付　属　資　料

１．要請書

２．署名したM/M

３．現地踏査記録

４．サンクチュアリ内の保護種

５．収集資料リスト

Project Concept Report

Feasibility Study for Expansion of Victoria Hydropower Station

Ceylon Electricity Board

FORMAT FOR PRESENTATION OF PROJECT CONCEPT

1. **Project Title:** Victoria Hydropower Station Expansion Project

2. **Sector:** Power & Energy - EN

3. **Type of Proposal:**

   1). Project Type Assistance :

   2). Technical Assistance :

   3). Feasibility Study : Feasibility Study

4. **Project Location**

Site	Province	District	Division	Location
	Central	Nuwaraeliya	Hanguranketha	Victoria Power Station

5. **Rationale**

5.1. Present Physical and Socio-Economic Features of the Sector Concerned
(General sector information and information specific to the area)

Ceylon Electricity Board is the sole authority for transmission and most of the generation and distribution of electricity in the country. Present generation capacity of the system is 2056 MW of which 1242 MW is composed of hydropower. Of 814MW thermal capacity, 344.5 MW is owned by the private sector.

5.2. Specific problem to be addressed by project

Priority is given for the development of hydropower potential in the country to meet the growing peak demand for electricity.

5.3. Mode of intervention in terms of this project (justification)

Sri Lankan power system is changing from a predominantly hydro-based system to a predominantly thermal based system. Role of hydro plants in the system is therefore changing from a base load operation to peak time operation. Increasing the installed capacity at the existing hydro stations is one of the cheapest ways of obtaining the peak power requirement in the future. The possibility of expanding the existing power stations has been further studied under the Hydro-power Optimisation in Sri Lanka, funded by Japan International Cooperation Agency in February 2004. The expansion of existing power stations at Victoria, Samanalawewa, New Laxapana and Polpitiya was found feasible. The expansion of Victoria power station could be carried out without

disrupting the operation of the existing facilities unlike at the other stations. Therefore, the detailed feasibility and EIA on the expansion project need to carried out.

5.4. Composition of Target Beneficiaries/Stake holders

This is a project with national economic benefits. Electricity consumers of Sri Lanka will be offered electricity from environmentally friendly indigenous source of power generation.

5.5. Relation of project to National Development Programme and Position of project in Government priorities

To be included in the national development plan, once the feasibility is completed.

5.6. Coherence with government plans and strategies at sectoral level and project level

This project is in conformity with the government objective of meeting the future electricity needs at least cost to the economy in a sustainable manner.

6. Objectives

6.1. Goal of the Proposed Project

No.1 is the primary objective
No.3 is the secondary objective

(Select and indicate the number pertaining to the primary objective and the secondary objective from list below)

1) Economic Development / Reform for Economic Growth
2) Poverty Alleviation
3) Social Development
4) Environmental Management
5) Capacity Building/Institutional strengthening

6.2. Purpose of Project

(Project's real outcome – the expected impact of the project's output on the beneficiary institution, or system in terms of changed behavior or improved performance)

To supply peak power electricity to the National Grid without emitting any green house gasses. Saving on foreign exchange spent on fuel.

7. Expected Project Outputs

(What the project can be held directly accountable for producing the project deliverables, the goods and services it will produce. Outputs are the results that can be guaranteed by the project as a consequence of its activities)

1).Capable of providing 140 - 210 MW of power to the national grid

8. Project Activities

1) Conduct a feasibility study and EIA on the expansion of the existing Victoria Power Station

9. Environmental Impacts on Physical, Biological, Socio-Cultural or Aesthetic Status

(As required please delete or describe appropriately to indicate the project situation)

9.1. Project Location

The proposed development project ~~is in conformity with~~ / is proposed to be included in the declared land use of the project area.

State adverse environmental impacts of locating the project if the proposed land use is not in conformity with the declared land use

9.2. Project Category

The proposed project is **a Prescribed project** / ~~**Not a Preseribed Project**~~ under the national environmental legislation.

9.3. Initial Environmental examination

Initial Environmental examination as per national environmental legislation ~~**had**~~ / **had not been carried out.**

If the answer to the above is affirmative then please annex the IEE report.

9.4. Mitigation Measures

Cost implications of mitigating adverse environmental impacts identified in the IEE ~~**had**~~ / **had not been** incorporated in the cost estimates in the section 11 of this format.

