



**SHIGA ENERGY PRIVATE LIMITED**

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East Sikkim - 737101  
Tel : +91-3592-204703

Ref.No;SEPL/F-5/13-14/ 295

To,  
The Joint Director,  
North-Eastern Regional office,  
Ministry of Environment & Forest,  
Government of India.

Dated: 17/5/2013

**Subject: Six Monthly compliance Report on status of Environmental Safeguards of  
97MW Tashiding Hydro Electric Project**

Dear Sir,

This has reference to Environmental Clearance of 97MW Tashiding hydro Hydro Electric Project vide MoEF letter No.J-12011/66/2006-IA-I dated 29.07.2010 following are clarified for your kind perusal.

1. As per the Stage I Clearance the following amount is deposited to the Forest Env. & Wildlife management Deptt. Government of Sikkim, Gangtok.
  - i) **Compensatory afforestation:** Rs, 28,43,900=00
  - ii) **Net Present Value:** Rs, 32,18,774=00
  - iii) **CAT Plan:** Rs 63,48,000=00
  - iv) **Biodiversity Conservation & Management Plan:** Rs,88,40,000=00
2. Six Monthly compliance on the status of the 97 MW Tashiding Hydro Electric Project to the stipulated environmental conditions is enclosed as Annexure-A, Environmental activities as Annexure-B, Corporate Social Responsibilities as Annexure-C and Monthly Progress report of the project as Annexure-D.

This is for your kind information.

Thanking You.

Yours faithfully,

(CL Thakur)  
Vice President  
For, Shiga Energy Pvt. Ltd.

- Copy to: 1) Additional Director, MoEF New Delhi, for kind information.  
2) Central Pollution Control Board, Govt. of India, for kind information.  
3) CCF-cum -Nodal Officer (FCA) Gangtok, for kind information.  
4) Member Secretary, State pollution Control Board Gangtok, for kind information.



Site Office

Yangtey, Near Tashigang Resort, Gyezing, West Sikkim - 737111  
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**97MW TASHIDING HYDRO ELECTRIC PROJECT  
DATA SHEET**

Sl.No.	Particulars	Details
1.	<b>Project Type</b>	Run- of- River Scheme
2.	<b>Name of the Project</b>	97MW Tashiding Hydro Electric Project
3.	<b>Clearance Letter</b> i) Environmental Clearance ii) Forest Clearance.	No.J-12011/66/2006-IA-I dated 29.7.2010  MoEF GOI vide letter No.3-SKB 007/2010-SHI/1693-94 dated 16 <sup>th</sup> Sept.2011. Forest Env.& wildlife Management Deptt GOS vide Letter No.1368/FCA/FEWMD 955-57 Dated 24 <sup>th</sup> September 2011
4.	<b>LOCATION:</b>	
	District	West District
	State	Sikkim
	Latitude	27°20'28"N
	Longitude	88°13'59"E
5.	<b>Address for Correspondence</b>	
	a) Addresss of concerned Project Head(with pin code, Telephone/Fax)  b) Address of Project Incharge site office (With Pin code, Telephone/Fax)	Shri. P.B.Praveen Kumar, Director Shiga Energy Pvt.Ltd. Rabdenling, Annex-II, Adjoining Hotel Royal Plaza Upper Shyari, Gangtok, East Sikkim. e-mail:praveenpb@yahoo.com Telephone:03592-280709 Fax:03592-280703 Mr.C.L.Thakur Vice-President, Shiga Energy Pvt.Ltd. Yangtey, Gyalshing, West Sikkim, Telephone:03595-250055 Fax-03595-250044 e-mail:cl.thakur@dansenergy.com
6.	Break up of the Project Area	
	a) Forest Land Total	4.3492 Ha (Surface: 2.7840Ha + Underground :1.5652Ha) in West Sikkim
7.	Break-up of the Project affected Population.	Project affected families:30 Landless affected families: Nil
8.	<b>Financial Details</b>	
	a) Project cost as originally planned.	494.44Crores.
9.	Forest Land requirement	
	a. The Status of approval for diversion of forest land for non- forestry use,	The Ministry of Environment & Forest Government of India vides its letter No.3-SKB 007/2010-SHI/1693-94 dated 16 <sup>th</sup> September 2011 Forest Env. & wildlife Management Deptt GOS vide Letter No.1368/FCA/FEWMD 955-57 Dated 24 <sup>th</sup> September 2011

