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**Minutes of the 6<sup>th</sup> Meeting of the Reconstituted West Bengal State Coastal Zone Management Authority (WBSCZMA) held on 30<sup>th</sup> January, 2014 at 4pm in the Conference Room of Environment Department at Poura Bhavan, Salt Lake**

The following Members attended the meeting:

1. Sri Trilochan Singh, IAS, Additional Chief Secretary, Environment Department & Chairman, WBSCZMA.
2. Dr Pranab Kumar Pradhan, Expert Member.
3. Dr Kana Talukder, IFS, Chief Environment Officer & Member Secretary, WBSCZMA.

The following also attended the meeting:

1. Sri Pradeep Shukla, IFS, Additional PCCF and Director, Sundarban Biosphere Reserve, Forest Directorate.
2. Dr Subrat Mukherjee, IFS, Director, Institute of Environmental Studies and Wetland Management (IESWM) and Project Director, ICZM Project, West Bengal
3. Smt Indrani Saha, Joint Secretary, Urban Development Department
4. Dr S N Biswas, Joint Director, Fisheries Department
5. Dr Rajarshi Chakrabarty, Environment Officer, Environment Department
6. Sri Proshanto Banerjee, Advisor, Business Development, H-Energy East Coast Pvt. Ltd.
7. Sri Saswata Dutta, Manager, Business Development, H-Energy East Coast Pvt. Ltd.
8. Sri Abhishek Kumar, Senior Manager, H-Energy East Coast Pvt. Ltd., Mumbai
9. Dr Subhendu Sekhar Mishra, Scientist B, Zoological Survey of India (ZSI) on behalf of H-Energy East Coast Pvt. Ltd.
10. Smt Shubhangi Jadhav, SENES Consultants India Pvt. Ltd., on behalf of H-Energy East Coast Pvt. Ltd.
11. Sri Subba Reddy Banthu, NCSCM, Chennai on behalf of H-Energy East Coast Pvt. Ltd.
12. Sri Rakesh Ranjan, Sundarban Infrastructure Development Corporation Ltd. (SIDCL), Sundarban Affairs Department
13. Sri Netai Pada Bhabak, Chief Engineer, Sundarban Development Board (SDB) and Nodal officer, ICZM Project
14. Sri Sutanu Ghosh, Ghosh Bose and Associates (P) Ltd., Consultant for SIDCL
15. Dr Chinmoy Chakrabarty, Ghosh Bose and Associates (P) Ltd., Consultant for SIDCL.

**Proceedings:**

The Chairman welcomed everybody and initiated the discussion. The agenda was:

- consideration for recommending to Ministry of Environment & Forests (MoEF) Coastal Regulation Zone (CRZ) clearance for proposed offshore LNG floating storage and re-gasification unit (FSRU) terminal in the offshore region of Digha, West Bengal by M/s H-Energy East Coast Pvt. Ltd.

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- consideration of grant of clearance in respect of CRZ to the proposed Ecotourism Project by Sundarban Affairs Department at Sagar Island around Kapil Muni Temple through World Bank funding under ICZM Project, West Bengal.

**Project by M/s H-Energy East Coast Pvt. Ltd.(HEECPL)**

The Company had earlier made presentation before the WBSCZMA in its 3<sup>rd</sup> meeting held on 29.5.13. Subsequently the draft Terms of Reference (TOR) for the project had been sent around concerned Departments for comments which were duly considered and the TOR finalized. The comments are represented below:

1. Department of Commerce and Industries: "The draft TOR as forwarded by you has been gone through and this department has nothing further to comment in this regard. Proposed ToR may kindly be examined by your Department based on the relevant regulations relating to Environmental aspects and experience in this regard".
2. Department of Fisheries: "The matter has been examined by the Fishery Department in item No.4 the Terms of Reference may be amended as follows:
  - a. Assessment of potential impact on fishing.
  - b. Quantification of losses of income in fishing; if any
  - c. Strategy to off-set the losses".
3. Department of Urban Development: "As the proposed project is not going to be located within the administrative jurisdiction of the Urban Development Department, I am directed to inform you in this context that this Department has nothing to comment in this regard".