10. Considered Project Alternatives and Reasons for Rejection

The alternative to this project is a diesel-fired gas-turbine power plant. This project will ensure greater reliance on indigenous and environmentally friendly generation of electricity. Further, the expenditure of foreign exchange on purchase of fossil fuel on a recurrent basis will also a burden to the country. The proposed project is therefore economically and environmentally attractive.

11. Cost and Financing

11.1. Total Project Cost (in US$) - 1.5 Million US$

11.2. Financing Plan

Financial Source	Amount (Million US$)
External Sources	1.5
Proponent Funding	0
Beneficiary Contribution	0
Consolidated Fund	0
Other (Specify)	0
Total	1.5

11.3. Prospective Donors for the Proposed Project

Japan International Cooperation Agency

12. Details of already offered or prospective external assistance to projects in the related Sector / Ministry

Donor	Related Field	Project title:Assistance already Offered / Prospective	Amount USD	Year
JBIC	Power	Upper Kotmale Project Engineering Services	JY 1,107 M (FA) SL.R 139 M (CEB)	
JBIC	Power	Samanalawewa project Construction	BP 7,727 M (FA) JY 31,572 M (FA)	
JBIC	Power	Kukule Ganga Project Construction	JY 21,227 M (FA) SL.R. 2.892 M (CEB)	
JBIC	Power	Combined Cycle Kelanitissa Construction	JY 13,481 M (FA) SL.R. 1312 M (CEB)	
JBIC	Power	West Coast Coal Engineering Services	JY 978 M (FA) SL.R. 88 M (CEB)	

13. Implementation

13.1. Organization with overall responsibility

Ceylon Electricity Board

13.2. Functions of the organization with overall responsibility

Generation, Transmission & Distribution

13.3. Authority of the organization with overall responsibility

CEB Act of 1969 and Electricity Reform Act No.28 of 2002

13.4. Implementing organization/s and their functions

	Implementing Organisation(s)	Functions
1	Ceylon Electricity Board (CEB)	Generation,Transmission & Distribution
2		
3		

13.5. Prior Experience of implementing organization(s) with similar projects/activities

	Implementing Organisation(s)	Prior Experience
1	Ceylon Electricity Board (CEB)	120 MW Samanalawewa Hydro Power Project
		70 MW Kukule Ganga Hydro Power Project
		150MW Upper Kotmale Hydro Power Project
		165 MW Combined Cycle Power Plant
		300MW West Coast Coal Power Project

13.6. Responsibilities of other entities (other relevant agencies)

None

13.7. Staff availability for implementing the proposed project
(Specify any additional staff required)

Available

13.8. Proposed Duration of the project

1 Year

Application Form for Japan's Development Study Program

Feasibility Study for Expansion of Victoria Hydropower Station

Ceylon Electricity Board

APPLICATION FORM FOR JAPAN'S DEVELOPMENT STUDY PROGRAM

Date of entry: August 2004

Applicant: the Government of Democratic Socialist Republic of Sri Lanka

(A) Project digest

(1) Project Title: Proposed Victoria Hydro Power Station Expansion Project

(2) Location : Victoria Power Station in Central Province in Sri Lanka

(3) Implementing Agency : Ceylon Electricity Board (CEB)
Number of Staff of the Agency: 13568 at the end of 2002
Budget allocated to the Agency:
Organization Chart: Attached

(4) Justification of the Project

Ceylon Electricity Board is the sole authority for transmission and most of the generation and distribution of electricity in the country. Present generation capacity of the system is 2056MW of which 1242MW is composed of hydropower.

Sri Lankan power system is changing from a predominantly hydro-based system to a predominantly thermal based system. Role of hydro plants in the system is therefore changing from a base load operation to peak time operation. According to the long Term Generation Expansion Plan (LTGEP 2003-2017) published in June 2003, it is expected to double the present peak demand by the year 2013. Increasing the installed capacity at the existing hydro stations is one of the cheapest ways of obtaining the peak power requirement in the future. The possibility of expanding the existing power plants has been further studied under the Hydro-power Optimisation in Sri Lanka, funded by Japan International Cooperation Agency in February 2004. The expansion of existing power stations at Victoria, Samanalawewa, New Laxapana and Polpitiya was found feasible. The expansion of Victoria power station could be carried out without disrupting the operation of the existing facilities unlike at the other stations. Therefore, a detailed feasibility and the Environmental Impact Assessment (EIA) on the expansion of Victoria power station are required to be carried out.

-Sectoral development policy of the national/local government:

To meet the demand for energy services at all times at least economic, social and environmental cost and thereby promote economic development and social well-being.

