

**Minutes of the 73<sup>rd</sup> Meeting of the Expert Appraisal Committee for River Valley and Hydroelectric Projects constituted under the provisions of EIA Notification 2006, held on 26<sup>th</sup> – 27<sup>th</sup> March, 2014 at Van Vigyan Bhawan, R. K. Puram, New Delhi.**

The 73<sup>rd</sup> Meeting of the Expert Appraisal Committee (EAC) for River Valley and Hydropower Projects was held during 26<sup>th</sup> – 27<sup>th</sup> March, 2014 at Van Vigyan Bhawan, R. K. Puram, New Delhi. The meeting was chaired by Shri. Alok Perti, Chairman. Shri P. K. Chaudhuri and Dr. S. Sathya Kumar, Members, EAC could not attend the meeting due to pre-occupation. The list of EAC Members and officials/consultants associated with various projects and who attended the meeting is at **Appendix**.

The following Agenda items were taken-up in that order for discussions:-

**1<sup>st</sup> Day (26.03.2014)**

1. **Agenda Item No.1** : Welcome by Chairman and Confirmation of Minutes of the 72<sup>nd</sup> EAC Meeting held on 20<sup>th</sup> – 21<sup>st</sup> Februray, 2014.

The minutes of the meeting of the 72<sup>nd</sup> EAC Meeting held on 20<sup>th</sup> – 21<sup>st</sup> February, 2014 was already circulated and with the approval of Chairman was uploaded in Ministry's portal. Since no comments was received from the members, this same was confirmed. Thereafter, main agenda items were taken up for discussion.

2. **Agenda Item No.2** : Consideration of Project proposals for Scoping and Environmental Clearance.

The following project proposals were considered:

- Agenda Item No. 2.1**      Naying HEP (1000MW) in West Siang District, Arunachal Pradesh by M/s Naying DSC Power Ltd.- For **Reconsideration of Environment Clearance.**

Naying H.E. Project with the installed capacity of 1000 MW was allotted to D.S. Constructions Ltd. (now DSC Limited) on BOOT basis by Government of Arunachal Pradesh and a Memorandum of Agreement (MoA) in this regard was signed between GoAP and D.S. Constructions Ltd. on 22.2.2006.

Scoping clearance for the project was accorded by MoEF during July 2007, which was extended during March 2012; Public Hearing was conducted during May 2012 and final report submitted to MoEF for appraisal during July 2012.

The Project is located in West Siang district of Arunachal Pradesh envisages utilization of the waters of the river Siyom (a tributary of Siang River) for power generation on a run of river type development harnessing a gross head of about 285 m in a stretch of about 15 km (from FRL to TWL). The project lies upstream of Siang Middle (Siyom) HE Project and downstream of Tato-II HE Project on the same river. The project with a proposed installation of 1000 MW (4x250 MW) would generate annual energy of 4325.50 MU from the project in 90% dependable year with 95% machine availability giving 50.21% load factor after allowing for environmental releases.

The proposed dam site is located at 28°31'10" N 94°30'25" E which is 40 km upstream of Siang Middle dam site and 4 km downstream of village Yapik. The project is located 100 km upstream of Along Town (the District Headquarter of West Siang District).

The Naying HE Project envisages construction of:

- A concrete gravity dam 108 m from river bed with length of 317 m at the top.
- Five spillways 4 nos. of 8 m (W) & 12 m (H) at lower level and 1 no. of 6m x 3.2m at upper level.
- 4 Nos. 10.6m dia. (2 nos. on either bank of river) Circular diversion tunnels, with upstream and downstream coffer dams of concrete faced rockfill type each.
- Well type intake structure, with bellmouth type openings and two nos. 6.5m x 7.5m sized Intake gates.
- Concrete lined single Head Race Tunnel 10.6m dia., 7.08 km long.
- Open to sky 28 m dia. 89.1 m high orifice type surge shaft.
- 4 Nos. 4.5m dia. steel lined, 366 to 388m long pressure shafts.
- 23 m wide, 54.22 m high, 181 m long Power House with 10 m (W), 24.45 m (H) x 105 m (L) MIV cavern and 16.5m wide, 25.5m high, 168.1m long transformer cavern.
- 464.9 m long 11 m wide Tail Race Tunnel.
- Other Hydro-mechanical components.
- 4 nos., 250 MW Generating Units, a pot head yard & switchyard.

The power to be generated from the project has been proposed to be evacuated through 400 kv double circuit lines to a pooling station near Kamki from where the power is to be transmitted to load centers through Power Grid Corporation of India Ltd. (PGCIL) transmission system.

The Gauge & Discharge sites have been established near dam site and power house location and regular observations are being made since September, 2006. Rain Gauge station has been established at Village Yapik. The catchment

area of river Siyom upto the proposed dam site is about 2760 sq.km. The submergence area at full reservoir level is estimated as 175 ha. The water availability studies for the project have been done on the basis of average 10-daily discharge series for Middle Siang H.E. Project for the period 1978-2003. The water availability has been derived on the basis of catchment area proportion and applying an overall reduction factor. The computed inflow series worked out has been utilized for Power Potential studies. The design flood has been assessed as 8270 cumec.

The total land requirement for the construction of various components and submergence in the reservoir is 644 ha including that for underground works and is classified as Un-classified State Forest as well as belonging to 120 PAFs of nine villages. DPR of the project has been accorded TEC by CEA.

The project was appraised by EAC during its 66<sup>th</sup> meeting held on May 3-4, 2013 and certain observations were made. Revised EIA and EMP reports were submitted by project proponent and were discussed in detail in the meeting. Observations such as TOR Compliance, Public Hearing compliance and Nabet accreditation have been included in the revised reports. Muck disposal sites cross sections have also been included in the report as required. After reviewing the reports and presentation made, EAC made following observations:

- Siang basin study is now available on CWC and MoEF website and EAC is also looking in to the report. The study has recommended that Naying HEP should lower the FRL to ensure 1 Km of free flowing river stretch between Naying HEP's FRL and upstream Tato II HEPs TWL. Developer claimed that initially there was about 1 Km of free flowing river stretch between Tato II TWL and Naying FRL, however, state government allowed the promoter of Tato II to lower the TWL and utilize the free flowing stretch. Therefore, instead of asking Naying to reduce the FRL, Tato II should be asked to change the TWL to the originally allotted level. EAC observed that as this is one of the recommendations in the basin study and a minimum 1 Km of free flowing stretch is essential between projects in cascade, the developer should implement the recommendation. It further observed that on finalization of the review of the basin study, MoEF will write to state government and CEA so that all the recommendations are implemented comprehensively. Till such time developer can sort out the matter with state government.
- Regarding the environment flow; in the 66<sup>th</sup> meeting EAC recommended that current norms should be considered i.e. 20% of average discharge in four leanest months in 90% dependable year for lean season discharge; 20-30% of inflows to be released in non-monsoon and non-lean months corresponding to 90% dependable year. The cumulative environmental flow release including spillage during the monsoon period should be about 30% of the cumulative inflows during the

monsoon period corresponding to 90% dependable year. Siang basin study has recommended on the basis of 90% dependable year discharge environment flow release should be calculated as 20% of average flow in lean season; 20% of average flow in monsoon and 20% of average flow in other months. Developer has not implemented these recommendations and EAC has asked to incorporate flow release recommendations in the power potential study as it may entail change in installed capacity.

- Regarding the micro-earthquake survey, the developer has responded that studies for site specific design parameters has been got done from Earthquake Engineering Department of IIT, Roorkee as per the latest guidelines and the report has been received and is submitted to National Committee on Seismic Design Parameters (NCSDP). The NCSDP has not desired any micro seismic study, however, if EAC considers it necessary and appropriate and such studies can be conducted after the clearance. EAC observed that as NCSDP has not desired such studies, such condition is not necessary.
- CSR activities have been listed in the revised report and a budget of Rs. 20 crore has been proposed. EAC suggested that these activities should be implemented as social development schemes and should not be clubbed with the mandatory provision under the Companies Bill 2012.

EAC concluded that on compliance of the above observations by the project proponent , the project will be reviewed and reconsidered again for environment clearance.

**Agenda Item No.2.2                      Lower Tapi Project, Village-Padalse, Taluka-Amalner, District- Jalgaon, Maharashtra by M/s Tapi Irrigation Development Corporation.- For Reconsideration of Environment Clearance.**

Proponent was absent owing to election duty. Therefore, this item was not considered by the EAC.

**Agenda Item No.2.3                      Magochu Hydro Electric Project (96 MW) Arunachal Pradesh in Distt Tawang- For Extension of Validity of ToR.**

The Mago Chu H E Project (96 MW) envisages run of the river on Mago Chu, a tributary of Tawang Chu in the Brahmaputra basin located in Tawang district

of Arunachal Pradesh. Mago Chu originates at about 6500 m elevation and flows for 48 Km and joins Nyukcharong Chu to form the Tawang Chu. New Melling HEP is the upper most project being developed and Mago Chu is the downstream project on Mago Chu. The Mago Chu HEP envisages utilization of 187.75 m rated head for the power generation with an installed capacity of 96 MW. The coordinates of barrage location are 27° 37' 42.3" N and 92° 02' 32.7" E. the catchment area up to the proposed diversion structure is 830 Sq.Km. majority of the catchment is snow bound and the project location is above 2450m and receives snow fall occasionally during winter. The full reservoir level is 2472.00m and the normal tail water level is 2272.32m. The project involves construction of 20.5 m high barrage intake structure and surface de-silting chambers, head race tunnel of 2773m long and 4.8m diameter, modified horse shoe shape. Surge shaft of 85m high 7.0m diameter followed with pressure shaft of 3.7m diameter and underground power house of 87m x 19m x 38.5m. Finally the water is released in to the Mago Chu through the Tail race Tunnel of 5.5m diameter. The total land requirement for the project has been estimated as 33.24 ha.

With regard to requirement of longer time in preparing EIA/EMP, the Project proponent submitted the following:

- Ministry of Environment & forests (MOEF) had accorded the TOR for detailed EIA study and pre construction clearance vide letter No. J-12011 / 46/ 2009-IA-I dated 23.02.2010. Subsequently, field investigations, data collection and surveys were carried out for formulation of DPR and EIA / EMP reports. The DPR has since been submitted to Central Electricity Authority for appraisal and Techno economic Clearance after approval of the Hydrology by CWC, Power Potential studies etc. The appraisal of CEA is in advanced stage and compliance for the comments from CEA / CWC are being attended to.
- Primary and secondary data for the preparation of the EIA report has been collected by 2010 and the flora fauna data and river water quality data has been reaffirmed with fresh data collected in September, 2012. Socio Economic survey was conducted public consultation was conducted by Assistant Deputy Commissioner, Jung, during September, 2013 on the request of SEW i.e. the project proponent.
- After finalization of the location of the project components, the Land Acquisition proposals were submitted to Deputy Commissioner, Tawang and Commissioner Land Management, Government of Arunachal Pradesh had issued preliminary notification for the Acquisition of Land. This process had taken more than 15 months (Sept.2012 to Jan., 2014). Simultaneously, proposal for the diversion of Forest land has been submitted to Government of Arunachal Pradesh. Request has been made to Arunachal Pradesh State

Pollution Control Board along with the draft EIA /EMP reports for conducting Public Hearing. It was explained that as the General Elections are announced, more time is required for conducting the Public Hearing and there by compilation of the Final EIA / EMP reports would get delayed further. That is why, the Project proponent requested for extension of validity of the TOR for one more year beyond February 2014.

