

**Development of an Offshore Wind Farm in Hong Kong
Minutes of Second Stakeholder Liaison Group Meeting
Held on 2 August 2011 at 2:25pm at Lamma Power Station**

Present (in alphabetical order):

Mr. Henry CHAN (HK Electric)
Mr. Lin-wai CHAN (Lamma Island (North) Rural Committee)
Ms. Mayling CHAN (CEO of Friends of the Earth (HK))
Mr. Shup-ng CHAN (Cheung Chau Office of Hong Kong Fishermen’s Association)
Ms. Gloria CHIU (Meeting Facilitator)
Mr. Yuk-tong CHOW (Lamma Island (South) Rural Committee)
Mr. Terence FONG (Environmental Resources Management – Hong Kong Limited)
Mr. Prentice KOO (Green Peace China)
Mr. Ying-leung KWAN (Hongkong Electric)
Mr. Edwin LAU (Friends of the Earth (HK))
Ms. Esme LAU (Hongkong Electric)
Mr. Frank LAU (Hongkong Electric) – Chairman
Mr. Kam-wah LAW (Lamma Fishermen’s Association)
Mr. Daniel LEE (Hongkong Electric)
Dr. Alan LEUNG (WWF-Hong Kong)
Prof. Dennis Y. C. LEUNG (Department of Mechanical Engineering, University of Hong Kong)
Dr. Cho-nam NG (Hong Kong Bird Watching Society)
Mr. Ken SO (The Conservancy Association)
Mr. Jovy TAM (Environmental Resources Management – Hong Kong Limited)
Hon. Yung-kan WONG (Legislative Council Member (Functional Constituency – Agriculture and Fisheries))
Ms. Mimi YEUNG (HK Electric)
Ms. Lai-fun YU (Islands DC Member)

Mr. Chi-ming YUNG (Islands DC Member)

Absent with apologies:

Dr. Luk-ki CHENG (Green Power)

Prof. Kit-po WONG (Department of Electrical Engineering, The Hong Kong Polytechnic University)

Ref. No.	Issue/Discussion	Follow-up Actions & Responsibilities
1.	<p>Chairman Mr. Frank LAU welcomed the Stakeholder Liaison Group (hereafter referred to as “SLG”) members to attend the 2nd SLG meeting at Lamma Power Station.</p> <p>The Chairman stated that there were a total of 15 SLG members, thirteen (13) of which attended today’s meeting. Prof. Kit-po WONG (Department of Electrical Engineering, The Hong Kong Polytechnic University) and Dr. Luk-ki CHENG (Green Power) were absent with apologies due to illness and works commitment respectively.</p> <p>The Chairman introduced the SLG members who attended the SLG meeting for the first time, including Prof. Dennis Y. C. LEUNG (Department of Mechanical Engineering, University of Hong Kong), Mr. Prentice KOO (Green Peace China), Mr. Ken SO (The Conservancy Association) and Mr. Kam-wah LAW (Lamma Fishermen’s Association). Mr LAU also welcomed Ms. Mayling Chan (CEO of Friends of the Earth (HK)) for her presence in the meeting.</p> <p>Other attendees included Facilitator Ms. Gloria CHIU (GolinHarris), consultant representative Mr. Terence FONG (Environmental Resources Management – Hong Kong Limited, hereafter referred to as ‘ERM’) and HK Electric representatives Mr. Ying-leung KWAN, Mr. Daniel LEE, Ms. Mimi YEUNG and Ms. Esme LAU.</p>	--
2.	<p>The Facilitator briefly summarized the agenda and other relevant information of the meeting. She stated that HK Electric representative Mr. Ying-leung KWAN would briefly introduce progress of the ongoing works of the “Development of an Offshore Wind Farm in Hong Kong” (hereafter referred to as “the Project”). Mr. KWAN would also briefly describe the design of the Wind Monitoring Station (hereafter referred to as “WMS”). Following the presentation would be a 10-minute Question and Answer Session. She estimated that the meeting would be completed at around 2:55 pm. After the meeting, HK Electric would arrange a site visit for the SLG members to the proposed location of the WMS. The Facilitator expected that the site visit would be completed at round 4:05 pm.</p> <p>The Facilitator clarified that the meeting was being taped only to assist in minute taking and the Chinese and English versions of the meeting minutes would be uploaded to the website of HK Electric within a month. The taped contents of the meeting would be destroyed after finalization of the meeting minutes. The Facilitator further stated that photos would be taken for record during the</p>	Meeting minutes to be circulated by Facilitator among all SLG members and agreed and posted on HK Electric’s website within one month of SLG meeting.