-Problems to be solved in the sector:

To meet country's electricity demand at an affordable price while utilizing indigenous renewable resources with minimum impacts to the environment.

-Outline of the Project:

This is a power plant expansion project capable of injecting 140-210 MW of power to the national grid. To review the previous studies and to conduct a detailed feasibility study and Environmental Impact Study on the expansion of Victoria Power Station making the station suitable for peak load operation.

-Purpose (short-term objective) of the Project:

To supply peak power to the National Grid without emitting any green house gasses and to save on foreign exchange spent on fuel

-Goal (long-term objective) of the Project:

To meet the long-term electricity demand in the country

-Prospective beneficiaries:

This is a national project with national socio-economic benefits.

-the Project's priority in the National Development Plan / Public Investment Program:

To be included once the feasibility study is completed.

(5) Desirable or Scheduled time of the commencement of the Project:

July 2005

(6) Expected funding source and/or assistance (including external origin) for the Project:
to obtain the services of specialized experts in the relevant field through Japan International Cooperation Agency

(7) Other relevant Projects, if any.
None

(B). Terms of Reference of the proposed Study

(1) Necessity/Justification of the Study:
The possibility of expanding the existing power plants has been further studied under the Study on Hydro-power Optimisation in Sri Lanka, funded by Japan International Cooperation Agency in February 2004. The expansion of existing power stations at Victoria, Samanalawewa, New Laxapana and Polpitiya was found feasible. The expansion of Victoria power station could be carried out without disrupting the operation of the existing facilities unlike at the other stations. The detailed feasibility and the EIA on the Expansion of Victoria Power Station need to be carried out.

(2) Necessity/Justification of the Japanese Technical Cooperation:
Under the Study of Hydro Power Optimization in Sri Lanka completed in February 2004, the expansion of Victoria was studied by the Japanese experts. Japanese technical cooperation for a detailed feasibility study and an EIA study is therefore preferred.

(3) Objectives of the Study:
To conduct a detailed feasibility study and the Environmental Impact Assessment on the Expansion of Victoria Power Station to make the station suitable for peaking duty in a thermal based system.

(4) Area to be covered by the Study:
Victoria reservoir and power station

(5) Scope of the Study:
Assess the technical feasibility, economic viability and environmental acceptability of the Expansion of Victoria Power Station undertaking a detailed feasibility study and EIA to allow the Government to decide upon project implementation and to

/ 3/6

apply for concessionary financing from JBIC.

(6) Study Schedule:
1 year, from July 2005 to July 2006

(7) Expected Major Outputs of the Study:
Detailed Feasibility and EIA Reports

(8) Possibility to be implemented / Expected funding resources:
Seeks funds from JBIC for the implementation phase of the project.

(9) Request of the Study to other donor agencies, if any:
Not Applicable

(10) Other relevant information
No

(C) . Facilities and information for the Study

(1) Assignment of counterpart personnel of the implementing agency for the Study:
The counterpart staff requested will be provided by the CEB

(2) Available data, information, documents, maps, etc. related to the Study
Necessary information will be submitted during the study

(3) Information on the security conditions in the Study Area:
Government of Sri Lanka will undertake to provide adequate security cover within its mean to the study team.

(D) Global Issues (Environment, Gender, Poverty, etc.)

(1) Environmental components (such as pollution control, water supply, sewage, environmental management, forestry, biodiversity) of the Project, if any.
No air pollution due to hydro-electricity generation. No serious impacts are anticipated since this is an extension to an existing station.

2) Anticipated environmental impacts (both natural and social) by the Project, if any.
Minimal impacts

/

(3) Women as main beneficiaries or not.
This is a national project.

(4) Project components which require special considerations for women (such as gender difference, women specific role, women's participation), if any.
Not Applicable

(5) Anticipated impacts on women caused by the Project, if any.
Not Applicable

(6) Poverty alleviation components of the Project, if any.
Not Applicable

(7) Any constraints against the low-income people caused by the Project.
Not Applicable

(E). Undertakings of the Government of (the recipient country)

In order to facilitate the smooth and efficient conduct of the Study, the Government of (the recipient country) shall take necessary measures:

(1) to secure the safety of the Study Team,

Yes

(2) to permit the members of the Study Team to enter, leave and sojourn in (the recipient country) in connection with their assignment therein, and exempt them from foreign registration requirements and consular fees,

