

**Development of an Offshore Wind Farm in Hong Kong  
Minutes of Third Stakeholder Liaison Group Meeting**

**Held on 23 February 2012 at 2:30pm on 11/F, Hongkong Electric Centre, 44 Kennedy Road, Hong Kong**

**Present (in alphabetical order):**

Mr. Lin-wai CHAN (Lamma Island (North) Rural Committee)

Mr. Norman CHAN (HK Electric)

Dr. Luk-ki CHENG (Green Power)

Mr. Yuk-tong CHOW (Lamma Island (South) Rural Committee)

Ms. Gloria CHIU (Meeting Facilitator)

Mr. Jonathan Hsu (BMT Asia Pacific)

Mr. Ying-leung KWAN (HK Electric)

Ms. Connie LAU (Environmental Resources Management – Hong Kong Limited)

Ms. Esme LAU (HK Electric)

Mr. Edwin LAU (Friends of the Earth (HK))

Mr. Frank LAU (HK Electric) – Chairman

Dr. Alan LEUNG (WWF-Hong Kong)

Mr. Prentice KOO (Green Peace China)

Dr. Cho-nam NG (Hong Kong Bird Watching Society)

Dr. Jasmine NG (Environmental Resources Management – Hong Kong Limited)

Mr. Rico Wong (The Conservancy Association)

Mr. Jovy TAM (Environmental Resources Management – Hong Kong Limited)

Dr. Chi-tong TSE (Department of Electrical Engineering, The Hong Kong Polytechnic University)

Ms. Lai-fun YU (Islands DC Member)

Mr. Chi-ming YUNG (Islands DC Member)

**Absent with apologies:**

Mr. Shup-ng CHAN (Cheung Chau Office of Hong Kong Fishermen’s Association)

Mr. Kam-wah LAW (Lamma Fishermen’s Association)

Prof. Dennis LEUNG (Department of Mechanical Engineering, University of Hong Kong)

Hon. Yung-kan WONG (Legislative Council Member (Functional Constituency – Agriculture and Fisheries))

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 attending the 3rd SLG meeting at the Hongkong Electric Center.</p> <p>The Chairman introduced HK Electric colleagues and the two consultants to all SLG members. The Chairman advised that Prof. Kit-po Wong of The Hong Kong Polytechnic University has left Hong Kong to pursuit his researches work in Australia and has resigned as SLG member. The Chairman introduced and welcomed Dr. Chi-tong Tse of The Hong Kong Polytechnic University as the new SLG member.</p>	--
2.	<p>The Facilitator briefly summarized the agenda of the meeting and stated that HK Electric Representatives Mr. Frank Lau and Mr. Ying-leung Kwan would present the ongoing progress of the Offshore Wind Farm Project (hereafter referred to as “the Project”), the construction and initial operation of the Wind Monitoring Station (hereafter referred to as “WMS”), updates on the Artificial Reef and Fisheries Management Task Groups under the Fisheries Review and Consultation Committee (FRCC) and the Marine Traffic Management Plan within the Project area. Following the presentation would be a one-hour Question and Answer Session.</p> <p>The Facilitator clarified that the meeting was being taped for minute taking purpose. Both 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 during the meeting for publishing in HK Electric’s internal newsletter.</p>	Meeting minutes to be circulated by the Facilitator among all SLG members and agreed and posted on HK Electric’s website within one month of SLG meeting.
3.	<p>The Chairman announced that the installation of the WMS was completed which would be used to collect one-year wind and wave data on-site.</p> <p>Mr. Ying-leung Kwan of HK Electric presented the construction process and initial operation of the WMS, which was followed by an</p>	--