The project proponent also informed that tough terrain conditions at site, problems in crossing Sella Pass to reach the site from Guwahati and occasional snow fall at site during winter etc., had delayed data collection and DPR preparation. Because, preparation of EIA/EMP goes simultaneously with DPR preparation.

The EAC, after a lot of deliberations, expressed the view that delay in preparing the EIA/EMP is on account of tough, inaccessible and hostile site conditions. This has primarily led to delayed submission of draft report to APPCB in January, 2014 only. Ensuing General Election is also compounded the problem as public hearing by APPCB will get further delayed. Therefore, 4 years time may not be adequate to submit the final EIA/EMP report to MoEF. On these considerations, the EAC recommended extension of validity of the TOR for a period of one year w.e.f 23.02.2014 to 22.2.2015. EAC also directed the project proponent to ensure that primary data used are not older than three years and if need be, EIA/EMP is to be revised before holding public hearing to that extent. This is to be certified in the EIA/EMP suitably. EAC also noted that Dam structure has been changed to barrage type which is environmentally friendly and will cause less submergence of area.

**Agenda Item No.2.4                      Nyukcharong Chu Hydro Electric Project (96 MW),  
Arunachal Pradesh- For Extension of Validity of  
ToR.**

The Nyukcharong Chu H E Project (96 MW) envisages run of the river on Nyukcharong Chu, a tributary of Tawang Chu in the Brahmaputra basin located in Tawang district of Arunachal Pradesh. Nyukcharong Chu originates at about 6500 m elevation in Tibet and flows for 92 Km and joins Mago Chu to form the Tawang Chu. Three upstream projects are being developed by other developer. The Nyukcharong Chu HEP is the last project on the stream and envisages utilization of 191.12m rated head for the power generation with an installed capacity of 96 MW. The coordinates of barrage location are 27<sup>o</sup> 38' 21.3" N and 92<sup>o</sup> 00' 20.9" E. the catchment area up to the proposed diversion structure is 2040 Sq.Km. majority of the catchment is snow bound and lies in Tibet / China Boundary. The project location is above 2450m and receives snow fall occasionally during winter. The full reservoir level is 2470.00m and the normal tail water level is 2270.87m. The project

involves construction of 22 m high barrage intake structure and underground de-silting chambers, head race tunnel of 1271m long and 4.8m diameter, modified horse shoe shape. Surge shaft of 62m high 7.0m diameter followed with pressure shaft of 3.7m diameter and underground power house of 87m x 19m x 38.5m. Finally the water is released through the Tail race Tunnel of 5.5m diameter. The total land requirement for the project has been estimated as 36.52 ha.

With regard to requirement of longer time in preparing EIA/EMP, the Project proponent submitted the following:

- Ministry of Environment & forests (MOEF) had accorded the TOR for detailed EIA study and pre construction clearance vide letter No. J-12011/45/2009-IA-I dated 23.02.2010. Subsequently, field investigations, data collection and surveys were carried out for formulation of DPR and EIA / EMP reports. The DPR has since been submitted to Central Electricity Authority for appraisal and Techno economic Clearance after approval of the Hydrology by CWC, Power Potential studies etc. The appraisal of CEA is in advanced stage and compliance for the comments from CEA / CWC are being attended to.
- Primary and secondary data for the preparation of the EIA report has been collected by 2010 and the flora fauna data and river water quality data has been reaffirmed with fresh data collected in September, 2012. Socio Economic survey was conducted public consultation was conducted by Assistant Deputy Commissioner, Jung, during September, 2013 on the request of SEW i.e. the project proponent.
- After finalization of the location of the project components, the Land Acquisition proposals were submitted to Deputy Commissioner, Tawang and Commissioner Land Management, Government of Arunachal Pradesh had issued preliminary notification for the Acquisition of Land. This process had taken more than 15 months (Sept.2012 to Jan., 2014). Simultaneously, proposal for the diversion of Forest land has been submitted to Government of Arunachal Pradesh. Request has been made to Arunachal Pradesh State Pollution Control Board along with the draft EIA /EMP reports for conducting Public Hearing. It was explained that as the General Elections are announced, more time is required for conducting the Public Hearing and there by compilation of the Final EIA / EMP reports would get delayed further. That is why, the Project proponent requested for extension of validity of the TOR for one more year beyond February 2014.

The project proponent also informed that the tough terrain conditions at site, problems in crossing Sella Pass to reach the site from Guwahati and occasional snow fall at site during winter etc., had delayed data collection and DPR

preparation. Because, preparation of EIA/EMP goes simultaneously with DPR preparation.

The EAC, after a lot of deliberations, expressed the view that delay in preparing the EIA/EMP is on account of tough, inaccessible and hostile site conditions. This has primarily led to delayed submission of draft report to APPCB in January, 2014 only. Ensuing General Election is also compounded the problem as public hearing by APPCB will get further delayed. Therefore, 4 years time may not be adequate to submit the final EIA/EMP report to MoEF. On these considerations, the EAC recommended extension of validity of the TOR for a period of one year w.e.f 23.02.2014 to 22.2.2015. EAC also directed the project proponent to ensure that primary data used are not older than three years and if need be, EIA/EMP is to be revised before holding public hearing to that extent. This is to be certified in the EIA/EMP suitably. EAC also noted that Dam structure has been changed to barrage type which is environmentally friendly and will cause less submergence of area.

**Agenda Item No.2.5                      New Melling Hydro Electric Project (96 MW)  
Arunachal Pradesh Distt. Tawang- For Extension  
of Validity of ToR.**

New Melling H E Project (90 MW) envisages run of the river on Mago Chu, a tributary of Tawang Chu in the Brahmaputra basin located in Tawang district of Arunachal Pradesh. Mago Chu originates at about 6500 m elevation and flows for 48 Km and joins Nyukcharong Chu to form the Tawang Chu. New Melling HEP is the upper most project being developed and Mago Chu is the downstream project on Mago Chu. The New MellingHEP envisages utilization of 211.65m rated head for the power generation with an installed capacity of 90 MW. The coordinates of barrage location are 27<sup>0</sup> 39' 0.39" N and 92<sup>0</sup> 04' 55.02" E. the catchment area up to the proposed diversion structure is 805 Sq.Km. majority of the catchment is snow bound and the project location is above 2700 m and receives snow fall occasionally during winter. The full reservoir level is 2730.00m and the normal tail water level is 2508 m. The project involves construction of 22 m high barrage intake structure and surface de-silting chambers, head race tunnel of 3128 m long and 4.5m diameter of modified horse shoe shape. Surge shaft of 50m high 6.5m diameter followed with pressure shaft of 3.4m diameter and underground power house of 87m x 19m x 38.5m. Finally the water is released in to the Mago Chu through the Tail race Tunnel of 5.0m diameter. The total land requirement for the project has been estimated as 29.34 ha.

With regard to requirement of longer time in preparing EIA/EMP, the Project proponent submitted the following:

- Ministry of Environment & forests (MOEF) had accorded the TOR for detailed EIA study and accorded pre construction clearance vide letter No. J-12011/44/2009- IA-I dated 23.02.2010. Subsequently, field investigations and surveys were carried out for compilation of DPR and EIA / EMP reports. Power Potential studies submitted to CEA during January, 2014 and Installed Capacity of 90 MW was approved during January, 2014. Due to reduction in the Installed capacity from 96 to 90 MW and change in the type of diversion structure, the reservoir storage capacity, spread has reduced and the reservoir almost confined within banks. Hydrology including flow series, flood values and Glacial Lake Outburst Flood Value (GLOF) has been approved by competent authorities. Site specific seismic parameters study has been carried out by IIT Roorkee. Documents for the Pre consultation for accepting the DPR has been submitted to Central Electricity Authority for appraisal as per the present norms of CEA.
- Primary and secondary data for the compilation of the EIA report has been collected by 2010 and the flora fauna data and river water quality data has been reaffirmed with fresh data collected in September, 2012. Socio Economic survey was conducted and Pre informed community consultation was conducted by Assistant Deputy Commissioner, Jung, during September, 2013 on the request of SEW.

After finalization of the location of the project components, the Land Acquisition proposals were submitted to Deputy Commissioner, Tawang, Government of Arunachal Pradesh. Simultaneously proposal for the diversion of Forest land has been submitted to Government of Arunachal Pradesh. Request has been submitted to Arunachal Pradesh State Pollution Control Board submitting the draft EIA /EMP reports for conducting Public Hearing. It was explained that the General Elections have been announced, more time is required for conducting the Public Hearing and there by compilation of the Final EIA / EMP reports and approaching MOEF for the Environmental clearance. The Project proponent requested for extension of validity of the TOR for one more year beyond February 2014.

It was informed that barrage axis was shifted to around 400 m upstream of the original site due to geological considerations which necessitated barrage type structure in place of Dam. EAC was informed that the PP has accordingly surveyed the modified project area and collected data.

The project proponent also informed that the tough terrain conditions at site, problems in crossing Sella Pass to reach the site from Guwahati and occasional snow fall at site during winter etc., had delayed data collection and DPR preparation. Because, preparation of EIA/EMP goes simultaneously with DPR preparation.

The EAC, after a lot of deliberations, expressed the view that delay in preparing the EIA/EMP is on account of tough, inaccessible and hostile site conditions. This has primarily led to delayed submission of draft report to APPCB in January, 2014 only. Ensuing General Election is also compounded the problem as public hearing by APPCB will get further delayed. Therefore, 4 years time may not be adequate to submit the final EIA/EMP report to MoEF. On these considerations, the EAC recommended extension of validity of the TOR for a period of one year w.e.f 23.02.2014 to 22.2.2015. EAC also directed the project proponent to ensure that primary data used are not older than three years and if need be, EIA/EMP is to be revised before holding public hearing to that extent. This is to be certified in the EIA/EMP suitably. EAC also noted that Dam structure has been changed to barrage type which is environmentally friendly and will cause less submergence of area.

**Agenda Item No.2.6                      Dibang Multipurpose Project in Arunachal Pradesh by NHPC – For reconsideration of Environment Clearance.**

Dibang Multipurpose Project (3000 MW) is proposed on River Dibang in Arunachal Pradesh. The project has been conceived with dual objectives. Primary objective is flood moderation while secondary objective is electricity generation. The project involves two Districts of Arunachal Pradesh viz. Lower Dibang Valley and Dibang Valley Districts. All the project components are located in Lower Dibang Valley District while reservoir will fall in both the Districts. Power house has been proposed on right bank, 250 m downstream of the dam axis. The key features of the project are as under:

Location of Dam Site	1.5 km upstream of confluence of Ashu Pani with Dibang at Muni village
Catchment area	11276 sq km
PMF	26230 cumecs
Full reservoir level	EL 545 m
Area under submergence	40.09 km <sup>2</sup>
Diversion tunnel	3 Nos., 12 m dia., horseshoe shaped
Dam	288 m high concrete gravity dam
Head Race Tunnel	6 Nos., 9 m dia., horseshoe shaped
Pressure Shaft	6 Nos., 7.5 m dia., circular
Power House	Underground / 3000 MW
Tail Race Tunnel	6 Nos., 9 m dia., horseshoe shaped
Annual Energy Generation	11330 MU
Project cost	Rs. 15886.39 crores (at Nov. 2007 PL)
Construction period	9 years from CCEA approval

Concurrence of CEA was obtained on 23.01.2008. PIB Clearance was obtained on 28.01.2008.

