

**Consultancy for Preparation of Disaster Management Plans for six Utilities in Electricity, Petroleum and Water Industries in Sri Lanka****1. Introduction**

Public Utilities Commission of Sri Lanka (PUCSL) as the regulator of the electricity industry is required to secure that all the demand for electricity supply is met throughout the country as per provisions under section 3(2) and section (4) (a) & (b) in the Sri Lanka Electricity Act no 20 of 2009. PUCSL as the designated regulator for the petroleum and water industries as per section 1(2) of the Public Utilities Commission Act no 35 of 2002 has a duty to look into the concerns of customers of respective utilities as per section 14(2)(a) through relevant line ministries for minimizing discontinuity of supply in an event of disaster.

The utilities regulated by PUCSL in the electricity industry are Ceylon Electricity Board (CEB), Lanka Electricity Company (LECO), Several independent power producers (IPPs) and large number of small power producers (SPPs). CEB is the main Utility involved in the generation, transmission, and distribution of electricity. LECO is involved in the distribution of electricity in some sub urban areas of the country. IPPs and SPPs feed electricity to the national electricity grid of transmission licensee of CEB based on power purchase agreement. Utilities in the petroleum industry include Ceylon Petroleum Corporation (CPC), Lanka India Oil Corporation (LIOC) and Ceylon Petroleum Storage Terminal Ltd (CPSTL). It has decided to consider only liquid fuels under petroleum fuels in the analysis for disaster management plan. CPC and LIOC supply petroleum fuel to customers through the network of fuel stations throughout the country. CPSTL stores and distribute petroleum fuel of CPC and LIOC as required by them. The main Utility in the Water industry is National Water Supply & Drainage Board (NWS&DB). There are large number (approximately 4000) of community-based water supply schemes (CBO) throughout the country. However, CBOs are not within the scope of this consultancy.

According to the Sri Lanka Disaster Management Act, No. 13 of 2005 and National Disaster Management Plan, all Ministries, government departments, public corporations and all government agencies are required to develop a Disaster Management Plan in conformity with the

National Policy and the National Plan on disaster management. Nineteen possible categories of disasters have been specified in the Sri Lanka Disaster Management Act. The utilities in electricity, petroleum and water industries have considerable experiences in mitigating, responding and recovering from disasters. Some of the Utilities have documented mitigation plan and emergency response plan based on the experiences from disasters. However, comprehensive Disaster Management Plans approved by the Disaster Management Center (DMC) are not available in these utilities. Therefore, it is vital for PUCSL to ensure that utilities prepare comprehensive disaster management plans as a means to face impending disasters and ensure minimal discontinuity of the utility services to customers. Also, it is logical to prepare DMPs of electricity, petroleum and water industries with holistic approach as the electricity supply depend on the petroleum fuel supply to a great extent while the water supply depends on availability of electricity or petroleum fuel supply. Due to the limitations in the budget and time, DMP covering all disaster events will not be considered in this consultancy. However, general considerations such as changes required if any in the organization structure for facing disaster events are to be addressed.

## **2. Objective of the Consultancy**

The objective of the consultancy is to prepare Disaster Management Plans (DMP) which include the emergency response and restoration plans, and mitigation plans for six utilities in the electricity, petroleum, and water industries with the objective of continuing respective utility services to consumers with minimal disruption possible through prevention, mitigation, emergency response and restoration aspects of disaster management once the utility installations/ infrastructures are subjected disasters.

## **3. Scope of Work**

Disaster Management Plans (DMP) has to be prepared in accordance with the Sri Lanka Disaster Management Act, National Disaster Management Plan and any guideline provided by the DMC. DMPs are to be prepared for on CEB and LECO in electricity industry, CPC, LIOC and CPSTL in petroleum industry and NWSDB in water industry. The specific disaster events that are to be

addressed in the DMPs in detail would be selected on the basis of maintaining the electricity, petroleum fuel or water supply to consumers with minimal disruption possible when installations/ infrastructures of the utility or installations/ infrastructures of utilities in the supply chain are subjected to disasters. The schematic diagram of the petroleum fuel, electricity and water supply chain is given in the page 6 of the document. Consultant is required to verify the same during the meeting with utilities. The consultant is provided access to risk profiles available at DMC on significant number of disasters applicable to Sri Lanka. Team of industry experts who work in the major areas of supply operations of the utility will be made available to the consultant for obtaining inputs to prepare the DMPs. Industry experts in respect of generation, transmission and distribution of electricity from CEB, electricity distribution experts from LECO, Water industry Experts from NWSDB, Petroleum industry Experts from CPC, CPSTL and LIOC will be available for engaging in the activity. The cost of all meetings and workshops will be borne by PUCSL except the cost of documentations of the proceedings and materials to be distributed among participants to generate the desired outputs. The consultant is required coordinate with PUCSL in respect of dates for workshops and meetings. PUCSL will coordinate with respective utilities and confirm on the arrangements. In case workshops cannot be held in an outside venue physically in the usual manner due to constraints of covid – 19, consultant has to setup online meetings/workshops.

