SCOPE OF WORK
FOR
FEASIBILITY STUDY
FOR
EXPANSION OF VICTORIA HYDROPOWER STATION
IN SRI LANKA

AGREED UPON BETWEEN
MINISTRY OF POWER & ENERGY
CEYLON ELECTRICITY BOARD
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

Colombo, 19th November 2007

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1. INTRODUCTION

In response to the request of the Government of Democratic Socialist Republic of Sri Lanka (hereinafter referred to as "Sri Lanka"), the Government of Japan decided to conduct the Feasibility Study (hereinafter referred to as "the Study") for Expansion of Victoria Hydropower Station in Sri Lanka (hereinafter referred to as "the Expansion") in accordance with the relevant laws and regulations in force in Japan.

Accordingly, the Japan International Cooperation Agency (hereinafter referred to as "JICA"), the official agency responsible for the implementation of the technical cooperation program of the Government of Japan, will undertake the Study in close cooperation with the authorities concerned of Sri Lanka.

The present document sets forth the scope of work with regard to the Study.

2. OBJECTIVES OF THE STUDY

The Study aims at formulating the optimum plan and assessing its technical, economic and financial, and environmental viabilities of the Expansion by means of the technology transfer to Sri Lanka counterpart personnel in the course of the Study and at recommending further process of the Expansion implementation.

3. SCOPE OF THE STUDY

In order to achieve the Study, JICA shall carry out the following study.

1. Data Collection and Site Visit
   - To collect and review the existing data, reports and other relevant information for the Study
   - To visit the Victoria Hydropower Station to confirm the current situation and collect the relevant data and information
   - To discuss with World Bank and Mahaweli Authority of Sri Lanka to confirm the progress and content of "Dam Safety and Water Resources Planning (DSWRPP)", especially relating to Component 3: Multi-sectoral Water Resources Planning

2. Preliminary Study on Alternative Options
   - To conduct preliminary economic study on the simple expansion option as annex to the existing power station and other options such as a pumped storage option (Victoria Reservoir as the upper pondage and Randenigala reservoir as the lower pondage) in consideration of the following parameters:
     (a) Installed capacity
     (b) Location of power house

3. Optimization of Expansion Plan
   - To optimize number of units and unit capacity considering the following viewpoints;

   "\[\text{Signature}\]"
(a) Water resources management of Mahaweli River Basin
(b) Power demand in future
(c) Generation expansion plan including IPP projects
(d) Constraints and measures relating to topography, geology, water use, environment, investment amount and transmission lines, if any

(4) F/S Grade Design
- To conduct basic design*) of which expected outcomes are:
  (a) Salient feature of the expansion plan
  (b) General layout and profile
  (c) Plans and sections of main structures
  (d) Geological plan and profile
  (e) Control system configuration
  (f) Reservoir operation
  (g) Power system stability
  (h) Construction Plan
  (i) Project cost estimate
  (j) Implementation schedule

*) basic design will be carried out by coping already available design drawing, and needs to be updated to produce commonly called “basic design”

(5) Environmental and Social Considerations
- Sri Lanka shall be responsible for the following items relating to EIA (Environmental Impact Assessment)/IEE (Initial Environment Examination), and JICA will support the activities and monitor the progress following JICA’s Guidelines for Environmental and Social Considerations.
  (a) Impact on ground water and soil stabilities
  (b) Impact on flora and fauna
  (c) Impact on social environment
  (d) Others, if any
  (e) Preparation of an environmental monitoring plan

(6) Economic Analysis and Financial Evaluation
- To conduct economic analysis
- To conduct financial evaluation considering expected finance sources

4. STUDY SCHEDULE

The Study shall be conducted in accordance with the tentative schedule in Appendix 1 attached herewith.

5. REPORTS

JICA shall prepare and submit the following reports in English to the Government of Sri Lanka, in accordance with tentative schedule attached in Appendix 1.
(1) Inception Report (15 copies)
(2) Interim Report (15 copies)
(3) Draft Final Report and its summary (15 copies)
(4) Final Report and its summary (15 copies) with a compact disc.

The Government of Sri Lanka will provide its comments on the draft final report within one month after receipt of the draft final report.

6. UNDERTAKINGS OF SRI LANKA

(1) To facilitate the smooth conduct of the Study, the Government of Sri Lanka shall take the necessary measures:

1) To permit the members of the Japanese study team (hereinafter referred to as “the Team”) to enter, leave and sojourn in Sri Lanka for the duration of their assignments therein and exempt them from foreign registration requirements and consular fees;
2) To exempt the members of the Team from taxes, duties and any other charges on equipment, machinery and other material brought into Sri Lanka for the implementation of the Study;
3) To exempt the members of the Team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Team for their services in connection with the implementation of the Study;

(2) The Government of Sri Lanka shall bear claims, if any, against the members of the Team resulting from, occurring in the course of, or otherwise connected with, the discharge of their duties in the implementation of the Study, except when such claims arise from gross negligence or willful misconduct on the part of the Team.

(3) Ministry of Power & Energy (hereinafter referred to as “MPE”) and Ceylon Electricity Board (hereinafter referred to as “CEB”) shall act as a counterpart agency to the Team and also as coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth conduct of the Study.

(4) CEB shall, at its own expense, provide the Team with the following, in cooperation with other organizations concerned:

1) Security-related information as well as measures to ensure the safety of the Team;
2) Information on as well as support in obtaining medical services;
3) Available data (including maps and photographs) and information related to the Study;
4) Counterpart personnel;
5) Suitable office space with necessary equipment; and
6) Credential or identification cards.

7. UNDERTAKINGS OF JICA

For the conduct of the Study, JICA shall take the following measures:

1) To dispatch, at its own expenses, the Japanese teams to Sri Lanka;
2) To pursue technology transfer to Sri Lanka counterpart personnel in the course of the Study.
8. OTHERS

MPE, CEB and JICA shall consult with each other in respect of any matter that may arise from or in connection with the Study.
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Legend:
- : works in Sri Lanka
- : works in Japan
- : works by subcontract
- : WIS Workshop
- : ICR - Inception Report
- : ITIR - Interim Report
- : DFIR - Draft Final Report
- : FFR - Final Report