The NHPC explained the following:

- The project was accorded Site Clearance Stage I & Stage II in January 2004 and December 2004, respectively as per EIA Notification, 1994. Accordingly, the EIA study was undertaken and EIA & EMP reports prepared. Further, NHPC submitted the application along with EIA & EMP reports to Arunachal Pradesh State Pollution Control Board (APSPCB) for initiating Public Hearing in February 2007. Public hearing for Lower Dibang Valley District only was held on 29.01.2008, after its postponement for several times, and the same for another district i.e. Dibang Valley District, could not be conducted due to public agitation.
- Environmental clearance proposal was submitted by NHPC along with EIA & EMP reports and public hearing report of One District (i.e. Lower Dibang Valley District) to MoEF on 26.12.2008 for accord of environmental clearance. Subsequently, MoEF vide letter dated 30.01.2009, intimated that extension of time for submission of project proposal under EIA Notification, 1994 has expired on 13.09.2008. Hence, the proposal for Environmental Clearance needs to be submitted as per the provision of revised EIA Notification, 2006. Accordingly, NHPC submitted proposal to MoEF on 27.05.2009 to MoEF for approval of TOR as per EIA Notification 2006. MoEF accorded clearance for pre-construction activities and approved the TOR for EIA study on 17.08.2009. The EIA & EMP reports, prepared earlier, were revised by NHPC as per the approved TOR and submitted to Arunachal Pradesh State Pollution Control Board (APSPCB) for initiating the fresh public hearing process in both the districts (i.e. Lower Dibang Valley and Dibang Valley) on 26.08.2010 and also submitted the above documents to MoEF on 03.09.2010 for initiating the process of public consultation. APSPCB tried to conduct the public hearings in October 2011, but the same was again postponed due to adverse law and order condition.
- NHPC, then pursued the matter with State Government, MoP and MoEF for conducting the public hearings through APSPCB. Finally, APSPCB successfully conducted the public hearings for Lower Dibang Valley on 11.03.2013 at Roing and for Dibang Valley District on 13.03.2013 at New Anaya. In both meetings, large number of people participated. EIA & EMP reports along with proceedings of

public hearings were submitted to MoEF on 27.05.2013 for consideration and accord of environmental clearance.

➤ **Concerns Raised During Public Hearings**

It was explained that in general, the people were satisfied with the EIA and EMP reports and proposed R&R plan and community and social development plan. R&R plan has been formulated in line with the State R&R Policy, 2008. They took keen interest in knowing the R&R package and community and social development (CSD) plan. However, during public consultation prior to public hearing and during public hearings of Dibang Multipurpose Project, in addition to community and social development plan more infrastructural development in both Lower Dibang Valley and Dibang Valley Districts were sought viz., up gradation of District Hospitals in both districts, financial assistance for schools, colleges and polytechnic, and construction of cultural museum at Roing and ITI at Anini etc. Besides this for downstream people, the main concern was protection of downstream area in case of dam break / high flood. Keeping this in view, a lump sum provision of Rs. 17100 lakhs has been proposed for consideration of MoEF for mitigative measures at downstream and other infrastructural facilities as raised during public hearings in addition to R&R and CSD plan.

During the EAC presentation, the project proponents gave a detailed response to the issues raised during the 68<sup>th</sup> meeting.

- A detailed fisheries survey was conducted by Centre for Inter-Disciplinary Studies for Mountain and Hill Environment (CISMHE), Delhi University in the month of December 2013.
- A detailed floral and faunal survey was conducted in submergence area, around dam axis, around power house site, around quarry and dumping sites, around proposed colony and labour camp area, and in surrounding area of different tributaries by Centre for Inter-Disciplinary Studies for Mountain and Hill Environment (CISMHE), Delhi University in the month of December 2013. Phyto-sociological studies were also conducted at various locations.
- As suggested by EAC, floral / faunal survey was also covered the backwater/submergence area viz. –
  - ✓ Upstream site 1 (Munli Camp, right bank of Dibang river,
  - ✓ Upstream site 2 (near Ithun bridge, left bank of Ithun river
  - ✓ Upstream site 3 (Tail end of reservoir near Etalin)

- The EAC was apprised that in compliance to minutes of 68<sup>th</sup> EAC meeting and MoEF's letter dated 25.11.2013, the State Forest Department vide letter dated 13.02.2014 has forwarded the forest proposal with reduced forest land requirement, to MoEF with recommendation of 10 m reduction in dam height. This has led to reduction of forest land requirement from 5022.84 ha to 4577.84 ha, i.e. causing a reduction of about 8.86 %.
- As a result of reduction in dam height by 10 m, the Installed Capacity has reduced from 3000 MW to 2880 MW (i.e. by 4%) and the Annual Energy Generation has reduced from 11330 MU to 10767 MU (i.e. by 5%).
- A Revised Environmental Management Plan with enhanced cost estimate of various plans/components has been formulated and submitted as a separate Document. The cost of EMP has been increased from Rs. 547.16 crore to Rs. 639.42 crore. Besides this, there is a provision of Rs. 395.81 crore for NPV and Rs. 147.74 crore for compensatory afforestation. A comparison of earlier and revised EMP cost is given as under:

S. No.	EMP Component	Cost in Previous EMP Report (Rs. lakhs)	Cost in Revised EMP Report (Rs. lakhs)
1	Catchment Area Treatment	1039.34	1785.10
2	Biodiversity Conservation & Management Plan	368.18	2395.71
3	Fish Management	143.18	648.24
4	Green Belt Development	102.27	200.00
5	Geo-environmental Management Plan	965.19	2312.63
6	Muck Disposal Plan	272.30	648.40
7	Restoration Plan for Quarry Areas	116.33	189.62
8	Landscaping & Restoration of Construction Area	172.58	877.76
9	Public Health Delivery System	273.58	1021.34
10	Solid Waste Management & Sanitation Facilities	236.50	554.78
11	Energy Conservation Management Plan	51.14	170.00
12 (a)	Resettlement & Rehabilitation Plan	7673.60	7907.05
12 (b)	Compensation of Land and Rights & Privileges	21369.58	19773.07*
13 (a)	Community and Social Development	4500.00	7000.00
13 (b)	Concerns raised during public hearings	17100	17100.00
14	Plan for Protection of Cultural Identity	Nil	327.03
15	Maintenance of Air, Water and Noise Quality	30.68	35.00
16	Disaster Management Plan	325.99	590.00

S. No.	EMP Component	Cost in Previous EMP Report (Rs. lakhs)	Cost in Revised EMP Report (Rs. lakhs)
17	Environmental Monitoring Programme	99.72	406.37
	<b>Total</b>	<b>Rs.54716.09 lakh, say Rs. 547.16 crore</b>	<b>Rs.63942.10 lakh, say Rs. 639.42 crore</b>

\* Land requirement reduced due to 10 m reduction in dam height.

- The plan for conservation of cultural identity of tribal community to be implemented during construction and post commissioning phases of the project is enclosed as Chapter-16 of the Revised EMP report.
- A study was undertaken to work out depth of river water on account of release of Environmental Flows in the diverted portion of about 1.2 km i.e. between dam and TRTs of Power House. Three alternate environmental flow i.e. 15 cumecs, 20 cumecs and 25 cumecs have been considered with four scenarios viz., no contribution of Ashupani & no backflow, contribution of Ashupani & backflow, contribution of Ashupani but no contribution from backflow, and contribution of Backflow but no contribution from Ashupani. The study has shown that with the release of discharge of 15 cumecs from dam, a depth of 0.78 m to 1.38 m is available downstream of plunge pool of dam with no contribution of Ashu Pani and no contribution from backflow. The Ashupani will contribute an average of about 1.55 cumec of water. Thus, the depth available in the stretch between plunge pool of dam and TRT outlet, by releasing the environmental flow of 15 cumecs from dam, is appropriate and meet the depth required by fish population. Moreover, at least one turbine out of 12 turbines shall be operated 24 hours in full / part load throughout the year, which will provide the sufficient discharge downstream of TRT outlet with adequate depth and velocity. EAC has agreed for release of 15 cumecs of water from dam and operation of at least one unit for 24 hours throughout the year as cited above.
- Water quality was monitored at various locations in the month of December 2013. In this study, value of Total alkalinity and Chlorides ranged from 38 to 46 mg/l and 10 to 14 mg/l, respectively
- As per the primary survey conducted in the month of December 2013 and on the basis of secondary sources, an inventory of fish species of Dibang river has been prepared. As per this inventory, a total of 80 fish species belonging to 22 families are found in Dibang river in its entire stretch. However, as per the survey conducted in December 2013, a total of 35 fish species belonging to 11 families are reported from the influence area (study area) of the project.
- Nizam Ghat, located about 14 km from the dam site, is the main fish landing centre in influence area of Dibang Multipurpose Project. Therefore, presence of warm water fishes along with cold water fishes during winter/post monsoon season has been reported.

*Schizothorax* sp. is also endemic to the Eastern Himalayas. However, presence of *Tor* spp. was viewed from upstream migration from the rivers of plains of Assam and Bengal.

- The seasonal variation also shows continuous presence of endemic Chocolate Mahseer and *Schizothorax* spp. in the project site and upstream area and during winters in the d/s area till the zone of heterogenous habitat with hill stream substrate conditions.
- The predominant species of lower fringe of influence area are *Labeo gonius*, *L. pangusia*, *Tor putitora*, *Tor*, *Sperata seenghala*, *Chanda nama*, *Chanda ranga*, *Badis assamensis* etc.
- In the upper fringe *Schizothorax richardsonii*, *Schizothoraichthys progastus*, *Barilius barila*, *Garra* spp. *Neolissocheilus hexagonolepis* are common and abundant species.
- Indian major carp *Semiplotus semiplotus* and *Cirrhinus mrigala* have been checked in the catch as well as during primary survey in the river stretch downstream of dam site. However, it has not been observed near proposed dam site and upstream dam site area.
- Based on the findings of during the field studies conducted in December 2013, it is confirmed that fish species *Oreochromis mossambicus*, is not recorded.
- *Tor putitora*, *Tor tor* and *Neolissocheilus hexagonolepis* are considered to be migratory species. These species especially *Tor tor* and *Tor putitora* inhabit lower reaches or foothills in Himalayan rivers and take their upstream migration during March and April. They spawn in small tributaries having relatively high temperature from June to September when rivers swell greatly and have high turbidity. After spawning *Tor* spp. starts to descend during September and October. During the primary surveys these species could not be located at fish landing centre and in the tributaries of Dibang basin. However, local fishermen revealed the presence of these species, which are known as Jungapithia in the area.
- *Schizothorax* spp. Is also a local migratory species, though they are found in Dibang river throughout the year. In winter season, these species migrate from upper reaches to lower reaches and ascends in the months of May-June.
- During field studies fingerlings and juveniles of *Schizothorax* spp. were observed in tributaries like Emra, Airi Pani and Ashu Pani.
- As suggested by EAC, stocking of exotic fishes will not be done.
- Two different types of hatcheries shall be setup for restoration and conservation of riverine ecology and lake environment-reservoir area. It is also proposed that while setting up different hatcheries, premier institutes

viz. Central Inland Fisheries Research Institute, Barrackpore, Kolkata, to be consulted for preparation of layout plan of the hatcheries and its execution.