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	meeting and the photos would also be published in internal newsletter of HK Electric.	
3.	Mr. Ying-leung KWAN of HK Electric briefly presented the progress of the ongoing works of the Project, described the design of the WMS and the environmental monitoring measures.	--
4.	The Facilitator invited members for questions concerning the project afterwards.	--
5.	<p>A SLG member asked several questions regarding the environmental monitoring measures: including the environmental monitoring frequency for water quality, noise, marine mammal and sea turtle; whether water quality and noise would be monitored 24-hours or at regular frequency; whether environmental monitoring data could be made available to SLG members.</p> <p>ERM replied that the environmental monitoring measures related to the WMS were not requirements under the Environmental Permit of the Project (Environmental Permit No. EP-394/2010). The Environmental Permit primarily required such environmental monitoring measures for the construction of the wind turbines. As such, environmental monitoring measures related to the WMS were additional measures implemented by HK Electric.</p> <p>ERM stated that during marine piling works, water quality monitoring would be conducted for three times per week accordingly to standard environmental monitoring practice. The water quality monitoring would be undertaken at mid-flood and mid-ebb tides, during which environmental monitoring data would be acquired from the sea surface, at the mid-depth and 1 m above the seabed. For noise monitoring, it would be undertaken during daylight hours when marine piling works would be conducted. Noise at the two monitoring stations at Cheung Chau and Lo So Sing Beach would be monitored. Marine mammal and sea turtle monitoring would be carried out at the same time during marine piling works at daylight hours, and would continue until the completion of piling works.</p> <p>HK Electric supplemented that the environmental monitoring measures for the WMS were on volunteer basis and thus would not be reported in the environmental monitoring and audit reports. However, HK Electric would consider uploading the monitoring results to the website.</p>	The Chairman agreed to consider for uploading the monitoring results to the website.
6.	<p>A SLG member questioned the accuracy of the LIDAR system in comparison with traditional wind monitoring mast as the wind monitoring system. He also questioned whether the system would be affected by lightning strike.</p> <p>HK Electric replied that there were available data in Europe showing that accuracy of the LIDAR system was similar to that of</p>	--

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	<p>traditional wind monitoring mast. The wind farm industry generally accepted the use of data collected by LIDAR systems. He added that the WMS would be designed to avoid impact from lightning strike. HK Electric also emphasized the data collected would be used for the design of the wind turbines.</p> <p>The Chairman supplemented that the LIDAR technique had recently been widely used for wind monitoring. Those major certification organizations in Europe such as DNV had accepted to verify data collected by LIDAR systems for the purpose of wind turbine design. As such Europe had considerable experience in the use of the LIDAR systems.</p>	
7.	<p>A SLG member asked whether the design of the wind farm would only use the one-year collected data or previous wind data for the past five or ten years would be supplemented. He pointed out that the use of one-year data seemed inadequate. He also asked whether the wind monitoring data would be used to verify the wind flow model and calculated the wind data for the past ten years for design of the Project.</p> <p>HK Electric replied that several consultants had been commissioned prior to the construction of the WMS to predict the wind resource for the Project by employing wind flow modelling. Past ten years data from Cheung Chau and Waglan were applied in the model for predictions. After collection of the wind resource data from the WMS, the consultant would use reference data collected by the Hong Kong Observatory to assess the wind resource of the proposed Project site.</p>	--
8.	<p>A SLG member expressed his concerns on marine safety issues related to the presence of the WMS and asked whether fishing operations by fishing vessels would be allowed in the future within the boundary of the offshore wind farm.</p> <p>The Chairman asked the SLG member whether his questioned was related to future wind farm operations.</p> <p>The SLG member clarified that his query was related to marine traffic safety of vessels during the one-year operation of the WMS. This included the measures to ensure navigational safety of vessels during dense fog. He pointed out that although the WMS would be equipped with lighting system, it would be difficult to be seen under dense fog.</p> <p>HK Electric explained that the WMS would be equipped with Fog Horn System in addition to the marine navigation lighting system. When visibility dropped below to a range from 0.5 to 4 nautical miles, the system would emit sound signal to alert nearby vessels of the presence of the WMS. HK Electric stated that the system was established based on overseas standard and thus believed the WMS would not cause impacts to vessel navigation. In addition, HK Electric would make arrangement to carry out 24-hour surveillance in the vicinity of the WMS.</p> <p>The SLG member further questioned that under dense fog, the vessel may be closer to the WMS so how HK Electric could avoid vessels approaching the WMS.</p>	--

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	<p>HK Electric explained that setting for activation of the Fog Horn could be adjusted. For example it could be adjusted to emit sound signal when visibility was below than 2 nautical miles. HK Electric would liaise with the Marine Department on an appropriate setting of the system.</p> <p>The Chairman further responded to the query of the SLG member on opening the wind farm to fishing operations in the future. He stated that a Task Group had been established under the Fisheries Review and Consultation Programme Committee to study the feasibility of implementing sustainable fisheries operations within the wind farm area. He expected that the findings of the Task Group Study would be discussed during the next Fisheries Review and Consultation Programme Committee meeting in September 2011. The Study findings could also be presented in the 3rd SLG meeting.</p>	
9.	<p>The Facilitator stated that the SLG members could present their questions to HK Electric during the site visit to the proposed WMS site. This meeting ended at 2:55pm.</p>	--