The Company had been communicated the TOR by the WBSCZMA vide No. EN/1872/T-II-4/004/2013 dated 29.7.13. The Company had prepared EIA accordingly which was being presented before the WBSCZMA now in the 6<sup>th</sup> meeting.

It was noted that the reconstituted Expert Appraisal Committee (Industry) in its meeting dated 5.3.13 to 7.3.13 had recorded "6.2.29 Proposed Offshore LNG Floating Storage and Regasification Terminal in the offshore region of Digha, West Bengal by m/s H-Energy East Coast Pvt. Ltd. regarding TORs: M/s H-Energy East Coast Pvt. Ltd. have proposed for setting up of Offshore LNG Floating Storage and Regasification Terminal in the offshore region of Digha, West Bengal. Project proponent informed that they are planning to build FSRU with minimum capacity 8 MMTPA in the offshore region of Digha, west Bengal, which is located 100km away from seashore. R-LNG will be transported from FSRU to the onshore receiving facility through sub sea pipeline, which attracts CRZ clearance. Project proponent confirmed that pipeline is not passing through eco-sensitive area. Therefore pipeline does not attract environment clearance. The Committee noted that proposal may be transferred to CRZ sector".

Vide F.No.J-11011/359/2012-IA-II-(I) dated 2.4.13 recommendation of the WBSCZMA was requested before the project was to be considered by MoEF for sanction. It is upto the MoEF to consider applicability of EIA 2006 notification for the project under category A.

The Rs 1100 crore project involved building and operating a FSRU for liquefied natural gas (LNG) of 8 MMTPA located around 115 km offshore from Digha coastline with land-fall point near Petua village (under Contai Sub-Division of Purba Medinipur district), transporting regasified LNG by a 115km sub-sea pipeline to an Onshore Receiving Facility (ORF) into the Haldia-Jagdishpur pipeline of GAIL (India) Ltd. The FSRU is proposed within area limits of the Kolkata Port Trust (KoPT) who have granted permission vide KoPT letter No.Admn/7415/A/H Energy dated 6<sup>th</sup> December, 2013. The Project Proponent was requested to submit a copy of the approval letter from KoPT as well as a full size CRZ map for records.

The pipeline (diameter 28 to 32 inches) passes through CRZ IV and CRZ-I (B) areas. CRZ I (A) area is not involved as per the project proposal. The ORF requires around 10 acres land and four optional sites of agricultural land have been proposed, two are within CRZ-III area and two in non-CRZ area. In terms of CRZ Notification S.O.19(E) dated 6.1.2011 facilities for receipt and storage of petroleum products and LNG and for regasification of LNG is permitted within CRZ III.

The project proponent described the salient features of the project. It was clarified that the FSRU was to be moored away from the main shipping channels to prevent collisions with vessels. ZSI should verify migratory routes of turtles and the FSRU should be located away from such routes. Security zone around the FSRU for navigation safety is to be sought from KoPT and enforced. The service life of the FSRU is estimated at 25 years. It will generate its own energy on board from gas. The waste generated in the FSRU will be treated and disposed strictly as per MARPOL standards. Water requirements of FSRU would be met by desalinating sea water in a plant aboard. Use of mesh and turtle guards to prevent entrapment of marine animals during intake of sea water is recommended.

It was reported that Digha-Shankarpur tourist beach is situated around 20km from the land fall point and hence the tourism sector is not potentially adversely affected. Petuaghat and Junput have fishing harbours and the project proponents should address specific concerns of the fisher folk expected to be affected around the landfall point.

The ORF would utilise surface / ground water and dispose waste in nearby approved waste handling facility. ORF may generate 19.2 MW power demand at 8 MMTPA regasification rate mainly to meet the compression and heating requirements. "Consent to establish" from West Bengal Pollution Control Board (WBPCB) for ORF will be taken at a later stage of project evaluation but before commencing of the project, followed by "Consent to operate". Air, water and noise pollution from operations at ORF will need to be controlled to within standard limits.

Oil Spill Disaster Contingency Plan for the project should be compliant with Eastern Region Oil Spill Disaster Contingency Plan of the Indian Coast Guard, Ministry of Defence, GoI as amended from time to time. Best available technologies should be used to minimise risks and ensure safety to the project personnel and to the environment. Implementation of safety regulations including guidelines issued by the Oil Industry Safety Directorate in the Ministry of Petroleum and Natural Gas, GoI are mandatory.