During the presentation, point-wise replies to the issues raised by Shri Chow Rajib Gogoi, Secretary, All Tai Ahom Student Union, Jorhat and Shri Pushp Jain, Director, EIA Resource And Response Centre (ERC), New Delhi were also given and the following points were clarified:

- In order to compensate the loss of forest, Compensatory Afforestation (CA) over twice in extent of area of forest land diverted on degraded forest land shall be undertaken. Further, other afforestation schemes viz., catchment area treatment, biodiversity conservation, green belt development etc. shall also be undertaken. Implementation of CA shall be started from the beginning of the construction, so that by the time the cutting of trees from reservoir area is carried out, the Compensatory Area plantations will make up the loss. Moreover, for loss of economic value forest goods and services, NPV shall be paid as applicable. Further, as per EIA/EMP, no endangered or threatened floral species are coming under submergence. In Arunachal Pradesh, about 80% area is under forest. The project is also not involving any part of national park / wildlife sanctuary.
- To address the concern raised during Public Hearing a plan has been prepared amounting to Rs. 171 crores for infrastructure works and protection works in downstream areas. Moreover, the project would bring in all round development in the project area and the State.
- Subsequent to FAC recommendation, MoEF had desired review of forest land requirement by NHPC. The same has been carried out and the State Govt. has forwarded the revised forest proposal to MoEF with recommendation of reduction in dam height by 10 m dam thereby reducing the forest area requirement for the project by 445 ha. The installed capacity has been reduced to 2880 MW. The revised land requirement for Dibang Project is 5349.14 ha out of which 4577.84 ha is Unclassified State Forest
- Downstream areas and Assam has to face the devastation every year caused by the flood of Brahmaputra River. Dibang project is on Dibang river which is a tributary of Brahmaputra river. Even after reducing the dam height by 10 m, the provision of the flood moderation i.e. about 1260 Mcum has been maintained. This is of extreme importance for saving the human, animal and plant life as well as property in the downstream of project in Arunachal Further, due to the construction of Dibang Multipurpose Project there would be an overall socio-economic development of the area.

During the presentation, point-wise replies to the issues raised by Shri Pushp Jain, Director, EIA Resource And Response Centre (ERC) Shri Chow Rajib Gogoi,

Secretary, All Tai Ahom Student Union, Jorhat were given and the following points were clarified:

- Subsequent to FAC recommendation, MoEF had desired review of forest land requirement by NHPC. The same has been worked out with reduction in dam height by 10 m thereby reducing the forest area requirement for the project by 445 ha. The installed capacity has been reduced to 2880 MW. The revised land requirement for Dibang Project is 5349.14 ha out of which 4577.84 ha is Unclassified State Forest
- The capacity of project became 2880 MW and annual energy generation will be 10767 MU. The forest land required for the project is 4577.84 ha including 1177.00 ha in the river bed. Thus, effective requirement of forest land shall be 3400.84 ha for the project.
- The proposed reservoir is confined to the river gorge. Animals like Mishmi Takin, Serow, Snow Leopard and Himalayan Black Bear are found at higher altitudes in the catchment and as such no major impact is anticipated on these animals due to the project. Further, mitigation measures such as installation of check posts with adequate communication equipment to prevent poaching and a set of other measures have been proposed in the Biodiversity Conservation and Management Plan for the protection of the fauna.
- There are two "Important Bird Area" in Dibang basin namely Dibang Reserve Forest and Dibang Wildlife Sanctuary which are located about more than 10 km (aerial distance) from the project components, thus, do not come under the impacted zone. For conservation of avi-fauna, installation of artificial nest boxes in the influence zone and catchment area of the project is proposed in biodiversity conservation and management plan.
- The project area lies in Seismic Zone V (as per Seismic Zoning Map of India IS:1893, Part-I-2002), but Dam would be designed as per best national / international practices using best available analytical techniques and knowledge. Latest techniques will be used for construction and quality as per the national / international code of practices. The health of the dam will be continuously monitored for its safety and early warning by various state-of-the-art instruments.
- State Forest Deptt. has identified degraded forest land for compensatory afforestation and the same shall be undertaken by the State Forest Deptt. as per the norms of MoEF.
- In order to moderate the flood in the downstream area, a regulated release of 3000 cumecs has been proposed in Dibang Project keeping a dedicated Flood cushion (about 1260 Mm<sup>3</sup>) for the entire monsoon period maintaining the reservoir at a lower level from the full reservoir level (FRL) i.e. El 530.3 m. Therefore, the development of Dibang Project is of extreme importance

for saving the human, animal and plant life as well as property in Assam and Arunachal Pradesh.

- The State Govt. has successfully conducted the Public Hearings of the project in March 2013, wherein local people expressed their views in support of the project. Locals are anticipating early start of the project. Start of construction activities at the project shall open up opportunities for indirect / direct employment and other business activities. The project would provide trainings and scholarships to the youth. It has been planned to generate various schemes for economic sustenance of local people for their livelihood.
- Further to address the concern raised during Public Hearing a plan has been prepared amounting to Rs. 171 crores for infrastructure works and protection works in downstream areas. Moreover, the project would bring in all round development in the project area and the State.

After critically examining the reply to various responses by the project proponents, EAC observed the following:

- The cost of private land in R&R plan to be revised in line with "The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation & Resettlement Act, 2013".
- Impact of peaking operation of Dibang Project on Dibru-Saikhova National Park to be assessed.
- A representation has been received by MoEF from an NGO Kalpvriksh. A copy of the same was handed over to NHPC and was asked to give a point-wise reply to the same.
- In the 1.2 km diverted stretch, a quantum of 15 cumec water towards maintaining E-flow may be released.

On receipt of response to the above observations / comments and reply to the representation received, the proposal may be reconsidered by the EAC.

**Agenda Item No.2.7                      Hutong –II (Original 1250 MW – now revised to 1200 MW) H.E Project in District Anjaw of Arunachal Pradesh by M/s Mountain Fall India Pvt. Ltd.- For Re-consideration of ToR.**

Hutong-II Hydroelectric Project located in Anjaw district of Arunachal Pradesh, envisages utilization of waters of the river Lohit (a major tributary of Brahmaputra River) for power generation. The project is one amongst a series of hydro projects those have been planned for development in cascade on the Lohit River.

The Hutong II HEP was allotted to Mountain Fall India Pvt. Ltd. (MFIPL) for development on BOOT basis & Memorandum of Agreement was signed between GoAP & MFIPL accordingly on 23.11.2006. Hutong II HE Project was conceived as a RoR scheme with an installed capacity of 1250 MW. The ToR approval for EIA & EMP study report was accordingly granted by MoEF vide its letter no. J-12011/47/2007-IA.1 dated 07.08.2007 and extended till May 31, 2012. The DPR of the project having FRL 714.5m, MDDL 710.88m and TWL 596m (normal) was submitted to CEA for according TEC on 27.12.2011 and at that time capacity was revised to 1200 MW; based on final power potential as per approved CWC flow series. Three season baseline surveys were completed, however, socio-economic survey of project-affected families could not be completed due to local resistance.

In the meanwhile, Ministry of Power constituted a Standing Technical Committee (STC) to go into the reasons for conversion of storage schemes to RoR schemes for those hydroelectric power projects which were earmarked as storage projects under Govt of India's 50000 MW initiative. Since Hutong II (RoR) formed part of the combined Hutong Storage Scheme identified by MOP, the STC desired that Hutong II project should either be explored as storage project. Since it was not possible to take up Hutong II HEP as a storage scheme within the allotted level regime, STC decided that the project should be implemented as Run-of-the-River scheme with increased pondage by raising the FRL from 714.5 m to 760 m by keeping MDDL at 710 m to create a live storage of 278 MCM to serve flood moderation purpose also.

Keeping in view the directions given by STC, the developer prepared revised PFR of Project (as ROR with pondage for flood moderation) and submitted to GoAP on 21.09.2012 and also submitted application for revised scoping for the new scheme to MoEF.

The matter was discussed and EAC observed that project cost including IDC at 2011 level has gone up by Rs. 3676 crore due to conversion of RoR scheme to RoR with increased pondage on the account of flood moderation. The Developer claimed that this has made the project financially unviable and unless this cost is subsidized, it will be difficult to implement the project. EAC recommended that project proponent should sort out the matter of cost sharing/subsidy with the Ministry concerned in Government of India/Government of Arunachal Pradesh, finalize the project parameters and establish financial viability after which the project can be considered for scoping clearance.

EAC further observed that a cost benefit study should also to be carried out to see the benefits of additional and huge investment for flood moderation and its

impacts on environment in terms of loss of forest, submergence of agriculture land, displacement of people, etc. EAC also observed that unless the issue of cost sharing is resolved with a firm commitment, considering change in type of project will be premature.

**Agenda Item No.2.8                      Kalai –I (Original 1450 MW – now revised to 1304 MW) H.E Project in District Anjaw of Arunachal Pradesh by M/s Mountain Fall India Pvt. Ltd.- For Re-consideration of ToR.**

Kalai - I Hydroelectric Project located in Anjaw district of Arunachal Pradesh, envisages utilization of waters of the river Lohit (a major tributary of Brahmaputra River) for power generation. The project is the uppermost amongst a series of hydro projects those have been planned for development in cascade on the Lohit River.

The Kalai-I HEP was allotted to Mountain Fall India Pvt. Ltd. (MFIPL) for development on BOOT basis & Memorandum of Agreement was signed between GoAP & MFIPL accordingly on 23.11.2006. Kalai I HE Project was conceived as a RoR scheme with the parameters of FRL 1065.25 m, MDDL 1061.35m and TWL 904.80m and installed capacity of 1450 MW. The ToR approval for EIA & EMP study report was accordingly granted by MoEF vide its letter no. J-12011/46/2007-IA.1 dated 06.08.2007 and extended till May 31, 2012. The DPR of the project having FRL 1065.25m, MDDL 1060.25m and TWL 910.40m (normal) was submitted to CEA for according TEC on 29.12.2011 and at that time capacity was revised to 1352 MW; based on final power potential as per approved CWC flow series. Three season baseline surveys were completed, however, socio-economic survey of project-affected families could not be completed due to local resistance.

In the meanwhile, Ministry of Power constituted a Standing Technical Committee (STC) to go into the reasons for conversion of storage schemes to RoR schemes for those hydroelectric power projects which were earmarked as storage projects under Govt of India's 50000 MW initiative. Since Kalai I (RoR) formed part of the combined Kalai Storage Scheme identified by MOP, the STC desired that Kalai I project should either be explored as storage project. Since it was not possible to take up Kalai I HEP as a storage scheme within the allotted level regime, STC decided that the project should be implemented as Run-of-the-River scheme with increased pondage by raising the FRL from 1065.25 m to 1080 m by keeping MDDL at 1060 m to create a live storage of 116 MCM to serve flood moderation purpose also.

