

**PART B – SECTOR SPECIFIC INFORMATION**  
**SMALL HYDRO POWER PROJECT**

**1.0 GENERAL**

1.1 Name of the Project :

\_\_\_\_\_

1.2 Proposed Installed Capacity of the Project : \_\_\_\_\_ MW

1.3 Proposed location of the Project :

Village : \_\_\_\_\_

Taluk : \_\_\_\_\_

District : \_\_\_\_\_

State : \_\_\_\_\_

Telephone / Fax : \_\_\_\_\_

1.4 Accessibility to proposed location of the project

Particulars	Name	Distance from the Project Site (km)
Nearest Tehsil / Block HQ		
Nearest Road Head		
Nearest Railway Station		
Nearest Airport		
Nearest Grid Substation		

1.5 Special Category if any – Location based :

TICK AS APPLICABLE						
NE States & Sikkim	Islands & Estuaries	Hilly Area	Jammu & Kashmir	Deserts	Newly formed states	Not applicable

1.6 Details of the Project Land (Please tick appropriate)

Particular	Area	Acquisition Status	Whether land is Mortgagable
Govt. Land			
Pvt. Land			
Forest Land			
Other Specify			
Total			

NB: In case Govt. Land / Forest Land is not mortgagable, please enclose letter from the concerned Govt. Authority

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## 2.0 TECHNICAL

### 2.1 Details relating to Resources

2.1.1 Category of the Project : \_\_\_\_\_  
(Please specify whether Dam Toe / Canal  
Fall / Run off River or Other Scheme) \_\_\_\_\_

2.1.2 Name of the River / Canal / Dam / : \_\_\_\_\_  
Others on which the project is  
proposed to be located \_\_\_\_\_

2.1.3 Design Head (in Meters) : \_\_\_\_\_

2.1.4 Discharge (in Cumecs i.e. m<sup>3</sup>/Sec)  
Maximum : \_\_\_\_\_  
Minimum : \_\_\_\_\_  
Design / Rated : \_\_\_\_\_

2.1.5 Source of Water : \_\_\_\_\_  
(Rain fed / Snow fed / dam  
releases / canal releases / any  
other) \_\_\_\_\_

2.1.6 Source of Discharge Data : \_\_\_\_\_

2.1.7 Period for which Discharge Data is : \_\_\_\_\_  
Available (Minimum requirement – two  
lean seasons & one monsoon season)

### 2.2 Estimation of Power Generation

2.2.1 Gross Energy Generation : \_\_\_\_\_  
estimated as per DPR in MU

2.2.2 Dependable year on which the : \_\_\_\_\_  
annual energy has been estimated  
/ arrived in the DPR

2.2.3 Estimated Energy Generation in : \_\_\_\_\_  
MU in 90% dependable year (if  
above is not estimated in 90%  
dependable year). \_\_\_\_\_

2.2.4 Annual Auxiliary Energy : \_\_\_\_\_  
Consumption (MU)



2.2.5 Transformation Loss in MU : \_\_\_\_\_  
(i.e. Transformer Losses from Generation Voltage to Step Up Voltage) \_\_\_\_\_

2.2.6 Transmission Line Losses in MU : \_\_\_\_\_

2.2.7 Energy Metering Point : \_\_\_\_\_  
(Please specify whether it is located at Switchyard at Power House or at Utility Grid Substation / Any other location) \_\_\_\_\_

2.2.8 Net Energy Generation taken for Financial Calculations : \_\_\_\_\_

**2.3 Project Configuration**

2.3.1 Type of Turbine : \_\_\_\_\_  
(Kaplan / Francis / Pelton / Turgo / Cross Flow / Any other) \_\_\_\_\_

2.3.2 Proposed Configuration of the Project (No. of Units x MW) : \_\_\_\_\_  
(Please specify alternative configurations, if any) \_\_\_\_\_