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	update on information regarding the Artificial Reef and Fisheries Management Task Groups. Mr. Kwan proceeded further with introducing the management and control measures on the marine traffic safety issues within the wind farm area.	
4.	The Facilitator invited members for questions concerning the Project afterwards.	--
5.	<p>A SLG member asked several questions regarding the Artificial Reef (AR) Programme, management of the sea area of the wind farm and the related environmental monitoring measures: whether a permit was required for fishing in the ARs or any fisheries measures to manage fisheries resources that will prevent overfishing as a result of the ARs aggregating fish; which part of the wind farm would be managed by HK Electric in the future; whether suction caisson would be considered as the construction method for the wind turbines; whether Finless Porpoise monitoring would be carried out using passive acoustic monitoring in the vicinity of the Project Site to provide baseline ecological data.</p> <p>ERM replied that in order to promote sustainability of the fisheries resources, different profiles and types of ARs would be deployed both in the voluntary no-take zone which would be within the 50m boundary from the wind turbines and in other fishable zones within the Project Site. This would lead to enhancement of fisheries resources at the no-take ARs while providing beneficial effects to the fishing community by allowing them to target the enhanced resources at the fishable ARs. Establishing the 50m boundary from individual wind turbine as a voluntary no-take zone was agreed by fishermen representatives, however, HK Electric would not have any authority to issue fishing permit under the legal framework.</p> <p>HK Electric stated that there were different views within the Marine Department on the preferred marine traffic management within the wind farm while tenancy issues would have to be discussed with the Lands Department once the Project was approved by the Government. In addition, HK Electric stated that there were still uncertainties with regard to the construction method and other O&amp;M requirements pertaining to the use of suction caisson for wind turbine foundations. A detailed study on the optimum foundation type would need to be carried out.</p> <p>ERM stated that according to the Environmental Monitoring and Audit (EM&amp;A) Manual, monitoring surveys on Finless Porpoise would be carried out during the pre-construction, construction and post-construction phases of the Project. Methodologies would include transect surveys, passive acoustic monitoring and land-based observation. The details would have to be discussed with AFCD &amp; EPD in due course. The baseline ecological monitoring would last for a period of 12 months and the programme would be determined based on the commencement date of the wind farm construction.</p>	--
6.	A SLG member questioned the use of baseline monitoring data and enquired whether the baseline survey could start earlier in order to gather adequate data for improving the design of the wind farm. Another SLG member also considered that it was preferable to	--

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	<p>have the baseline survey getting started soonest possible.</p> <p>The Chairman stated that the wind farm would be designed in 2013 while piling works would be undertaken in 2014 subject to the government's approval within this year. The one-year baseline avifauna and marine mammal including Finless Porpoise monitoring would start in mid-2013. Afterwards, a one-year monitoring would be conducted during both the construction and post-construction phases of the Project.</p>	
7.	<p>A SLG member asked several questions regarding the offshore wind farm: the distance between adjacent wind turbines; potential hazards for trawling within the fishable AR zone; whether a pilot wind turbines would be set up to test the performance of power generation before construction of the entire wind farm; whether wind farm project would lead to an increase in electricity tariff.</p> <p>HK Electric replied that distance between adjacent turbines would be approximately 360m along the north-south direction and 650m along the east-west direction. The Government was planning to ban trawling within Hong Kong waters starting from 2013, therefore, trawling operation would not be expected within the operating wind farm.</p> <p>Regarding the pilot unit, the Chairman considered it unnecessary if data collected from the WMS could provide adequate information on wind resources in the area. Furthermore, it would be difficult inviting tenderers to bid for the installation of a few pilot wind turbines.</p> <p>HK Electric stated that in the age of advanced technology, the offshore wind farm would be able to generate electricity in a cost effective manner.</p>	--
8.	<p>A SLG member questioned the financial arrangement of the wind farm: whether this Project would be qualified for applying the Clean Development Mechanism (CDM) in the United Nations (UN) and whether any scheme of Voluntary Emission Reduction would be implemented for the operation of this Project.</p> <p>The Chairman replied that HK Electric would explore further on the eligibility of applying CDM for this project and would report findings in the next SLG meeting.</p>	HK Electric to explore eligibility of applying CDM for the offshore wind farm project
9.	<p>A SLG member expressed his concerns over hazards related to navigation of ocean-going vessels within the wind farm and the potential hazard posed to the wind farm by such vessels during typhoon.</p> <p>The Chairman stated that Marine Department would indicate the location of the offshore wind farm in the marine navigation chart. In addition, under normal circumstance ocean-going vessels would not navigate within the wind farm area.</p>	--

