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ACE-EIA Paper 2/2010
For advice

Environmental Impact Assessment Ordinance (Cap. 499)
Environmental Impact Assessment Report
Black Point Gas Supply Project

PURPOSE

This paper presents the key findings and recommendations of the Environmental Impact Assessment (EIA) report for the Black Point Gas Supply Project (hereafter known as the Project), submitted under Section 6(2) of the Environmental Impact Assessment Ordinance (EIAO). The applicant, Castle Peak Power Company Limited (CAPCO), and their consultants will make a presentation at the EIA Subcommittee meeting if necessary.

ADVICE SOUGHT

2. Members' views are sought on the findings and recommendations of the EIA report.

NEED FOR THE PROJECT

3. According to CAPCO, the project would provide a replacement for the natural gas source currently supplied to CAPCO from the Hainan Island's Yacheng 13-1 gas field which is expected to be depleted as early as 2012. CAPCO also indicates that a stable and cost-efficient way to supply natural gas to Hong Kong is essential for the operation of Black Point Power Station (BPPS). Hence, CAPCO's present plan is to import gas from the Southern Guangdong Province, via two new submarine natural gas pipelines and two associated Gas Receiving Stations (GRSs) at Blackpoint.

DESCRIPTION OF THE PROJECT

4. CAPCO indicates that natural gas will be imported from the western Shenzhen and eastern Zhuhai coastline, through two new submarine natural gas pipelines across the Tonggu Waterway and the Urmston Road shipping channel to the BPPS (**Figure** attached).

5. The two new submarine pipelines will be installed approximately 100 to 200 m to the north of the existing pipeline, and within the HKSAR waters, they will be approximately 5 km in length. These two pipelines will be between 32" to 42" in diameter, and they will be located in two separate trenches about 100 m apart. The first pipeline and GRS is scheduled for completion in 2012; the second pipeline and GRS could commence construction within 24 months of commissioning of the first phase.

6. The two GRSs will be located at the BPPS, and will be constructed in two phases. The first GRS will be constructed and operated within the site boundary of the BPPS, while the second GRS will be constructed and operated on a piece of land to be reclaimed (approximately 0.5 ha of land area). The reclamation works will also include the construction of an approximately 200 m long vertical seawall.

7. The Project inside Hong Kong constitutes a designated project under items H.2 and C.12 of Part I of Schedule 2 of the EIAO, i.e. construction of *"submarine gas pipelines"* and *"a dredging operation exceeding 500,000 m^3"* respectively.

8. According to CAPCO, the construction and operation of the two submarine natural gas pipelines and the associated gas export facilities in Mainland China will be handled by the gas suppliers in the Mainland. These facilities will be subject to the relevant regulatory and permitting systems of the Mainland authorities. Nevertheless, during the EIA study for the Project in Hong Kong, CAPCO has also carried out project specific cumulative impact assessment, where appropriate, by taking into account respective construction works in the Mainland waters.

VIEWS OF THE DIRECTOR AND RELEVANT AUTHORITIES

9. The Director of Environmental Protection (DEP), in conjunction with

the relevant authorities, considers that the EIA report meets the requirements of the EIA Study Brief and the Technical Memorandum on EIA Process (TM). Comments from the public and the Advisory Council on the Environment will be taken into account by the DEP in deciding on the approval of the EIA report under the EIAO.

SPECIFIC ENVIRONMENTAL ASPECTS TO HIGHLIGHT

Marine Ecological and Fisheries Impacts

10. The alignment of the submarine pipelines and the location for the GRS reclamation have avoided adverse impacts to habitats or species of high ecological value, e.g. intertidal mudflat and horseshoe crab nursery ground in Ha Pak Nai, critical habitats of the Chinese White Dolphin in north Lantau waters, and the Sha Chau and Lung Kwu Chau Marine Park. Significant impacts to these important ecological resources are therefore unlikely. Marine ecological resources in close proximity to the proposed Project are assessed to be of low to low-to-moderate ecological values.

11. During the construction stage, potential disturbance to the Chinese White Dolphin will be reduced through the use of pre-defined / regular routes and speed limit of 10 knots for marine works vessels. In addition, if any dolphin is observed within a “marine mammal exclusion zone” of 250 m radius around the works vessel, dredging / jetting works will be suspended until the dolphin leaves the exclusion zone.