Keeping in view the directions given by STC, the developer prepared revised PFR of Project (as ROR with pondage for flood moderation) and submitted to GoAP on 12.11.2012 and also submitted application for revised scoping for the new scheme to MoEF.

The project was reviewed by EAC during its 66<sup>th</sup> meeting held on May 3-4, 2013 for according scoping clearance to revised RoR scheme with pondage. EAC made certain observations to which developer has submitted written response and supporting documents.

The matter was discussed and EAC observed that project cost including IDC at 2011 level has gone up by Rs. 1350 crore due to conversion of RoR scheme to RoR with increased pondage on the account of flood moderation. Developer claimed that this has made the project financially unviable and unless this cost is subsidized, it will be difficult to implement the project. EAC recommended that project proponent should sort out the matter of cost sharing/subsidy with the Ministry concerned in Government of India/Government of Arunachal Pradesh, finalize the project parameters and establish financial viability after which the project can be considered for scoping clearance.

EAC further observed that a cost benefit study should also to be carried out to see the benefits of additional investment for flood moderation and its impacts on environment in terms of loss of forest, submergence of agriculture land, displacement of people, etc. EAC also observed that unless the issue of cost sharing is resolved with a firm commitment, considering change in type of project will be premature.

**Agenda Item No.2.9                      Sonthi Lift Irrigation Scheme in Gilbarga District of Karnataka by M/s. Krishna Bhagya Jala Nigam Ltd – Re-consideration of ToR.**

The barrage of the proposed Sonthi Lift Irrigation Scheme is proposed at Sonthi village of Chittapur Taluka in Gulbarga District. The coordinates of the barrage site are 16<sup>o</sup>,49'50" & longitude of 76<sup>o</sup>55' 45". The storage capacity envisaged is 2.89 TMC of water including dead storage of 0.265 TMC. The total land required for the project is 1412.81 ha for dam and allied works including submergence.

The scheme comprises of an intake channel of 3 km length to draw water from the foreshore of the reservoir at Kollur village and construction of Jackwell at the end of intake channel near Tarkaspeta village and there by lifting the water by installing 3 vertical turbine pumps, including a standby pump of 1944 HP capacity to an height of 43.20 m through raising mains of 2.20 m diameter for a length of 4.32

km. A delivery chamber is constructed from where the canal network will start in a gravity flow for irrigating 16800 Ha of land of Gulbarga and Yadgir districts. The intensity of the irrigation is kept at 105% by providing 2.3 TMC during Kharif season, 1.4 TMC during Rabi and 0.3 TMC for two seasonal crops.

It has been explained that the project will benefit Chittapur taluka of Gulbarga District and Yadgir taluka of Yadgir District. Gulbarga district is one of the most drought prone areas in the state of Karnataka. The district is one of the most backward districts in the state and occupies lowest position in economic as well as human development.

About 0.78 ha of forest land is to be acquired and the remaining land (1412.03 ha) is private land. The Clearance for Diversion of forest land has already been accorded by the Southern Region office of Ministry of Environment and Forests. There is no protected, eco sensitive, wildlife area as notified in Wildlife (Protection) Act, 1972 located within 10 km of proposed command area.

The project proponent had applied for TOR clearance in March 2012. It was informed to the EAC that during the intervening period, 3 season field studies have also been completed. The Government of Karnataka informed that they had gone ahead with data collection as per extant provision of EIA Notification, 2006, by considering deemed clearance for ToR.

The project was appraised in the 69<sup>th</sup> meeting of the Expert Appraisal Committee (EAC) for River Valley and Hydroelectric projects held on 11th -12th November, 2013.

The EAC had suggested that following aspects be included in the TOR:

- **Soil sampling to be done at two more locations**
- **At two to three locations, soil profile should be studied in the dam area**

It was also informed to the project proponent that a complaint/representation against the project from SANDRP has been received. As per the complaint, construction work for the project has already been started. In that case, this is a violation of Environmental Protection Act, 1986. The project proponent was given a copy of the complaint and was asked to give a detailed response. The EAC also advised MoEF to write to State Government on the violation and take necessary action/ settle in accordance with provisions of prevalent office memorandum on such violation. The proposal may be placed before EAC only after this issue is resolved.

MOEF accordingly, wrote to the Chief Conservator of Forests, Regional Office (SZ), MoEF, Bangaluru vide letter No.J-12011/17/202-1A-1, dated 31/12/2013 and sought clarifications through site inspection regarding violation of Environmental Protection Act, 1986. A copy of the letter is enclosed as **ANNEXURE-I**.

During the meeting , it was explained by the project proponent that Sonthi Lift Irrigation Scheme was started during 2003 as a minor irrigation barrage with submersible bridge to facilitate communication facilities to famous pilgrimage center- Sri Chandralamba Devi Temple and also between the two Talukahead quarters Chittapur and Shahapur. Barrage was proposed to be constructed with vertical needle gates over a weir in the gorge portion in the river, to impound water, confine it within the river flanks to provide irrigation to 797 Ha of land in Rabi season. At that time, for this proposal there was no clearance required to be taken from MoEF, GOI.

Now Sonthi MI Barrage is proposed to be modified as “ SONTHI LIFT IRRIGATION SCHEME” which contemplates to utilise 4 TMC of water through lift canals to irrigate GCA of 16800 ha of land situated on the left bank side of Bhima river covering Chittapur Taluka of Gulburga District and Yadgir Taluka of Yadgir district. The submersible bridge is proposed to be modified as non-submersible bridge and instead of needle gates, automated vertical type crest gates are proposed. Sonthi Lift Irrigation Scheme, involves, construction of gated barrage across River Bhima near Sonthi Village in Chittapur Taluka. The length of barrage is 665 m. The length of earthen dam towards the left flank is 275 meters and on the right flank is 180 m.

The Project Proponent have also submitted Detailed Project Report (DPR) for Modification of “Sonthi Lift Irrigation Scheme” as a major irrigation project to Central Water commission (CWC) for obtaining clearance and thereafter to avail Central Assistance under Accelerated Irrigation Benefit Programme (AIBP) during December2012. The DPR is under consideration with CWC and Modification works will be taken up for execution after clearance from CWC and MoEF for the Project proposal. Further, the project proponent have also submitted that the minor irrigation project is still under construction phase with only Bridge cum barrage with crest gates is completed, head works and canal net work is yet to be completed and distributor network is yet to be taken up for execution, the irrigation potential as per original scope is yet to be realized, as such the project has gone beyond the original scope.

Dr. C. Kaliyaperumal, Director (S), Regional Office, Southern Zone, MOEF, conducted a site visit on 10.02.2014 and in his letter has concluded that:

- The construction work started in 2003. The Main Bridge cum Barrage with Crest Gates, Delivery Chambers and Feeder canal works are completed. Submergible barrage cum bridge was raised and constructed into non-submergible barrage and bridge and also changed/provided automated vertical type crest gate instead of needle gate. All these structures were part of the original Minor Irrigation Scheme also which envisaged irrigation over an area of 797 ha.
- Head works, Intake canal, Jackwell cum pump house and raising main works are under progress. These components are common for both for minor as well major irrigation project.
- Further, as gathered that as per the original scope of minor irrigation project, 797 ha area has to be brought under this project including the canal networks. But still the canal networks and distributor canal networks involving/required to irrigate 797 ha of minor irrigation project are still under progress.

A copy of the site visit report of Dr. C. Kaliyaperumal, Director (S), Regional Office, Southern Zone, MOEF is enclosed as **ANNEXURE -II**.

Further, Secretary, Water Resources Department, Government of Karnataka, wrote a letter (letter no. No. WRD 210 KBN 2011, dated 09/01/2014) to The Secretary, Ministry of Environment and Forests, Government of Karnataka. A copy of the letter is enclosed as **ANNEXURE -III**. The said letter stated the following points:

- a) Sonthi Lift Irrigation Scheme was started during 2003 as a minor irrigation barrage with submersible bridge to facilitate communication facilities to famous pilgrimage center- Sri Chandralamba Devi Temple and also between the two Talukahead quarters Chittapur and Shahapur. The Barrage was proposed to be constructed with vertical needle gates over a weir in the gorge portion in the river, to impound water, confine it within the river flanks to provide irrigation to 797 Ha of land in Rabi season. At that time, for this proposal there was no clearance required to be taken from MoEF, GOI.
- b) Later, due to persistent demands from farmers and public representatives decision was taken to modify the Sonthi Minor Irrigation Barrage as "SONTHI LIFT IRRIGATION SCHEME" which contemplated utilization of 4 TMC of water to irrigate GCA of 16800 Ha of land situated on the left bank of Bhima river covering Chittapur Taluka of Gulburga Dist. and Yadgir Taluka of Yadgir District. Subsequent to this modification of the submersible bridge is modified as non-submersible bridge with the provision of automated vertical type crest gates instead of needle gates needed to correlate

structural and hydraulic requirements. The finalized DPR with the above modification was submitted to Central Water Commission during March 2011.

- c) The project has metamorphed many times since 2003 to 2010. The work of Barrage civil works and Crest Gates had been entrusted on tender basis, in order to fulfill the contractual obligations and also to provide provisions/alterations needed for the barrage, gates and head works at the construction phase to accommodate further extension/modification. The entire details of development of the project has been narrated in the DPR of Modified Sonthi Lift Scheme submitted to MoEF through Central water commission.
- d) The project is still under construction phase and the project as per original scope is not yet implemented, as irrigation facilities to 797 ha is yet to be realized through canal network. The alteration/provision made during the construction phase in barrage/gates/head works/canals have been carried out which were time bound and essential.
- e) To expedite the process of Environmental clearance the project documents- Form-1, Draft ToR and PER were submitted to MoEF on 21.03.2012. The necessary forest clearance and certification from Deputy Commissioner regarding “no tribal population and forest area under submergence” was obtained and communicated to MoEF during processing of DPR of the project for CWC clearance. In the event of no communication from MoEF for more than a year, deemed environmental clearance was sought as per EIA Notification-2006 and three seasons studies for preparation of EIA were also conducted along with the preparation of draft EIA report. All these facts has been brought to the notice of EAC in its 69<sup>th</sup> meeting.
- f) From the above narrated facts, it is evident that there is no deliberate violation of EIA notification.

Krishna Bhagya Jala Nigam Limited (A Government of Karnataka Undertaking) submitted an undertaking, which is enclosed as **ANNEXURE -IV**. The Extract of the Circular Resolution No.53 dated: 16.01.2014 of the Board of Directors of KBJNL was also submitted (enclosed as **ANNEXURE -V**).

The project proponent confirmed during the EAC meeting that, if MOEF does not give Clearance for the Sonthi Lift Irrigation Scheme, then KBJNL will develop only the minor irrigation barrage, with an irrigation potential of 797 ha. It was also

confirmed that three season data required for preparation of EIA report has also be collected.