## **Annexure-A**

### **Compliance Status on Environmental Clearance**

Sl.No.	Stipulated Conditions	Compliance Status
<b>Part –A: Specific Conditions</b>		
(i)	Catchment area treatment plans as has been proposed should be completed in 3 years.	We have already deposited the CAT amount of Rs. 63, 48, 000=00 in the CAMPA fund and work will be carried out by the State Forest Department.
(ii)	Five dumping site have been identified for dumping 380858m <sup>3</sup> of excavated material. For retaining the dumped /unused material for subsequent stabilization along the hill slopes and along the stretch of the road sausage-cum-retaining walls shall be developed. These need to be built prior to the dumping of muck at these sites. These walls would range from 70 to 290m length at the proposed dumping site.	Muck dumping is being carried out in approved muck dumping sites. Sausages cum retaining walls have been developed as proposed.
(iii)	It should be ensured that the dumping yards blend with the natural landscape by developing the sites with gentle slopes, bunds, terraced and water ponds, patches of greenery in and around them.	After the completion of the construction work we will convert the dumping sites into natural vegetation parks and recreational center.
(iv)	For maintaining environmental flow in the river two cumec water should be released during lean season.	We will comply with the MoEF norms.
(v)	The scheme of disposal of solid waste should cover the integrated project area including from labour colony during construction Phase. Solid waste from the labour camps shall be collected in beans/Masonry Vats and the same shall be dumped or disposed to nearby municipal landfills/authorized dump sites. No dumping of solid waste is allowed near any water body or a stream to exclude any health hazard problems to the society.	The solid waste is collected in bins and then dumped into the pit which does not fall near any water body or a stream to exclude any health hazard problems to the community. We are in touch with central Govt. organization for converting these solid wastes from the labour camp into Biogas for its useful purpose.
(vi)	Jobs should be provided to atleast 1 member of all the 30 affected families as per their skills.	We have already provided jobs to atleast one member of all the affected families as per their skills and also contract works are being allocated to the affected families and we are further encouraging them to produce organic vegetables and developed poultry farming.

(vii)	Fishery Management Plan as proposed in the EMP should be implemented in totality.	We will implement the Fishery Management plan as proposed in the EMP together with the Fisheries Department, Govt. of Sikkim.
(viii)	The proposed site is about 5 km away from the buffer zone of Khangchendzonga Biosphere reserve as per Supreme court order clearance from NBWL may be obtained (if required).	N.A
(ix)	The Proponent should carry out a study on post construction period during O&M stage in between 3 to 5 years after commissioning of the project to examine the actual environmental impact of the project on its surrounding compare to what was planned initially. The study should be conducted by a reputed institute/consultant.	Between 3 to 5 years after the commissioning of the project we will carry out a study on post construction period during O&M stage to examine the actual environmental impact of the project on its surrounding compared to what was planned initially by a reputed institute/consultant.

#### **Part-B: General Conditions**

Sl.N o.	Stipulated Conditions	Compliance status
(i)	Adequate free fuel arrangement should be made for the labour force engaged in the construction work at project cost so that indiscriminate felling of trees is prevented.	Sufficient free fuel (only LPG) has been provided by the company for labours engaged in the project. As such food is provided to the employees at the Company's mess where LPG is used as fuel.
(ii)	Fuel depot may be opened at the site to provide the fuel (kerosene/wood/LPG). Medical facilities as well as recreational facilities should also be provided to the labourers.	The fuel Depot (LPG) has been established at site. We have employed two nurses and an ambulance has been provided to meet the emergency needs for project employees and also the public residing within the project site. Routine HIV Test programmes and medical camps are also conducted at the site.
(iii)	All the labourers to be engaged for construction works should be thoroughly examined by health personal and adequately treated before issuing them work permit.	Labourers engaged at construction work were examined by MBBS Doctors and treated before issuing the work permit. Regular health checkup is continuing at various sites. HIV Test for all the migrant labourers has also already been conducted and would be conducted in every 6 months by the State AIDS Control Society.
(iv)	Restoration of Construction area including dumping site of excavated materials should be ensured by leveling, filling up of burrow pits, landscaping etc. The area should be properly treated with suitable plantation.	We have been complying with the guidelines that have been drawn and we will also take plantation steps once the dumping yard is filled.