2.3.3 Type of Generator : \_\_\_\_\_  
(Induction / Synchronous / Others) \_\_\_\_\_

**2.4 Procurement Procedure** :

2.4.1 Contractor for Civil Works  Single Quotation  Limited Tender  
 Published Tender  Any Other

2.4.2 Supplier for E&M Works  Single Quotation  Limited Tender  
 Published Tender  Any Other

2.4.3 Supplier for Hydro Mechanical Works  Single Quotation  Limited Tender  
 Published Tender  Any Other

## 2.5 Power Evacuation

2.5.1 Generation Voltage (in kV) : \_\_\_\_\_

2.5.2 Evacuation Voltage (in kV) : \_\_\_\_\_

2.5.3 Length of the Transmission Line in km (from Power House to Grid Substation) : \_\_\_\_\_

2.5.4 Type of Transmission Line (Single Circuit / Double Circuit) : \_\_\_\_\_

## 2.6 Mode of Implementation

2.6.1 Mode of implementation of the project : In-house / Consultants / Any other (please tick appropriate)

## 3.0 COMMERCIAL

### 3.1 Proposed Project Cost Estimates :

Particulars	Amount (Rs. In Lakhs)
a) Cost of Land & Site Development	:
b) Civil Works	:
c) Electro Mechanical Equipment	:
d) Hydro Mechanical Equipment	:
e) Installation	:
f) Engineering & Consultancy	:
g) Technical Assistance	:
h) Project Management (including Front End Fee)	:
i) Others(including Transmission Lines)	:

	:	
j) Taxes & Duties	:	
k) Contingency	:	
l) IDC	:	
<b>Total Project Cost</b>		

### 3.2 Proposed Means of Financing

Particulars	Amount (Rs. In Lakhs)
<b>A) Promoter's Contribution</b>	
➤ Equity Share Capital	:
➤ Internal Accruals	:
➤ Unsecured Loan	:
➤ Others, if any – specify	:
Sub Total (A)	:
<b>B) Term Loan Proposed</b>	
➤ From IREDA	:
➤ From Others (FI / Banks)	:
➤ Subsidy, if any*	:
Sub Total (B)	:
<b>Total Project Cost (A+B)</b>	:

\* Capital Subsidy, if available, will reduce IREDA's Loan

### 3.3 Purpose of the Project

		Tick Appropriate Box
a)	Captive consumption	:
b)	Sale to State Electricity Board	:
c)	Sale to Third Party	:
d)	Sale to Power Trading Corporation	:

Note: Please enclose copy of ERC approved Power Purchase Agreement (PPA) wherever applicable. In case of sale to third party, please enclose copies of latest three years Annual Report of the Company to whom you propose to sell power.

### 3.4 Marketing Arrangement

#### 3.4.1 In case of Sale to SEB / Trading Corporation –

- |    |  |   |            |
|----|--|---|------------|
| a) | Availability of State ERC Approved PPA | : | Y YES / NO |
| b) | Date of Signing of PPA                 | : | _____      |
| c) | Validity of the PPA                    | : | -          |
| d) | Power Purchase Rate as per PPA         | : |            |
| e) | Escalation Clause                      | : | Y YES / NO |
| f) | Discount Clause / Penalty Clause       | : | Y YES / NO |

#### 3.4.2 In case of Captive Consumption / Third Party Sale –

- |    |                                    |   |       |
|----|------------------------------------|---|-------|
| a) | Applicable SEB Tariff at present * | : | _____ |
| b) | Average Monthly Consumption *      | : | _____ |
| c) | Status of Wheeling Agreement       | : | _____ |
| d) | Rate of Wheeling                   | : | _____ |

Note: Latest three months electricity bill to be provided at the time of Appraisal of the Project.