The consultant is expected to carry out all analysis and documentation of the DMPs, while industry experts of the utility are expected to provide necessary data/information available/procedures /suggestions, etc. the utility encompasses for preparation of the plan. The consultant is required to carry out in the following in respect of each utility to meet the objective of the consultancy.

1. Prepare an inception report which includes the details on aspects described in item 2,3, 4, 5 and 6.
2. Review on how the utility responded and recovered from disasters in the past.
3. Mechanisms available within the present organization structure of the utility to activate mitigation, response and recovery activities
4. Brief overall evaluation on the existing disaster management plans or any other documents that contain information on disaster management plan.
5. Future plans if any for reducing effects of impending disasters

6. Consultant's Action Plan for preparation of DMPs. It should be prepared in consultation with the utility and PUCSL Details on preparation of the emergency response plan, recovery plan and mitigation plan have to be included in the action plan. Brief detail on methodologies that will be used for preparation DMP, i.e., risk analysis, vulnerability analysis, standard operating procedures etc. have also to be described.
7. Present the inception report with the focus on action plan to officials in the electricity, petroleum and water utilities, DMC and PUCSL and improve further the inception report based on the comments received from the participants in the workshop as appropriate.
8. Submit the inception report for approval of PUCSL and implement the action plan for preparation of the DMP with the approval of the PUCSL
9. Facilitate the industry experts of the utilities through interactive discussions, brainstorming sessions and data/ information formats, documents on future plans, etc. to reveal/ generate required inputs for DMP.
10. Engage the team of industry experts of the utilities to generate input for hazard identification and analysis, vulnerability analysis and risk assessment. However, evidence collection by the consultant should not be limited only to the inputs provided by the experts in utilities. The consultant feels free to find their own evidence through international best practices and create a discussion with utility experts and reach consensus.
11. Based on the analysis under item 10 and past disaster events, Consultant is required to propose six possible disaster events for each utility which has significant impact on utility services. Based on the proposal, PUCSL in consultation with the Utility would decide on four disaster events for development of the rest of the plan.
12. Guide the expert teams of the utility to generate inputs for mitigation plans, emergency response plans, restoration plan, standard operating procedures etc. Discuss and analyze improving the existing organization structure to face disaster events and recommend changes that are required introduce into the for effective execution of DMP.
13. Required to submit minutes of all meetings with utilities to PUCSL.
14. Submit and present the first draft plan to PUCSL for obtaining comments/review.

15. Upon approval of PUCSL, Present draft disaster management plan to officials of utilities in each industry in three-separate workshops for dissemination and obtaining further views/comments.
16. Consider the reviews/comments provided by the parties under item 15 above in finalization of the plan.
17. Submit three hard copies and the soft copy of the final disaster management plan to PUCSL.
18. Consultants is required to format the disaster management plan in such a way that utilities will be able submit same plan to DMC for approval.

#### 4. **Applicable Laws**

The provisions in the following Acts shall be taken into account in preparation of the disaster management plans.

1. Public Utilities Commission Act of Sri Lanka of 2002
2. Sri Lanka Disaster Management Act.
3. National policy and National Disaster Management Plan
4. Sri Lanka Electricity act no 20 of 2009 (as amended)
5. National Water Supply and Drainage Board Law, No 2 of 1974
6. Ceylon Petroleum Corporation Act No. 28 of 1961 (as amended)
7. Petroleum Products (Special Provisions) Act, No. 33 of 2002
8. Marine Pollution Prevention Act, No. 35 of 2008 Petroleum

#### 5. **Deliverables and Payment schedule**

The payments for the consultancy will be made upon submission of deliverables as shown in table below. All payments will be done in LKR denominations.

Payment (% of the contact value)	Deliverable to be completed before payment	Deadline From the date of award
10%	Upon submission of the Inception Report and held the workshop	3 months from the date of award
15% (5% for each sector)	Upon Submission of the report on hazard identification and analysis, vulnerability analysis and risk assessment.	5 months from the date of award

30% (10% for each sector)	Upon submission of the report on mitigation plans, emergency response plans, restoration plan, standard operating procedures etc.	7 months from the date of award
15% (5% for each sector)	Upon submission of the draft utility disaster management plan	9 months from the date of award
30% (10% for each sector)	Submit final utility disaster management plan	10 months from the date of award