(v)	Financial provision should be made in the total budget of the project for implementation of the above suggested safeguard measures.	Yes, the financial provision for implementation of environmental safeguards has been kept.
(vi)	Six monthly monitoring reports should be submitted to the Ministry and its Regional Office, Shillong for review.	We have been submitting the Six monthly compliance reports to the Ministry and its Regional Office, Shillong for review.
5.	Officials from Regional Office MoEF, Shillong who would be monitoring the implementation of environmental safeguards should be given full Cooperation facilities and documents/Data by the project proponents during their inspection.	We agree to give full cooperation by providing facilities and documents/data during the inspection by the officials from Regional Office MOEF, Shillong.
6.	The responsibility of implementation of environmental safeguards rests fully with the M/s Shiga Energy Pvt.Ltd. & Govt. of Sikkim.	We will strictly comply with all the conditions set for the safeguards of environment with the cooperation of Forest Env. & Wildlife management Department, Government of Sikkim.
7.	The total amount of Rs.466.76 lakh kept in the budgetary provision for implementation of environmental management plan should be strictly adhered and not to be diverted for any other purpose.	We will fully implement the said budget for Environmental Management programme.
8.	In case of change in the scope of the project, project would require a fresh appraisal.	We agree.
9.	The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary and take action including revoking of the clearance under the provision of the Environment (protection) Act,1986 to ensure effective implementation of the safeguard measures in a time bound and satisfactory manner.	We agree.
10.	This clearance letter is valid for a period of 10 years from the date of issue of this for commencement of construction work.	The construction work began since December, 2011.
11.	A copy of the clearance letter will be marked to concerned Panchayat / local NGO, if any .from whom any suggestion / representation has been received while processing the proposal. The Clearance letter shall also be put on the website of the Company by the proponent.	Till date we had not received the suggestion /representation while processing the proposal. The Clearance letter already been uploaded in the company's website.

12.	The project proponent should advertise atleast in two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environment clearance and copies of clearance letter are available with the SPCB and may also be seen at website of MOEF.	We have advertised in two Local Newspaper widely circulated in the region around the Project “Himali Bela” in Nepali and “Sikkim Express” in English and Sikkim Herald classified the Government of Sikkim paper dated;11 <sup>th</sup> August 2010 and 12 <sup>th</sup> August 2010, informing that Project has been accorded environmental clearance. The clearance letter is available with SPCB and at MOEF website.
13.	The project proponent shall also submit Six monthly reports on the status of compliance of the stipulated EC conditions including result of monitored data ( both in Hard copies as well as by e-mail) to the representative Regional office of MoEF, the respective Office of CPCB and the SPCB.	We have been submitting the Six monthly compliance reports to the Regional Office of MoEF, Shillong Office of CPCB and SPCB.
14.	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Authority Act.1997.	We agree.



## **ANNEXURE –B**

### **ENVIRONMENTAL ACTIVITIES**

Napier Grass Plantation drive on land slide prone areas of the Project:





## Muck dumping :

Muck dumping is being carried out in approved muck dumping sites. Sausages cum retaining walls have been developed as proposed.





## ANNEXURE- C

### **CORPORATE SOCIAL RESPONSIBILITY**

#### **Educational tour to project Area**

Shiga Energy Pvt. Ltd organised an educational trip for the students of three schools namely Ramitay Primary School, Lower omlok Primary school and Kaberthang Primary school to the project area. The students of each school were accompanied by one of their teachers.

The tour started from the Barrage area where our site engineer educated these young students about the functioning of a hydro-electric project. The students were also provided with a handy manual so as to provide them with an ease to understand how electricity is produced at a hydro-electric project. The tunnel Managers took the students through a brief understanding on tunnel safety and also how the tunnel excavation takes place. At the Power House, these young minds were explained the final production of electricity and how it is transmitted to different locations.



## **Sponsoring Young Boys Football academy, Gyalshing**

Young Boys Football Academy is a club for the young stars of the future, located at Gyalshing, West Sikkim. This club was set up to help young footballers boys and girls to achieve a better career in football. Their coach cum Manager Mr. Namgyal Bhutia aims towards encouraging fair play and sportsmanship. Emphasis is also laid towards the academics of these young players. They attend school like normal children and are trained during the morning and evening time. Free food and lodging services are provided by the club. With the rigorous efforts of the Coach and the footballers, these young footballers have entered various State and National level football tournaments. This club has given them a platform to display their skills at different levels.