### 3.5 Implementation Schedule

3.5.1 Tentative Date for Award of Civil Contract : \_\_\_\_\_

3.5.2 Tentative Date for Award of E&M Contract : \_\_\_\_\_

3.5.3 Tentative Date for Award of Hydro Mechanical Contract : \_\_\_\_\_

3.5.4 Envisaged Date of Commissioning of the Project : \_\_\_\_\_

3.5.5 Approximate Manpower Requirement for Implementation the Project

a) Skilled : \_\_\_\_\_

b) Unskilled : \_\_\_\_\_

3.5.6 Manpower Requirement for Operation of the Project

a) Skilled : \_\_\_\_\_

b) Unskilled : \_\_\_\_\_

3.6 Assumptions taken for Performance Indicators

a) Installed Capacity : \_\_\_\_\_

b) Rate of Interest for proposed loan from IREDA : \_\_\_\_\_

c) Repayment Period : \_\_\_\_\_

d) Moratorium Period : \_\_\_\_\_

e) Net Energy Available for Sale : \_\_\_\_\_

- f) Selling Price (as per SERC approved & signed Power Purchase Agreement) : \_\_\_\_\_
- g) Selling Price Escalation per Annum : \_\_\_\_\_
- h) Wheeling Charges if applicable : \_\_\_\_\_
- i) Capacity Utilization Factor : \_\_\_\_\_
- j) Annual O&M Charges : \_\_\_\_\_
- k) Annual Escalation of O&M Charges : \_\_\_\_\_
- l) Taxes & Duties, if any : \_\_\_\_\_
- m) Any other (please specify) : \_\_\_\_\_

3.7 Performance Indicators

- a) IRR : \_\_\_\_\_
- b) DSCR (Average) : \_\_\_\_\_
- c) Pay Back Period : \_\_\_\_\_

**4.0 Environmental Impact Assessment :**

- 4.1 Analysis to be provided as per the Guidelines and Format attached : \_\_\_\_\_

**5.0 Social Impact Assessment :**

- 5.1 Analysis to be provided as per the Guidelines and Format attached : \_\_\_\_\_

**6.0 Other Information :**

6.1 Name & Address of the Consultants who : \_\_\_\_\_  
have prepared the DPR

6.2 Name of the Address of the Project : \_\_\_\_\_  
Consultant

**7.0 Enclosures (Essential for Registration)**

7.1 Letter of Intent / MOU with the State : \_\_\_\_\_  
Govt. / Nodal Agency regarding allocation  
of site.

7.2 Power Purchase Agreement / Agreement : \_\_\_\_\_  
with Third Party etc.

- 7.3 Copy of Wheeling Agreement for Captive Use / Third Party Sale. \_\_\_\_\_
- 7.4 Latest Annual Report of Third Party Purchaser \_\_\_\_\_
- 7.5 Three copies of the Detailed Project Report of the scheme in the format prescribed by IREDA : \_\_\_\_\_
- 7.6 Clearance from Nodal Agency for the Detailed Report : \_\_\_\_\_
- 7.7 Copy of the Pre-feasibility Report / DPR prepared by State Nodal Agency / SEB for the scheme. : \_\_\_\_\_
- 7.8 Executive summary of the project proposal and layout sketch of the scheme. Salient features of the scheme in a tabular form. : \_\_\_\_\_
- 7.9 Checklist on land details alongwith the table of existing charges. : \_\_\_\_\_
- 7.10 Justification for cost estimates : \_\_\_\_\_
- 7.11 Calculation of cost of generation and energy returns : \_\_\_\_\_
- 7.12 Toposheet and also Map showing Catchment Area. : \_\_\_\_\_
- 7.13 Justification note on Hydrology, Power Potential Assessment and Energy assessed from various alternatives. : \_\_\_\_\_
- 7.14 Environment Impact Assessment Analysis as per the Guidelines and Format attached
- 7.15 Social Impact Assessment Analysis as per the Guidelines and Format attached

7.16 Other Clearances / Enclosures (please specify)

a)

\_\_\_\_\_

b)

\_\_\_\_\_

c)

\_\_\_\_\_

7.17 Location map of Project, w.r.t Country (India):  
State, District, etc

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Place: \_\_\_\_\_

Signature

\_\_\_\_\_

Date: \_\_\_\_\_

Name

\_\_\_\_\_

Designation

\_\_\_\_\_

Rubber Stamp

\_\_\_\_\_

## Environmental Screening Sheet – Small Hydro Project

Name of the Promoter with full address:
Name of the Small Hydro Project (SHP):
Geographical Location of SHP: The State, District / Block / Gram Panchayat:
Is the District / Block a part of Tribal Sub Plan area: Yes / No
Name, Designation and Address of Authority responsible for this SHP

Major Environmental Issues (e.g. Forest, Land, Water Flow, Pollution etc.)	
Is there any environmental mitigation or management plan available?	
Area of forest / tribal land required for the project	
Length & Budget for access road to site (RS)	
Minimum water flow planned during dry season (cumecs) in the bypassed river section	
Evidence / record available of endangered biological species in the area to be enclosed?	
Provide a copy of clearance received from the Department of fisheries / Other concerned Department	
Is there any village irrigation scheme in the bypassed river section? If yes, provide details	

Area of land proposed to be cleared for access road and transmission lines	
Provide the evidence / documents of Public Consultation (including summary of the discussion) on environmental issues.	
Approximate no. of trees proposed to be felled for the project.	
Area where muck / excavated waste material is proposed to be disposed	
Minimum flow proposed in the river during construction period.	
Is there any community complaints against the project?	