After critically examining the response, queries, letter from Secretary, Water Resources Department, Government of Karnataka, Undertaking from KBJNL and Extract of the Circular Resolution No.53 dated: 16.01.2014 of the Board of Directors of KBJNL, Report of Regional Office of MoEF, EAC observed that there may not be violation as the works commenced pertain to the minor irrigation project conceptualized by the State Government earlier. Thus, EAC recommended the proposal for TOR clearance for the major projects with following additional conditions:

- Norms for release of Environmental Flows, i.e., 30% in monsoon season, 20% in lean season and 25% in non-monsoon & non lean season to be followed corresponding to 90% dependable year.
- The project proponent has to prepare the R&R Plan for PAFs as per the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, which has come into effect since January 1, 2014.
- Social Impact Assessment Study to be conducted
- Command Area Development Plan report to be provided alongwith EIA – EMP report.
- Impacts of Mining of materials for the project
- Impacts of Backwater Effects of the reservoir in flood season
- A table of 10 daily water discharges in 75% dependable year showing the intercepted discharge at the barrage, diversion for irrigation, environmental and other flow releases downstream of the barrage shall be included in the EIA report
- Realistic assessment of requirement of labour during the construction phase of the project should be done and local labour should be preferred. Mixing with local tribal community to be minimized.
- EAC permitted the use of three season baseline data already collected for the preparation of EIA/EMP report of the project, provided it is not more than 3 years old.
- The project proponent shall go ahead with works of major project only when and if EC is granted by MoEF.
- Till the EC is considered, there should not be continuation of any work on the project as the minor project shall be merged and integrated with the new & major irrigation project.

**Agenda Item No.2.10****Siang Upper Hydro Power Project (3750 MW)  
Stage-II, Arunachal Pradesh by M/s North Eastern  
Electric Power Corporation Ltd.- Re-consideration  
of ToR.**

The WAPCOS & NEEPCO presented the case before the EAC and explained the following:

The Brahmaputra Board had envisaged one large dam on river Siang in 1983, with a view to exploiting hydro potential and to derive benefits of flood moderation one large dam. Brahmaputra Board had prepared Detailed Project Report (DPR) after conducting detailed survey and investigations works of Siang Dam Project (20,000 MW) comprising of 269 m high dam near village Rotung about 47 km upstream of Pasighat. The project could not be taken up for execution because of objections from Arunachal Pradesh Government on account of large submergence of its land including some major towns like Along and Yingkiong, etc.

Later, during 1995 Brahmaputra Board in consultation with Central Water Commission proposed cascade development over Siang river in order to minimise the extent of submergence. Three schemes were identified in the Siang basin. The broad features of these schemes of Siang river basin were as under:

<b>S.No.</b>	<b>Name of the project</b>	<b>Location</b>	<b>Dam Height (m)</b>	<b>Installed Capacity (MW)</b>
1	Siang Upper HEP	Pugging	257	11000
2	Siang Middle HEP	Mega	154	700
3	Siang Lower HEP	Rotung	65	1700
	<b>Total</b>			<b>13400</b>

Subsequently, the work of survey and field investigations of Siang Basin as a whole was given to NHPC. Based on Survey and investigations by NHPC, it was pointed out that the reservoir of Siang Upper Project extends beyond the Indian Territory with the dam of height 257 as proposed in the master plan by Brahmaputra Board. Further, the Siang Upper project would have also led to submergence of Tutting town in Arunachal Pradesh.

The work of survey, investigation and preparation of PFR for Siang Upper HE Project has been allocated by Govt. of Arunachal Pradesh to NTPC Limited vide letter dated 16.2.2009. During the meeting held in the office Secretary (Power), GoI, New Delhi, on 19.05.2009, Hon'ble Chief Minister of Arunachal Pradesh indicated that for harnessing the hydropower potential of Siang Upper Basin be considered through cascade/ a series of two or three projects minimizing submergence. Further, submergence of Yingkiong and Tutting town be avoided.

With this background, Siang Upper Project on river Siang in Arunachal Pradesh is envisaged to be developed in two stages. Siang Upper Stage-I HEP and Siang Upper Stage-II HEP.

The dam site of Siang Upper Stage - II HEP is located near village Uggeng in Upper Siang District of Arunachal Pradesh. The dam site is about 6 km upstream of Geku and about 20 km from Dite Deme. The distance of dam site from Pasighat is about 84 km by road. From Dite Deme, there is a BRO road on the right bank, which passes very close to the site and the site is thus approachable by metalled roads on both banks. The nearest meter gauge rail head is North Lakhimpur and Broad Gauge Railhead is at Nagaon. The nearest Airport is at North Lakhimpur (Lilabari). The Siang Upper HEP Stage-II project comprises of the following components:

- A 140 m high Concrete Gravity Dam from river bed level
- Two level spillway.
- Upper spillway comprising of 7 nos. of Radial Gate with opening size of 16m x 20m and crest elevation at EL 300.0 m.
- Lower Sluice spillway comprising of 7 nos. vertical list gates with opening size 6m x 8m and crest elevation at EL. 258.0m.
- 6 nos. 12.5 m Horse Shoe shaped Diversion Tunnel and length 1000 m (Max)
- 12 nos. Horse Shoe shaped Head Race Tunnel of 9.0 m diameter and 2050 m long (Max)
- 15 nos. 6.8 m diameter Penstock
- Dam Toe surface Power House having installation of 3 units (Unit-I : 3\*250MW, Unit-II: 6\*250 MW, Unit-III: 6\*250) with a total installed capacity of 3750 MW.
- 2 nos. Underground Power House cavern having installation of 6 units each.
- Independent Tail Race Tunnel of 9.0 m diameter Horse Shoe section has been provided for each machine to feed the water back into the river.
- Necessary infrastructure e.g. approaches roads, buildings, etc.

The reservoir area at FRL 340 m is 3939 ha. The total land to be acquired for various project appurtenances is 4741 ha. The details are given as below:

S. No	Description	Forest /Private Land (ha)
<b>A</b>	<b>PLANT</b>	
1	Dam ,Intake, Diversion Tunnel (Inlet & Outlet)	160
2	Surge-shaft, Powerhouse(3 nos), Tailrace & switchyard	180
<b>B</b>	<b>RESERVOIR at EL 340.00 m (Submergence area)</b>	<b>3939</b>
<b>C</b>	<b>NON-RESIDENCIAL COMPLEX</b>	
1	Administrative building	10

<b>S. No</b>	<b>Description</b>	<b>Forest /Private Land (ha)</b>
2	Guest house/I.B	2
3	School	10
4	Playground	3
5	Bank, Post office, Commercial Development, Petrol Pump	25
6	Contractors camp	10
7	Fabrication yard cum store	10
8	Electro-Mechanical store	10
9	Civil Store	10
10	LPG	1
11	Magazine, Approach road, Security barrack	5
12	Surge-shaft, Powerhouse(3 nos), Tailrace & switchyard	180
13	Colony Road, Approach road	10
14	Garden	5
15	Security office/ Barrack	2
16	Medical	3
17	Helipad	4
18	Public Health	2
19	Parking Area	5
20	Co-operative building / recreation	5
21	Muck disposal area i/c approach road	120
22	Construction power line/substation	10
<b>D</b>	<b>RESIDENCIAL COMPLEX</b>	
1	Office colony, Staff Colony, Garden, Children park, internal roads, etc.	100
<b>E</b>	<b>QUARRY AND BORROW AREA</b>	<b>100</b>
	<b>TOTAL</b>	<b>4741</b>

After critically examining the Proposal from NEEPCO, EAC observed the following:

- The PFR submitted to MOEF is almost 5 years old, and NEEPCO was asked to submit a revised PFR along with revised Form-I and latest.
- EAC observed that there is no riverine free stretch between Siang Upper HEP Stage-I, Siang Upper HEP Stage-II and Siang Lower HEP. The project proponent was asked to maintain a reasonably longer clear/ free stretch between the Siang Upper HEP Stage-I on the upstream side and Siang Lower HEP on the downstream side.
- MOEF norms for release of Environmental Flows, i.e., 30% in monsoon season, 20% in lean season and 25% in non-monsoon –non lean season to be followed in power potential exercise.

On receipt of response to the above issues along with submission of revised Form-1, the proposal may be reconsidered for TOR approval by the EAC.

**Agenda Item No.2.11 Sher-Machhrewa-Shakkar Irrigation (SMS) Complex Project, District Narsinghpur, Madhya Pradesh- For ToR.**

Sher-Machhrewa-Shakkar(SMS) is an integration of three projects, which together with the assistance of waters from proposed hydel projects viz Raghvapur, Rosara and Basania upstream of Bargi project, envisages irrigation of about 65,000 ha of land on the left bank of Narmada River between the doabs of Dudhi and Shakkar, tributaries of Narmada River. It also aims to make available 297 MCM (0.241 MAF) from Shakkar reservoir for irrigating about 50,000 ha areas on the left bank of Dudhi river to supplement the water release from the proposed Dudhi project on Dudhi River. The Sher, Machhrewa Shakkar water will be carried by a common canal starting from the Sher dam. The water of Machhrewa and Shakkar reservoirs will be fed into this canal by feeder canals from Machhrewa and Shakkar reservoirs. The waters from the proposed hydel projects viz Raghvapur, Rosara and Basania upstream of Bargi will be fed into the Sher-Machhrewa-Shakkar complex command canal through the Left Bargi canal extension originating from Bargi reservoir.

Sher, a tributary of Narmada river originates from near village Khamaria in Lakhnadon tehsil of Seoni district at an elevation of 655.93 m and drains an area of 2903 sq km (including that of tributary Machhrewa) and joins Narmada from left at an elevation of 314.86 m. The total length of river from the source to its confluence with Narmada is 129 km.

Machhrewa, a tributary of Sher river originates from near village Sukritolain Seoni district at an elevation of 899 m and drains an area of 470 sq Km and joins Sher from left. The river flows South-North direction crossing the boundaries of Seoni district on the u/s of the dam site and then flows in Narsinghpur district till it meets Sher river.

Shakkar, a tributary of Narmada river originates from near village Surla in Amarwara tehsil of Chhindwara district at an elevation of 956.8 m and drains an area of 2294 sq km and joins Narmada from left at an elevation of 304.8 m. Upto Shakkar dam site, the river flows in North & N-W direction through the hilly area draining the water from the river Harda, Sitarewa and other small streams. In the reach d/s of the dam site, the hills open out and run away from the river. Total length of the river from source to its confluence with Narmada is 161 km.

Sher-Machhrewa-Shakkar (SMS) Complex Project comprises of

- Dam across Sher River, a tributary of the Narmada River
- Dam across Machhrewa river, a tributary of Sher river
- Dam across Shakkar river, a tributary of Narmada river
- SMS common Canal
- Extension of Bargi Left Bank Main Canal
- Feeder Canals for Machhrewa & Shakkar dam to SMS common Canal

The complex when completed will command 0.648 lakh hectares in the Doab of Shakkar and Dudhi river. Out of this, 0.326 lakh hectares will be irrigated from SMS Canal and the remaining from the Bargi extension Canal. The Bargi extension Canal will be an extension of the Bargi Left Bank Main Canal and will carry water from Raghavpur-Rosra-Basania hydel project on the u/s of the Bargi project on Narmada river under construction. The SMS Canal will carry the water of Sher Machhrewa and Shakkar reservoirs. Part of these will be used for irrigating the areas in the command while some water will be carried on the Dudhi Project for irrigation on the left bank of Dudhi river.