Shiga Energy Pvt. Ltd. on its attempt to help these young and aspiring footballers announced a total sponsorship of Rs.3 lakhs to the Young Boys Football Academy. The first installment was handed over to Mr. Namgyal Bhutia, Coach cum Manager of the Academy. Further the Company following the proper and the dedication of the students attending the Academy and give additional price to the selected players, who gets selected in reputed football Clubs in Sikkim/ India



## **Sponsoring of Sound System to the Kalzang Welfare Association of Tashiding**

The officials of the Shiga Energy Pvt. Ltd handed over the Sound System to the President of Kalzang Welfare Association Tashiding



## **Sponsoring of Computer System to Police Fire Department**

The officials of Shiga Energy Pvt. Ltd handed over the Computer System to the Police Inspector of Police Fire Department, Gyalshing, West Sikkim.



## **FORMATION OF SECURITY/ RESCUE TEAM**

A rescue team of total 42 people was formed where all the candidates are bonafide Sikkim subject holder and also the affected landowners.

### Objective:

1. To protect the assets of the Company.
2. To function as rescue team in the times of emergency.
3. Generate local employment.

The Rescue teams were trained at Fire Station in Kyongsa, Geyzing Under the supervision of the Sikkim Police (Fire Fighting Department).





*ANNEXURE-D*

APR 2013

97 MW TASHIDING HEP  
SIKKIM

MONTHLY PROGRESS REPORT  
(ANNEXURE-D)



SHIGA ENERGY PVT LTD

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## EXECUTIVE SUMMARY

Owner	: Shiga Energy Pvt Ltd
Civil and HM Works Contractor	: Bumi Geo Engineering Ltd
Electro-Mechanical Contractor	: Alstom India Ltd
Design Consultant	: Energy Infratech Pvt. Ltd

Under Ground excavation of HRT-Face -1 of 65.10 m length is completed during the month making total progress of excavation to 615.10m.

Under Ground excavation of HRT-Face -2 of 53.00 m length is completed during the month making total progress of excavation to 425.20m.

Under Ground excavation of HRT-Face -3 of 89.10m length is completed during the month making total progress of excavation to 673.30 m.

Under Ground excavation of HRT-Face -4 of 48.80m length is completed during the month making total progress of excavation to 392.60m.

DT outlet portal surface excavation and slope protection work is under progress.

## 1. PROJECT STATUS

### 1.1 Clearances

SEPL has obtained all **clearances** which are required for construction of the Tashiding HEP.

### 1.2 Financial Closure

The financial closure for the Project was achieved in the month of **July 2011**.

## 2. Infrastructure Works at Project Site

### 2.1 Infrastructure Works

Infrastructure works are completed, the detail of which is given below:

#### i. Land Acquisition :

The total land required for the project has been acquired.

#### ii. Construction of Roads :

The work for construction of access road is completed and regular maintenance is under progress.

#### iii. Construction of Bridge near Adit-1 :

Bridge erection work completed and is operational.

#### iv. Construction of Bridge near Barrage :

Bridge erection work completed and is operational.

#### v. Construction of Magazine house :

Construction of Magazine House is completed.

vi. **Construction Power :**

Transmission line network for Construction power has been charged and is under operation.

vii. **Miscellaneous:**

- Setting up SEPL's administrative and technical office at Project Site has been done.
- Works of labour quarters for the Civil Contractor is completed.

### **3. Progress of Works**

#### **3.1 Head Race Tunnel**

Excavation of all the three Adits is completed.

##### **3.1.1 HRT-Face-1:**

Under Ground excavation of HRT-Face -1 of 65.10 m length is completed during the month, making total progress of excavation to 615.10 m.

##### **3.1.2 HRT-Face-2:**

Under Ground excavation of HRT-Face -2 of 53.00 m length is completed during the month, making total progress of excavation to 425.20 m.

##### **3.1.3 HRT-Face-3:**

Under Ground excavation of HRT-Face -3 of 89.10 m length is completed during the month, making total progress of excavation to 673.30 m.

##### **3.1.4 HRT-Face-4:**

Under Ground excavation of HRT-Face -4 of 48.80 m length is completed during the month, making total progress of excavation to 392.60m.

##### **3.1.5 HRT-Face-5&6:**

Underground excavation of HRT-Face -5 & 6 of 7.50 m length is completed till date.