The EIA Report contained specific recommendations represented below:

- I. Zoological Survey of India (ZSI): "M/s H-Energy East Coast Pvt. Ltd. may ensure the following ecological measures for the proposed site of ORFs and landfall points.
  - i. Precautionary principles for safeguarding offshore movement routes of olive ridley turtles / marine mammals in and around the proposed FSRU should be followed. During the breeding and migration season of turtles, the offshore operation should be avoided. Along with this, the operation crew and other people involved in the offshore operation engaged in the FSRU and ORF should be aware about turtle congregation sites and their breeding activities in the Bay of Bengal and nesting beaches
  - ii. The tidal creeks running around the proposed landfall point and ORF site should not be altered (by dumping, narrowing the path, etc) for any purpose and ensure the local species to feed and breed in the creeks
  - iii. Any infrastructure development (construction of boundary wall/ building) should be done at least 100mts away from the HTL of the tidal creeks
  - iv. No dumping of waste (bio/ non-biodegradable) should be planned into the creeks
  - v. Proper treatment of effluents if any should planned into the creeks
  - vi. Since mangrove patches already evident in the creeks banks, m/s H-Energy East Coast Pvt. Ltd. should attempt plantation of mangroves in the banks of the creeks and tidal

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inundated area adjacent to the proposed sites. This will protect the soil from erosion of the creek as well as support mangrove associated marine fauna to grow in the area

- vii. There should be periodic monitoring and assessment on the infrastructure development in the FSRU, landfall point and the ORFs and their possible impact along with management strategies to combat any adverse impact to coastal and marine life at the sites due to such development. This should be carried out by scientific agency with credibility on coastal and marine fauna study and impact assessment
- viii. There should be Environment Management Plan for the ORF and FSRU of H-Energy East Boast Private Limited should be followed in consultation with the central and state environment, forest and wildlife agencies as well with organizations involved in wildlife and marine life conservation concerned.”

The ZSI study further stated that the beaches involved in the project proposal were predominantly muddy and not sandy and which were not suitable for turtle nesting. The proposed ORF sites were far from horse shoe crab habitats. No sea grass beds were reported. Corals are not found in the area. The area is not included in any protected area under Wildlife (Protection) Act, 1972.

- II. Department of Ocean Engineering and Naval Architecture, IIT, Kharagpur: performed sensitivity study using 3-D Princeton Ocean Model (POM) and forced with surface winds for the study domain of FSRU location where water depth is in the order of 50m. The latent heat flux for the study region was estimated, subsequently used in the flux-coupling algorithm to generate the feed-back mechanism from ocean to atmosphere and vice versa. The quantity of cold-water discharge used in the analysis was 36,000m<sup>3</sup> per hour continuous discharge at the outfall location.

The impact of outfall discharge on the circulation characteristics as well the spatial evolution of thermal plume was investigated using the POM model. The numerical study using POM for the FSRU plume outfall discharge recommended that most ideal water depth is 15m below surface.

- III. SENES Consultants India Pvt. Ltd.: Socio-economic analysis of affected coastal villages recommended strategy to offset any economic loss of villagers through local employment generation in following requirements:

- i. Unskilled / semi-skilled workers required as part of constructing the ORF and laying the onshore segment of the pipeline – for short term
- ii. Land transport and local accommodation requirements for both construction and operation personnel
- iii. Security and patrolling requirements during operation of ORF and onshore pipeline
- iv. Food, water and waste management service requirement to be met at FSRU through supply vessels.
- v. While the employment skill set and entrepreneurship might not be available locally to meet the required needs in an adequate manner, H-Energy will directly as well as through its contractors and sub-contractors put in the required efforts to promote local employment and entrepreneurship”.

The WBSCZMA noted that the cyclone data for the EIA study was of 2010 and it was felt that 2013 data should be incorporated before approaching MoEF for final clearance. The project proponent confirmed that analysis of 2013 cyclone real time data will be provided to MoEF and that they had already collected the necessary data from a weather buoy located at the proposed site.