**Details of SMS Canal System**

Reach	Command Area (Ha)	Length (Km)	Head Discharge (Cumeecs)	Tail Discharge (Cumeecs)	Head (m)	Tail (m)
Ist	486	8	3.161	2.784	401.42	399.13
IIInd	4130	56	6.508	3.231	399.13	387.46
IIIrd	27924	42	60.0	60.0	387.46	378.15
<b>Total</b>	<b>32540*</b>	<b>106</b>				

**Note:** \* Total command area of SMS canal alone is 32540 ha and Bargi left canal extension will have separate 32460 ha, thus covering entire 65000 ha of Shakkar-Dudhi doab.

The irrigation intensity proposed is 140%, including 50% in Kharif, 70% in Rabi, 5% for summer crops and 15% for perennial crops. The cropping pattern proposed for the project is given as below:

S. No.	Crop Name	Cropping Intensity (%)	Cropped Area (ha)
	<b>KHARIF</b>		
1	Hybrid Maize	0.5	324
2	Paddy	26.0	16448
3	Hybrid sorghum	0.5	324
4	Sesamum	0.5	325
5	Soyabean	10.0	6480
6	Vegetables	1.0	648
7	Pulses	11.5	7452
	<b>Sub-Total</b>	<b>50.0</b>	<b>32400</b>
	<b>RABI</b>		

S. No.	Crop Name	Cropping Intensity (%)	Cropped Area (ha)
8	Wheat I	20.0	12960
9	Wheat II	20.0	12960
10	Peas	2.0	1296
11	Vegetables	1.0	648
12	Pulses	27.0	17496
	<b>Sub-Total</b>	<b>70.0</b>	<b>45360</b>
	<b>SUMMER</b>		
13	Pulses	2.0	1296
14	Fodder	2.0	1296
15	Vegetables	1.0	648
	<b>Sub-Total</b>	<b>5.0</b>	<b>3240</b>
	<b>PERRENNIAL</b>		
16	Sugarcane	15.0	9720
	<b>Total</b>	<b>140.0%</b>	<b>90720</b>

The project command area lies within Doab of Shakkar and Dudhi Rivers having Culturable Command Area (CCA) of 64800 ha with annual irrigation is nearly 90720 ha. The Overall summary of irrigation requirement at canal head is 486.6 MCM (17.18 TMC) for SMS Command only. In order to support about 50000 ha of Dudhi command, about 150 MCM of water will be released from SMS canal in a pattern matching with requirement pattern of SMS Canal command. The details are given in Feasibility Report.

The total land coming under reservoir submergence is 6342.02 ha of which 2922.12 ha is forest land. The details are given as below:

S. No.	Category	Sher (ha)	Shakkar (ha)	Machhrewa (ha)	Total (ha)
1	Cultivable/uncultivable land	1854.48	1481.78	83.64	3419.90
2	Forest land	442.86	1898.65	580.61	2922.12
	<b>Total</b>	<b>2297.34</b>	<b>3380.43</b>	<b>664.25</b>	<b>6342.02</b>

After critically examining the proposal, EAC observed the following:

- A map showing drainage network along the alignment of SMS main canal be provided.
- EAC asked NVDA to submit the status of development of six wildlife conservation areas in the Narmada Basin, which was one of the conditions in the Environmental Clearance for earlier projects on river Narmada.
- MOEF norms for release of Environmental Flows, i.e., 30% in monsoon season, 20% in lean season and 25% in non-monsoon –non lean season to be followed.

- The project proponent has to prepare the R&R Plan for PAFs as per the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, which has come into effect since January 1, 2014
- A representation has been received by MoEF from an NGO, SANDRP. A copy of the same was handed over to the project proponents and was asked to give a pointwise reply to the issues raised in the representation.

On receipt of response to the above observations / comments and representation received, the proposal may be reconsidered for TOR approval by the EAC.

**Agenda Item No.2.12                      Nalo HEP in Upper Subansiri District, Arunachal Pradesh being implemented by M/s. Indus Hydro Power (India) Private Limited- For Scoping and ToR approval for change in the installed capacity from 360 MW to 635 MW.**

The Nalo HE Project is proposed in upper reaches of Subansiri River near Jiba Ayang village (latitude 28° 24' 38"N and longitude 93° 48' 29"E). The project site is located about 378 km from Dibrugarh, and can be approached by crossing the Brahmaputra river at Bogibeel and afterwards through an all weather road connecting Silapathar with Daporijo via Likabali check post. The Nalo HE Project is located about 120 km from Daporijo town on the all weather Daporijo- Limeking road running on right bank of the river. The dam site is located about 5 km upstream of Nacho village near Jiba-Ayang village. The project Dam site is proposed on Subansiri River just downstream of confluence with Ledi Ishi Nallah and is about 120 km from Daporijo town, District Headquarter, Upper Subansiri.

The Memorandum of Agreement (MoA) for implementation of Nalo HE Project was signed on 16<sup>th</sup> November 2010 with Government of Arunachal Pradesh for developing this project within the River elevations of EL ±765 m and EL ±635 m. This project is being developed in a Public – Private Partnership (PPP) model on Build, Own, Operate and Transfer basis.

The project originally envisaged a Concrete Gravity Dam of 127 m height (from average river bed level) 329.16 m length at top, with a central spillway comprising of 6 Nos. of sluice type and one bay of surface ogee controlled by radial gates. Diverted water for power generation was to be conveyed through four individual 4.5 m diameter water conductor tunnels of varying length ranging from 322 m to 404 m. A dam-toe underground power house of 129.0 m length and 21.00 m width housing 4 units of vertical Francis turbines, each of 86 MW and 1 unit of 16

MW (catering to environmental flow) was to be located on the left bank of Subansiri River. On completion of the project, it would have provided 360 MW of peak power with generation of 1824.43 Million KWH of electricity in a 90% dependable year on a 95% machine availability basis. The hard cost of the project was estimated to Rs 2694.49 Crores at August 2011 price level.

As per revised proposal, the installed capacity has been increased from 360 MW to 635 MW. The project envisages a Concrete Gravity Dam of 162 m height (from maximum height above deepest foundation of river bed level) 291.247 m length at top, with a central spillway comprising of 6 Nos. of sluice type and one bay of surface ogee controlled by radial gates. Diverted water for power generation will be conveyed through four individual 5.5 m diameter water conductor tunnels of varying length ranging from 322 m to 404 m. A underground power house of 170.0 m length and 23.00 m width housing 5 units of vertical Francis turbines, 3 units of 150 MW, 1 unit of 170 MW and 1 unit of 15 MW (both single catering to environmental flow) will be located on the left bank of Subansiri River. On completion of the project, it will provide 635 MW of peak power with generation of 2456.3 Million Unit of electricity in a 90% dependable year on a 95% machine availability basis. The hard cost of the project is estimated to Rs 3651.0 Crores at December 2013 price level.

The total land requirement for the project is 662.94 ha out of which 541.27 ha is Community forest land with vegetation cover and Jhum agriculture practices, 104 ha is River Bed area and 17.67 ha is underground area.

Proposal for diversion of forest land under Forest Conservation Act-1980 has been submitted to Conservator of Forests cum Nodal Officer, Government of Arunachal Pradesh vide letter no. IHPPL/Forest/ 110818, dated 23<sup>rd</sup> August 2011. Based on the preliminary survey and information from secondary resources, the total land (including Forest, Community land with vegetation cover, Community Private Land (Agricultural/Jhum), River bed area etc) required for the construction of the project is about 663 ha, out of which about 292 ha would be required for Project Components and 371 ha for Submergence area (including 98 ha of Riverbed area).

It is submitted that, as per MoEF Office Memorandum dated 21<sup>st</sup> March 2012, ToR approval for 360 MW Nalo HEP is valid up to a period of two years and is going to be expire in the month of March, 2014.

It was further submitted that the revised application for scoping and ToR approval has been submitted because of following reasons.

- The installed capacity is now proposed as 635 MW against 360 MW. This has been approved by the CEA. In working out the installed capacity of 360 MW (4X86MW+16MW) in PFR, the generation per MW was considered as 5.29 MU (Total 1851.88MU) in 90% dependable year. The 16MW unit was provided to utilize for power generation the mandatory release of water due to environment consideration. The mandatory release considered throughout the year was 20% of average discharge in lean months. It was also indicated in PFR that there is a possibility of increase in Installed Capacity. In normal practice followed by CEA, for optimum utilization of power potential, the energy generation is normally considered around 4MU/ MW for the installed capacity chosen. Therefore the installed capacity of 635MW now decided works out as detailed below:

- Installed capacity of 450MW (3 X 150MW) to be utilized for peaking operation of the plant. **The energy generation per MW works out to be 4.08MU/MW.**
- To utilize the mandatory release of 20% of the average of 4 lean month discharge for power generation, one 15MW unit is proposed.
- As per the TOR approved by MoEF (March 2012), 30% release of the monsoon discharge is mandatory during monsoon. To utilize this discharge for power generation, one unit of 170MW has been proposed in addition to 15MW unit.

Thus, total installed capacity = 450 + 15 + 170 = 635MW

1. In the present revised PFR proposal, the dam axis has now been located 325m upstream of PFR axis(2011) so that entire dam body, stilling basin and plunge pool can be accommodated within the right bank rock ledge.
2. Due to local problems in the project area, the desired progress could not be completed. The matter has been taken up with the Government of Arunachal Pradesh and we are hopeful that the local issues shall be sorted out and we shall able to complete the survey and investigation works at the earliest possible.

The EAC recommended the TOR clearance for the project as a fresh TOR, with the following additional issues to be covered in the CEIA study:

- The project proponent has to prepare the R&R Plan for PAFs as per the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, which has come into effect since January 1, 2014.

- Disaster vulnerability of the area on various aspects like landslides, earthquakes and floods.
- Impacts of Tunneling and Blasting
- Impacts of Mining of materials for the project
- Impacts of Backwater Effects of the reservoir in flood season
- A table of 10 daily water discharges in 90% dependable year showing the intercepted discharge at the dam, the environmental and other flow releases downstream of the dam and spills shall be included in the EIA report.
- Provision of release of environmental flow of 20%, 25% & 30% during lean, non-lean & non-monsoon and monsoon seasons to be ensured.
- Observed flow at G&D site, rainfall data and intermediate catchment mapping along with its contribution shall be included in the EIA report
- Realistic assessment of requirement of labour during the construction phase of the project should be done and local labour should be preferred. Mixing with local tribal community to be minimized.
- EAC observed that three season baseline data to be collected afresh for 635 MW capacity.
- Bio-diversity study is to be conducted with the assistance of a suitable institute as per MoEF's published list.

MoEF may issue ToR on production of revised MoA between project proponent and State Government for 635 MW capacity as the original MoA is for 360 MW only.