Place: \_\_\_\_\_

Signature

\_\_\_\_\_

Date: \_\_\_\_\_

Name

\_\_\_\_\_

Designation

\_\_\_\_\_

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## Social Screening Sheet – Small Hydro Project

Name of the Promoter with full address:

Name of the Small Hydro Project (SHP):

Geographical Location of SHP: The State, District / Block / Gram Panchayat:

Is the District / Block a part of Tribal Sub Plan area: Yes / No

Name, Designation and Address of Authority responsible for this SHP

1. Details of land under different tenure system required for SHP

Type of land	Area Required (HA)	Area Transferred / Acquired / Purchased
Forest		
Dongar / Hills		
Gram Panchayat		
River bed		
Private / Patta		
Revenue		

2. Patterns of current use of above mentioned areas. Tick  $\checkmark$  if applicable.

Cultivation  Grazing  Collection of fodder / fuel wood

Cultural properties: temples, sacred groves etc.  Homesteads

Other structures  Burial / Cremation Ground

2A. Where answer is Yes, indicate within the box the number of affected families

Cultivation  Grazing  Collection of fodder / fuel wood

Cultural properties: temples, sacred groves etc.  Homesteads

Other structures  Burial / Cremation Ground



Contd. 2/-

2B Provide the evidence / documents of Public Consultation (including summary of the discussion) on Social issues such minutes of the Gram Panchayat Meeting and the copy of the Advertisement in the Local Newspaper.

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3. Indicate whether:

(i) Forest Clearance Obtained	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
(ii) Alternate land for afforestation provided to Forest Department		<input type="checkbox"/>		<input type="checkbox"/>
(iii) Gram Panchayat has cleared the project if it is within Tribal Area		<input type="checkbox"/>		<input type="checkbox"/>
(iv) All payments for land / structures paid to individuals		<input type="checkbox"/>		<input type="checkbox"/>
(v) Attach copies of relevant documents		<input type="checkbox"/>		<input type="checkbox"/>

Indicate the length of the river from diversion to Power House: \_\_\_\_\_ Kms.

5. Tick  $\checkmark$  if diverting water affects the following:

Irrigation	<input type="checkbox"/>	No. of affected families	<input type="checkbox"/>
Drinking water	<input type="checkbox"/>	No. of affected families	<input type="checkbox"/>
Other domestic use	<input type="checkbox"/>	No. of affected families	<input type="checkbox"/>
Milling "Chaki"	<input type="checkbox"/>	No. of affected families	<input type="checkbox"/>
Fishing	<input type="checkbox"/>	No. of affected families	<input type="checkbox"/>
Cultural use – festivals	<input type="checkbox"/>	No. of affected families	<input type="checkbox"/>
Ponds / Nallahs	<input type="checkbox"/>	No. of affected families	<input type="checkbox"/>

Contd. 3/-

6. Tick  $\checkmark$  if following benefits available to families who live within project area:

Royalty to Gram Panchayats within tribal area

Free / subsidized supply of electricity to families

Employment to village individuals during Construction. If yes, number of employed:

Skilled

Unskilled

Average monthly income per person Rs. \_\_\_\_\_

Employment to village individuals during SHP operation. If yes, number of employed:

Skilled

Unskilled

Average monthly income per person Rs. \_\_\_\_\_

7. Indicate whether or note formal and / or informal meetings had been organized with Gram Panchayat, Gram Sabha, NGO / CB's and other in the area. If answer is yes, give dates of meetings and details of important social, economic, cultural and environmental issues raised by participants of meetings.

8. If social, economic, cultural and environmental issues had been raised, give details of actions taken to address them.

Place: \_\_\_\_\_

Signature \_\_\_\_\_

Date: \_\_\_\_\_

Name \_\_\_\_\_

Designation \_\_\_\_\_

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