the comment on the GI work from the District Council before formal gazetting.

Appendix

1. Plans showing the Proposed Borehole Locations for Ground Investigation Work

The Hongkong Electric Co., Ltd.

August 2012

APPENDIX 1

附錄 1