12. The fishing ground affected by the marine works is of relatively low importance and the construction stage impacts will be temporary. Operation stage impact to fishery trawling activities caused by the presence of submarine pipelines is avoided, as the pipelines will be buried under the seabed and the seabed along the pipeline corridors is expected to return to the same level as the surrounding upon the completion of the pipelines laying works.

Water Quality Impact

13. The potential water quality impacts caused by construction and operational activities have been assessed. The key sensitive receivers include the Sha Chau and Lung Kwu Chau Marine Park, commercial fisheries spawning habitat, ecologically sensitive areas, beaches and water intakes.

14. During the construction stage, the main potential impacts relate to the disturbances to the seabed and the subsequent Suspended Sediment (SS) dispersion. The SS dispersion is mainly caused by the grab dredging and jetting activities for the two submarine pipelines installation, and also the dredging and filling of the reclamation area for the second GRS during Phase 2. According to the EIA findings, the SS plumes will not be extended to the nearby sensitive receivers by limiting the respective dredging and jetting rates during construction stages. As precautionary measures, CAPCO will also provide different types of silt curtains on top of the intensive water quality monitoring and auditing programme for avoiding the potential impacts to nearby sensitive receivers.

15. The EIA also concludes that there will not be significant operational stage water quality impacts arising from the Project.

Waste Management

16. For the marine dredging works for the construction of the first submarine pipeline during Phase 1, the Marine Fill Committee (MFC) of the Civil Engineering and Development Department has no objection in-principle to allocating disposal space at East Sha Chau for the Category M_{fail} sediment (0.06 Mm^3, bulk volume), subject to the availability of disposal space at the time of CAPCO's application and at the proposed programme for disposal. For the Category L sediment (0.029 Mm^3, bulk volume) arising from Phase 1 works, it will be disposed of at Type 1 Open Sea Disposal site managed by the MFC. For the M_{pass} sediment (0.164 Mm^3, bulk volume) arising from the Phase 1 works, CAPCO is also liaising with relevant authorities for the preparation of a submission for disposal in Mainland waters.

17. For the marine dredging works for the construction of the second submarine pipeline and reclamation works during Phase 2, an alternative site(s) / option(s) for contaminated sediment disposal would be identified in consultation with the MFC and the Environmental Protection Department (EPD). Furthermore, CAPCO will arrange the marine sediment disposal in accordance with the requirements of the Dumping at Sea Ordinance and the Practice Note for Authorized Persons and Registered Structural Engineers.

Hazard to Life

18. Results of the quantitative risk assessment show that risks associated

with the operation and construction phases of these facilities will be acceptable and within the TM criteria.

Air Quality Impact

19. There is only one air sensitive receiver in the vicinity of the Project, which is the BPPS Administration Building. With the implementation of mitigation measures, no adverse dust impact is anticipated during the construction phase. During the operation phase, air emissions from the gas heaters of the GRSs will be potential sources of impact. With appropriate control on the emissions and emission rates, no air impact exceeding the TM requirements is expected.

Other Environmental Impacts

20. Other potential environmental impacts, including noise, cultural heritage, and landscape and visual, have been concluded to be insignificant. To minimize the potential landscape and visual impacts, the EIA recommends that the colours of the proposed GRSs should complement with the existing industrial surroundings.

ENVIRONMENTAL MONITORING AND AUDIT

21. The Environmental Monitoring and Audit (EM&A) Manual, which forms part of the EIA report, recommends an EM&A programme for the monitoring of the respective environmental impacts, in particular the marine water quality and the status of relevant marine organisms. The EM&A requirements will be enforced through the relevant Environmental Permit conditions.

PUBLIC CONSULTATION

22. CAPCO has made the EIA report and the Executive Summary available for the public to comment under the EIAO between 12 February and 13 March 2010. Members will be informed of any public comment received by the EPD.

March 2010
Environmental Assessment Division
Environmental Protection Department

Project Title: **Black Point Gas Supply Project**
Figure: **Location Plan**

Source: Figure 3.1 of the EIA Report