Yes

(3) to exempt the Study Team from taxes, duties and any other charges on equipment, machinery and other materials brought into and out of (the recipient country) for the conduct of the Study,

Yes

(4) to exempt the Study Team from income tax and charges of any kind imposed on or in connection with the implementation of the Study,

Yes

/ 5/6

(5) to provide necessary facilities to the Study Team for remittance as well as utilization of the funds introduced in (the recipient country) from Japan in connection with the implementation of the Study,

Yes

(6) to secure permission for entry into private properties or restricted areas for the conduct of the Study,

Yes

(7) to secure permission for the Study Team to take all data, documents and necessary materials related to the Study out of (the recipient country) to Japan, and,
Yes

(7) to provide medical services as needed. Its expenses will be chargeable to members of the Study Team.

Yes

6. The Government of Sri Lanka shall bear claims, if any arise against member(s) of the Japanese Study 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 member of the Study Team.

7. Ceylon Electricity Board shall act as counterpart agency to the Japanese Study Team and also as coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the Study.

8. Ceylon Electricity Board, as the executing agency of the project will take responsibilities that may arise from the products of the Study.

The Government of Sri Lanka assures that the matters referred to in this form will be ensured for the smooth conduct of the Development Study by the Japanese Study Team.

Signed:_____

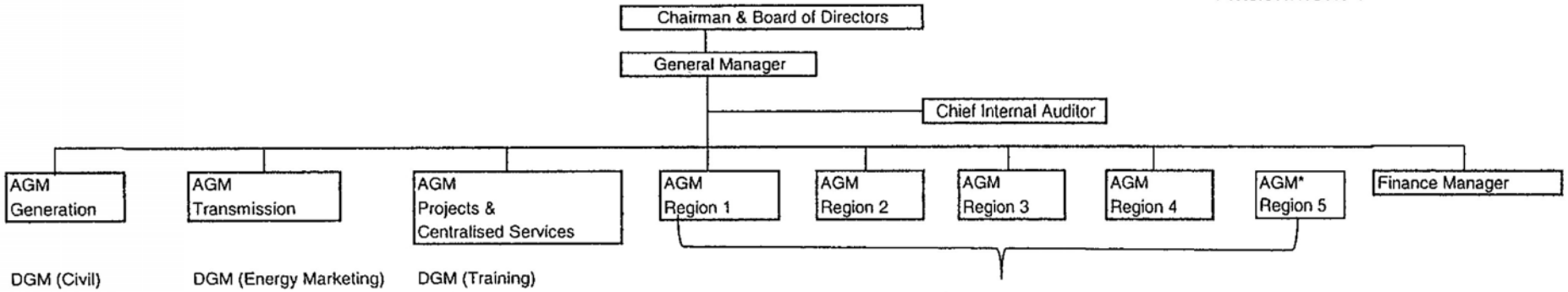
Title: _____

On behalf of the Government of Sri Lanka

Date: _____

/ 6/6

Attachment 1



DGM (Civil)
DGM (Mech.)
DGM (Projects)
DGM (Cor. Aff.)
DGM (Mahaweli)
DGM (Laxapana)
DGM (Thermal)
DGM (Other Hydro)
DGM (Energy Sales)
AFM (Generation)

DGM (Energy Marketing)
DGM (Energy Purchase)
DGM (Tr. & Gen. Planning)
DGM (System Control)
DGM (Info. Management)
DGM (CRR)
DGM (Tr. Projects)
DGM (O&M)
DGM (Asset Management)
DGM (Communication)
DGM (Tr. Design & Env.)
AFM (Transmission)

DGM (Training)
DGM (Workshop & Anciliary Ser)
DGM (Civil Works & Buildings)
PD (UKHPP)
PD (CCEDDP)
AFM (Projects & Centralised Services)

DGM (Plann. & Develop.)
DGM (Projects & Heavy Maintenance)
DGM (Commercial & Corporate)
DGM (Province A)
DGM (Province B)
.
.
.
DGM (Province n)
AFM (Distribution)

Note:

AGM	Additional General Manager
DGM	Deputy General Manager
AFM	Addl. Finance Manager
PD	Project Director
*	AGM (Region 5) is temporarily look after by AGM (Region 1)

Screening Format

Question 1 Outline of the project

1-1 Does the project come under following sectors?

☑Yes ☐No

If yes, please mark corresponding items.