#### **3.2 Power House area:**

- **Excavation and Slope protection works**

Reinforced cement concrete of pre excavation anchor beam at El. 732.00m is 89% completed. Cladding wall concreting of 95% has been completed from El.732 to El.722m. Surface Excavation work is 63% completed from El.712.00 to El.693.00m and El.722 to El.716.00m. Shotcreting work is 40% completed from El.712.00 towards El.702.00m. SDA fixing work is 35% completed from El.732 to El.722 & from El.712 to El.695.00m.

- **Protection works along river side**

Wire crate fixing work has been completed and Back filling with due compaction has been completed to El 707.00 m.



### **3.3 Intake Site:**

Surface excavation and Portal development of DT-Inlet portal is completed. Underground excavation of 6.0 m length is completed.

360 Cum of surface excavation and 28 cum of shotcrete at DT Outlet was completed during the month.

### **3.4 Surge Shaft :**

Surface preparation for Adit to Surge shaft has been completed.

### **4. Quality Control :**

Quality control Lab truss and sheeting work is completed.

### **5. Electro-mechanical Work :**

The contract for entire Electro Mechanical works was awarded to M/s ALSTOM Projects India Ltd on turnkey basis. Advance payment has been released to Alstom Projects India Ltd as per contract.

M/s ALSTOM Projects India Ltd has submitted the model test report and same has been accepted.

#### **The following drawings/documents have been approved:**

1. Francis turbine Material & Material Equivalence datasheet
  2. Generator Material Equivalence datasheet
  3. Design Memorandum of Grounding System
  4. Inspection & Test Plan Turbine & Accessories
  5. Francis Turbine Draft Tube Elbow & Liner Hydraulic Design
  6. Francis turbine Draft Tube General Arrangement Drawing
  7. Inspection and Testing plan of MIV –Spherical valve and Accessories
  8. Inspection and Test Plan of governing system and OPU
  9. Inspection and Test Plan of Generator package
  10. Painting specification
  11. MIV Spherical Valve material equivalence sheet
- MIV Design Memorandum has been reviewed and our observations have been sent to Alstom.
  - Generator Design Memorandum has been reviewed and our observations have been sent to Alstom.
  - Francis Turbine Design Memorandum has been reviewed and our observations have been sent to Alstom.
  - Inspection and test plan of EOT crane has been reviewed and our observations have been sent to Alstom.
  - GSU Transformer Design Memorandum has been reviewed and our observations have been sent to Alstom.
  - PH Elevator Design Memorandum has been reviewed and our observations have been sent to Alstom.

**Following Material Dispatch Clearance Certificate (MDCC) has been released:**

1. Grounding System (Lot-1).
2. Draft Tube Elbow & Liner for Unit -1 and unit -2.

**Inspection carried out**

1. Draft tube Elbow & Liner (Part 1&2) of Unit 1 & Unit 2.

**Status of E&M equipment at Alstom works:**

1. Basic Design and Detailed design in respect of turbine, generator ,MIV, governing equipment is under progress
2. Draft Tube elbow /liner for unit 1 and Unit 2 and grounding system material (Lot-1) have been manufactured, Inspected and reached project site.
3. Review of manufacturing drawings for Lower Pit Liner, Upstream Sleeve, Spiral Case, Stay Ring, MIV Body, Downstream Sleeve, Upper Bracket sole plate, Generator Stator layout, Generator rotor Layout, Stator Sole plate, Francis Turbine Cross Section General layout, Grounding System Connection details and Generator lower guide bearing are under progress.
4. Design and Engineering of BOP items such as cooling water system ,drainage & dewatering System, 11 KV isolated phase bus duct, EOT crane, Fire-fighting system, Ultrasonic flow-meter, Cable & Cable Trays, Power house elevator, MIV Governing System Operating Sequence, Inspection and test plan of GSU Transformer and Governing system – Governor Panel, 240V AC UPS system, HVAC system is under progress.

**6. Transmission System :**

SEPL has signed the Long Term Access Agreement (LTAA) with Power Grid Corporation of India Limited (PGCIL) on 19th October, 2011 for evacuation of power.

Switchyard and Transmission line works will start at a later stage.

## 7. PROGRESS PHOTOGRAPHS:



View of Face-1



View of HRT-Face-2-Shotcreting is under progress





**View of Face-3: Drilling work is under progress**



**View of Face-4: Lattice Girder erection is under progress**





**DT Outlet Portal: Slope Protection Works in Progress**