The WBSCZMA advised the project proponent to synchronise with GAIL, WBIDC and Department of Commerce and Industries so that the state of West Bengal could adequately benefit from the use of natural gas via the gas grid.

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The WBSCZMA after going through the project documents as well as the presentation consented to recommend clearance from CRZ angle as stipulated under CRZ Notification 2011 subject to conditions specified above to the National Coastal Zone Management Authority.

The project proponent agreed to abide by the conditions.

**Ecotourism Project at Sagar Island by Sundarban Affairs Department under ICZM Project**

The Kapil Muni Temple on Sagar Island is a traditional site for *Gangasagar mela* during winter each year. Lakhs of pilgrims from all over India congregate on the island for a holy dip in the Bay of Bengal. Temporary arrangements for accommodation and sanitation have to be made for the influx of visitors every year. There is generation of a lot of municipal solid waste (MSW) and domestic sewage during the annual festival.

Efforts are on to streamline the process and make facilities available the year round without adverse effects on the coastal environment. Under the World Bank funded Integrated Coastal Zone Management Project (ICZMP) being undertaken by IESWM in coordination with different government departments and institutes, one component involves the Ecotourism Project at Sagar Island by Sundarban Affairs Department.

Sagar island in 24 Parganas South district is around 30km in length and 10km in width and a reported resident population of 160,000. Electrification of the Island has been undertaken as a separate part of the ICZM Project. The Ecotourism project component of Rs 40 crores seeks to economically benefit the local inhabitants of the Island while mitigating the environmental emergency created during the annual Gangasagar mela.

The project proposal under consideration involves construction of camp site, visitor centre-cum-museum, toilets, nat mandir, dala arcade, culverts, waste segregation sites etc. Of these the camp site and the visitor centre-cum-museum are in non-CRZ area as per the proposal. Some of the rest are partly in CRZ I (B) area and permissible under CRZ notification 2011.

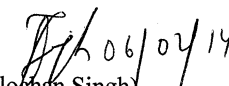
The WBSCZMA after going through the project documents as well as the presentation consented to grant clearance from CRZ angle as stipulated under CRZ Notification 2011 subject to the following conditions:

1. Construction of the proposed community toilets, nat mandir-cum-public rain-shelter and dala arcade-cum-public rain-shelter are hereby permitted provided they are designed to be cyclone proof to ensure public safety and should not pollute the environment.
2. Construction of two culverts across creek for access to the museum from mela ground is permitted provided the flow of the creek is not hindered in any way.
3. The waste segregation sites are permitted provided that no dumping of waste (bio/non-biodegradable) should be made into the creeks / sea and proper treatment of effluents should be done before releasing into the creeks / sea. WBPCB should be consulted in the matter of disposal of MSW.

The project proponent agreed to abide by the conditions.

The meeting ended with a vote of thanks.

Dated: 6.2.2014.

  
(Trilochan Singh)  
ACS Environment  
& Chairman WBSCZMA

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Copy forwarded for kind information to:

1. Addl. Chief Secretary, Department of Environment.
2. Addl. Chief Secretary, Department of Forests
3. Principal Secretary, Department of Urban Development
4. Principal Secretary, Department of Fisheries
5. Principal Secretary, Department of Commerce and Industries
6. Principal Secretary, Department of Power and NES
7. Secretary, Department of Sundarban Affairs
8. Chairman, Kolkata Port Trust (this has reference to KoPT letter No.Admn/7415/A/H Energy dated 6<sup>th</sup> December, 2013).
9. Deputy Director, IA-III Division, Ministry of Environment & Forests, Government of India (this has reference to his F.No.J-11011/359/2012-IA-II-(I) dated 2<sup>nd</sup> April 2013).
10. Commander, Indian Coast Guard, CG DHQ-8, Haldia.
11. Prof. Anindya Sarkar, Department of Geology and Geophysics, Indian Institute of Technology, Kharagpur
12. Dr Pranab Kumar Pradhan, 34/1, Banamali Naskar Road, Behala, Kolkata – 700 060
13. Director, Institute of Environmental Studies & Wetland Management.
14. Senior Manager, H-Energy East Coast Pvt. Ltd., Mumbai.

(Kana Talukder)  
Member Secretary, WBSCZMA