☐Mining development
☐Industrial development
☐Thermal power (including geothermal power)
☑Hydropower, dams and reservoirs
☐River/erosion control
☐Power transmission and distribution lines
☐Roads, railways and bridges
☐Airports
☐Ports and harbors
☐Water supply, sewage and waste treatment
☐Waste management and disposal
☐Agriculture involving large-scale land-clearing or irrigation
☐Forestry
☐Fishery
☐Tourism

1-2 Does the project include the following items?

☑Yes ☐No

If yes, please mark following items.

☐Involuntary resettlement (scale: households persons)
☐Groundwater pumping (scale: m3/year)
☑Land reclamation, land development and land-clearing (scale: below 1 hector)
☑Logging (scale: below 1 hector)

1-3 Did the proponent consider alternatives before request?

☐Yes: Please describe outline of the alternatives
(　　)
☑No

1-4 Did the proponent have meetings with the related stakeholders before request?

□Yes ☑No

If yes, please mark the corresponding stakeholders.

□Administrative body

□Local residents

□NGO

□Others ( )

Question 2

Is the project a new one or an on-going one? In the case of an on-going one, have you received strong complaints etc. from local residents?

☑New □On-going(there are complaints) □On-going (there are no complaints)

□Others ( )

Question 3 Name of the law or guidelines:

Is Environmental Impact Assessment (EIA) including Initial Environmental Examination (IEE) required for the project according to a law or guidelines in the host country?

☑Yes □No

If yes, please mark the corresponding items.

□Required only IEE (□Implemented, □on going, □planning)

□Required both IEE and EIA (□Implemented, □on going, □planning)

☑Required only EIA (□Implemented, □on going, ☑planning)

□Others: ( )

Question 4

In case of that EIA was taken steps, was EIA approved by relevant laws in the host country? If yes, please mark date of approval and the competent authority.

□Approved: without a supplementary condition	□Approved: with a supplementary condition	□Under appraisal

(Date of approval: Competent authority:)

☑Not yet started an appraisal process

□Others:( )

Question 5

If a certificate regarding the environment and society other than EIA is required, please indicate the title of certificate.

☐Already certified ☐Required a certificate but not yet done

Title of the certificate :( )

☑Not required

☐Others [ ]

Question 6

Are following areas located inside or around the project site?

☑Yes ☐No ☐Not identified

If yes, please mark corresponding items.

☑National parks, protected areas designated by the government (coast line, wetlands, reserved area for ethnic or indigenous people, cultural heritage) and areas being considered for national parks or protected areas

☐Virgin forests, tropical forests

☐Ecological important habitat area s (coral reef, mangrove wetland, tidal flats)

☐Habitat of valuable species protected by domestic law s or international treaties

☐Likely salts cumulus or soil erosion areas on a massive scale

☐Remarkable desertification trend areas

☐Archaeological, historical or cultural valuable areas

☐Living areas of ethnic, indigenous people or nomads who have a traditional lifestyle, or special socially valuable area

Question 7

Does the project have adverse impacts on the environment and local communities?

☐Yes ☑No ☐Not identified

Reason: [As the project is to extend the existing hydropower station, the project dose not include the dam. The additional tunnel will be excavated along the existing tunnel]

Question 8

Please mark related environmental and social impacts, and describe their outlines.

☑Air pollution
☑Water pollution
☐Soil pollution
☑Waste
☑Noise and vibration
☐Ground subsidence
☐Offensive odors
☐Geographical features
☐Bottom sediment
☐Biota and ecosystem
☐Water usage
☑Accidents
☐Global warming
☐Involuntary resettlement
☐Local economy such as employment and livelihood etc.
☐Land use and utilization of local resources
☐Social institutions such as social infrastructure and local decision-making institutions
☐Existing social infrastructures and services
☐The poor, indigenous of ethnic people
☐Maldistribution of benefit and damage
☐Local conflict of interests
☐Gender
☐Children's rights
☐Cultural heritage
☐Infectious diseases such as HIV/AIDS etc.
☐Others ( )

Outline of related impacts:

Under the construction, Air pollution, Water pollution, Waste, Noise and Vibration, and Accidents will be expected. However, these impacts should be minimized by proper mitigatory measures.
During the construction, the local economy should be stimulated.
The project/Hydropower contributes the prevention of Global warming.

Question 9

Information disclosure and meetings with stakeholders

9-1 If the environmental and social considerations are required, does the proponent agree on information disclosure and meetings with stakeholders in accordance with JICA Guidelines for Environmental and Social Considerations?

☑Yes ☐No

9-2 If no, please describe reasons below.