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	<p>BMT added that the chance of ocean-going vessel experienced anchor drag or lose anchor and drift towards the wind turbine would be extremely low. Nevertheless, HK Electric would engage contract with service provider to deploy tug boat to standby near Lamma waters during typhoon period to offer towing service if any vessel was found drifting towards the wind farm to cater for such unlikely case occurred during typhoon periods.</p> <p>A SLG member questioned if crash barriers would be installed for protection of the wind turbines.</p> <p>The Chairman stated that radar would be used to monitor vessels in the vicinity of the wind farm. Tug boats would be sent out to assist any vessels which lost power and drifted towards the wind farm. These measures should be adequate to help avoiding collision of vessels with the turbines.</p> <p>BMT added that the cost of crash barriers to withstand collision from vessels would be very high. Therefore, it was not suggested to install such crash barriers to the turbines.</p>	
10.	<p>A SLG member questioned if the wind farm would be located outside Hong Kong SAR boundary. The Chairman replied that the whole wind farm area would be within Hong Kong SAR waters.</p>	
11.	<p>A SLG member reflected the concern raised by the fishing community of Lamma Island regarding opening up of the wind farm area for fishing operation.</p> <p>The Chairman stated that there was consensus between HK Electric and the fishermen representatives reached at the 2<sup>nd</sup> Task Group Meeting under the Fisheries Review and Consultation Committee (FRCC). HK Electric could provide the meeting minutes to this SLG member for reference. The Chairman emphasized that the operating wind farm would be opened to fishing operations in order to alleviate the impacts to the fishing community. In addition, issues related to allowing recreational fishing within the fishable ARs had been raised by the Task Group members and would be discussed further under the FRCC. These measures would be implemented/further discussed in order to address concerns of the fishing community.</p>	
12.	<p>A SLG member suggested that HK Electric should promote to the public that the wind farm could potentially enhance local fisheries resources in addition to the production of renewable energy.</p> <p>Another SLG member questioned which department would be authorized to enforce the Advisory Safety Zone to prevent entrance by the public.</p>	

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	<p>The Chairman stated that the enforcement of the Advisory Safety Zone would be based on the tenancy signed with Lands Department in the future. In long term, it might be required to develop a detailed emergency response plan.</p>	
13.	<p>Regarding the AR within wind farm area, a SLG member suggested HK Electric to discuss with the relevant government department on the responsibility for managing the AR and to help the fishing community to understand the time requirement from initial AR deployment to enhance fisheries resources. The SLG member also questioned the potential pollution problems caused by recreational fishing and any measures to prevent illegal fishermen.</p> <p>The Chairman stated that the fishing operations and AR management within wind farm area would be discussed with fishermen groups &amp; AFCD. He added that the issue of fishing by non-local fishermen was not only limited to the wind farm but rather a territory-wide issue in Hong Kong. AFCD might make necessary amendment to the regulations in regard to this issue.</p> <p>A SLG member queried the methodology of the baseline survey for avifauna. In addition, he also questioned if electricity tariff would decrease after the payoff period of the Project and the lifespan of a wind turbine.</p> <p>ERM replied that survey for avifauna would be carried out during the pre-construction, construction and post-construction phases of the Project, and the same also applies to the survey for Finless Porpoise. Details regarding the monitoring would be further discussed with EPD &amp; AFCD. The Chairman supplemented that details of ecological surveys could be discussed in the next meeting.</p> <p>The Chairman replied that there were a number of factors affecting the electricity tariff. In particular, the surge in fuel costs was the main factor attributed to the recent increase in electricity tariff.</p> <p>The Chairman stated that the lifespan of each wind turbine was about 20-25 years.</p>	
14.	<p>A SLG member questioned if wind monitoring data would be collected from the WMS for more than one year.</p> <p>The Chairman said at least one year of wind monitoring data would be used for design of the wind farm and wind monitoring data might also be collected during the design phase.</p> <p>Another SLG member questioned if the wind monitoring data would be available for review.</p> <p>The Chairman replied that data collected in spring and summer could be presented to SLG members in the next SLG meeting.</p>	
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	<p>The meeting ended at 4:30 pm.</p> <p>[Post Meeting Note: As requested in the second SLG meeting regarding the EM&amp;A results for the wind monitoring station, please refer to the attached noise and water quality monitoring report.]</p>	<p>--</p>