**List of EAC members and Project Proponents who attended 73<sup>rd</sup> Meeting of Expert Appraisal Committee for River Valley & Hydro Electric Power Projects held on 26<sup>th</sup> – 27<sup>th</sup> March, 2014 in New Delhi**

**A. Members of EAC**

- |    |                          |   |                                   |
|----|--------------------------|---|-----------------------------------|
| 1. | Shri Alok Perthi         | - | Chairman                          |
| 2. | Dr. Vijay Kumar          | - | Member                            |
| 3. | Shri Hardip Singh Kingra | - | Member                            |
| 4. | Shri K. D. Joshi         | - | Member                            |
| 5. | Shri N. N. Rai           | - | Member                            |
| 6. | Shri G. M. Lingaraju     | - | Member                            |
| 7. | Shri B. B. Barman        | - | Member Secretary & Director, MoEF |
| 8. | Dr. P. V. Subba Rao      | - | MoEF                              |

**B. Naying HEP (1000MW) in West Siang District, Arunachal Pradesh by M/s Naying DSC Power Ltd.- For Reconsideration of Environment Clearance.**

- |    |                      |   |                         |
|----|----------------------|---|-------------------------|
| 1. | Shri P. S. Khurana   | - | Chief Operation Officer |
| 2. | Shri Ravinder Bhatia | - | Director                |
| 3. | Shri Arun Bhaskar    | - | Director                |
| 4. | Shri Harsimram Singh | - | Engineer                |

**C. Lower Tapi Project, Village-Padalse, Taluka-Amalner, District- Jalgaon, Maharashtra by M/s Tapi Irrigation Development Corporation.- For Reconsideration of Environment Clearance.**

**Absent**

**D. Magochu Hydro Electric Project (96 MW) Arunachal Pradesh in Distt Tawang- For Extension of Validity of ToR.**

**E. Nyukcharong Chu Hydro Electric Project (96 MW) , Arunachal Pradesh- For Extension of Validity of ToR**

**F. New Melling Hydro Electric Project (96 MW) Arunachal Pradesh Distt. Tawang- For Extension of Validity of ToR.**

- |    |                        |   |          |
|----|------------------------|---|----------|
| 1. | Shri Y. Aditya Krishna | - | Director |
|----|------------------------|---|----------|

- |    |                          |   |                     |
|----|--------------------------|---|---------------------|
| 2. | Shri S. B. V. Somayajulu | - | Engineer            |
| 3. | Shri Ravi Rama Krishna   | - | Add. Vice President |
| 4. | Shri V. R. Sharma        | - | Liaison Officer     |
| 5. | Shri D. K. Koushik       | - | Consultant          |
| 6. | Shri Amit Srivastava     | - | Design Engineer     |
| 7. | Ms. Chandrani Mitra      | - | EIA Coordinator     |
| 8. | Ms. Neeta Arora          | - | Functional Manager  |

**G. Dibang Multipurpose Project in Arunachal Pradesh by NHPC – For reconsideration of Environment Clearance.**

- |     |                        |   |                     |
|-----|------------------------|---|---------------------|
| 1.  | Shri Manjusha Mishra   | - | Manager             |
| 2.  | Shri V. K. Maini       | - | General Manager     |
| 3.  | Shri M. G. Gokhle      | - | Chief Engineer      |
| 4.  | Shri Sanjay Meena      | - | Engineer            |
| 5.  | Shri A. K. Sarkar      | - | Executive Director  |
| 6.  | Shri Rahul Shrivastava | - | Environment Officer |
| 7.  | Dr. Aman Sharma        | - | General Manager     |
| 8.  | Dr. Shahid Ali Khan    | - | Chief (Environment) |
| 9.  | Dr. Ajay Kumar Jha     | - | Assistant Manager   |
| 10. | Shri Amit Bhadula      | - | Environment Officer |
| 11. | Dr. Pranay Vikram      | - | Geologist           |
| 12. | Shri Y. K. Chaubey     | - | Chief Engineer      |
| 13. | Dr. J. P. Bhatt        | - | Scientist           |
| 14. | Dr. D. C. Nautiyal     | - | Scientist           |

**H. Hutong –II (Original 1250 MW – now revised to 1200 MW) H.E Project in District Anjaw of Arunachal Pradesh by M/s Mountain Fall India Pvt. Ltd.- For Re-consideration of ToR.**

**I. Kalai –I (Original 1450 MW – now revised to 1304 MW) H.E Project in District Anjaw of Arunachal Pradesh by M/s Mountain Fall India Pvt. Ltd.- For Re-consideration of ToR.**

- |    |                      |   |                         |
|----|----------------------|---|-------------------------|
| 1. | Shri P. S. Khurana   | - | Chief Operation Officer |
| 2. | Shri R. S. Gill      | - | Coordinator (Hydro)     |
| 3. | Shri Harsimran Singh | - | Engineer                |
| 4. | Shri Ravinder Bhatia | - | Director                |
| 5. | Shri Arun Bhaskar    | - | Director                |

**J. Sonthi Lift Irrigation Scheme in Gilbarga District of Karnataka by M/s. Krishna Bhagya Jala Nigam Ltd – Re-consideration of ToR.**

- |    |                   |   |                    |
|----|-------------------|---|--------------------|
| 1. | Shir K. G. Mahesh | - | Executive Engineer |
|----|-------------------|---|--------------------|

2. Dr. Aman Sharma - General Manager

**K. Siang Upper Hydro Power Project (3750 MW) Stage-II, Arunachal Pradesh by M/s North Eastern Electric Power Corporation Ltd.- Re-consideration of ToR.**

1. Shri Tulshi Baruah - Executive Director  
2. Shri N. K. Nao - General Manager  
3. Shri Jawahar Chaudhuri - General Manager  
4. Shri Kamalendu Deb - Manager  
5. Dr. Aman Sharma - General Manager

**L. Sher-Machhrewa-Shakkar Irrigation (SMS) Complex Project, District Narsinghpur, Madhya Pradesh- For ToR.**

1. Shri S. P. Singh - Member, NVDA  
2. Shri R. P. Malviya - Chief Engineer  
3. Shri K. K. Vishwakarma - Executive Engineer  
4. Dr. Aman Sharma - General Manager  
5. Shri Shambhu Azad - General Manager

**M. Nalo HEP in Upper Subansiri District, Arunachal Pradesh being implemented by M/s. Indus Hydro Power (India) Private Limited- For Scoping and ToR approval for change in the installed capacity from 360 MW to 635 MW.**

1. Shir J. N. Garg - General Manager  
2. Shri Rajender Singh - Consultant  
3. Shri S. C. Sud - Consultant (Hydrology)  
4. Shri Manoj Basu - Vice President  
5. Shri Manoj K. Gupta - Sr. Dy. General Manager  
6. Shri Kishore P. - Assistant Manager  
7. Ms. Shradha - Sr. Environmentalist  
8. Dr. Aman Sharma - General Manager

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**ANNEXURE-I**  
**No. J-12011/17/2012-IA.I**

Ministry of Environment & Forests Government of India  
(IA.I Division)

ParyavaranBhavan  
CGO. Complex,  
Lodi Road,  
New Delhi-110 003

**Dated: 31<sup>st</sup>December,2013**

To

**The Chief Engineer**

M/s. Krishna BhagyaJala Nigam Ltd,  
Government of Karnataka  
KBJNL, Canal Zone-I  
Bheemarayanagudi - 585287  
Karnataka

**Subject: Sonthi Lift irrigation Scheme in Gulbarga District of Karnataka by M/s. Krishna BhagyaJala Nigam Ltd, Government of Karnataka - For TOR - regarding.**

**Sir,**

This has reference to your letter no. KBJNL/CEC-I/AEE/AE-7/2011-12/1079 dated 21.3.2012 and subsequent letters of KBJNL dated 9.7.2013 and 10.9.2013 on the above mentioned subject This project was considered by EAC in its meetings held on 11-12<sup>th</sup> November, 2013. During the discussions, the project proponent admitted that the construction work had already been started. Therefore, the committee noted that a violation has occurred as EAC can consider only fresh proposals beginning from scoping as stipulated vide EIA Notification, 2006. The EAC was further informed that such cases are to be dealt in terms of the MoEF OM No. J-11013/41/2006-IA.II (I) dated 12.12.2012 & 27.6.2013 (copies enclosed for ready reference).

2. In this context, it is requested that the project proponent is required to submit an affidavit with an undertaking not to execute further works on the project without obtaining environmental clearance and furnish photographs of the site from all four sides of the project. The State Government is also required to comply with Paras-5 (i), (ii), (iii) & (iv) of the above two OMs No. J-11013/41/2006-IA.II (I) dated 12.12.2012 & 27.6.2013 respectively.

3. In addition, you are also required to submit a Board Resolution with an undertaking that such violations would not be repeated in future.

4. The Ministry noted that the project is at construction stage and the violation is on account of carrying-out construction without valid environmental clearance. Therefore, the Ministry hereby issues directions under Section-5 of the Environment (Protection) Act, 1986 to **"Stop and suspend all works on the project"** till further orders by the Ministry.

5. It may also be noted that once action as per Para-5 of the above OMs has been taken and MoEF informed accordingly, the case will be dealt-with and processed as per the prescribed procedures for appropriate view/decision by the Ministry as per the merits of the case.
6. This issues with the approval of the Competent Authority.

Yours faithfully,



(B. B. Barman)  
Director

Copy to: The Managing Director M/s. Krishna BhagyaJala Nigam Ltd, PWD Offices  
Annexe, 3<sup>rd</sup> Floor, K.R. Circle, Bangalore - 560 001



ANNEXURE-II

भारत सरकार  
पर्यावरण एवं वन मंत्रालय

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT & FORESTS

क्षेत्रीय कार्यालय (दक्षिण वलय)

Regional Office (Southern Zone)  
Kendriya Sadan, 4th Floor, E&F Wings, 17th Main Road,  
2nd Block, Koramangala, Bangalore - 560 034.

*by hand*

No.:

तार : पर्यावरण, बेंगलूर

Telegram : PARYAVARAN  
BANGALORE

दूरभाष :

Telephone : 25635309

Fax-080-25537184

No.EP/12.8/MIN/2013-14

Dated: 20.02.2014. *1/1887*

To,

Shri. B.B. Burman,  
Director,  
Government of India,  
Ministry of Environment & Forests,  
Paryavaran Bhavan,  
CGO Complex, Lodhi Road,  
New Delhi -110 003.

Subject: Sonthi Lift Irrigation Scheme in Glubarga District of Karnataka by M/s.  
Krishna Bhagya Jala Nigam Ltd, Government of Karnataka -For TOR -  
reg.

Reference: MoEF.Lr.No. J-12011/17/2012-IA,I dated. 31.12.2013.

Sir,

With reference to the above mentioned subject, I am directed to enclose a copy of  
the site inspection report for your information and further necessary action please.

Yours faithfully

*(Signature)*  
(Dr.C.Kaliyaperumal)  
Director (S)

Encl: As above.

## SITE INSPECTION REPORT OF SONTHI LIFT IRRIGATION SCHEME

Krishna Bhagya Jala Nigam Limited (KBJNL), a Government of Karnataka undertaking proposed to construct a barrage across river Bhima with the pumped storage, jack well and canal distribution networks to irrigate 16000 ha of agriculture land in 31 villages of Chittapur Taluka of Gulbarga District & Yadgir Taluka of Yadgir District, Karnataka. There was an existing Minor irrigation Barrage with submergible barrage/bridge with needle gates. A minor irrigation project was converted into a Major irrigation project by M/s KBJNL by doing the submergible barrage/bridge into non-submergible bridge also changing/providing automated vertical type crust gates instead of needle gates.

M/s KBJNL, wanted to impound the water by raising the Full Reservoir Level (FRL) and lift the water by way of pumping at Tarkaspet Village and Irrigate the above mentioned Talukas. The Main Salient Feature of the project as given below in Table-1.

**Table-1: Salient Feature of the Project.**

Taluka : Chittapur		Dist Gulbarga
Sl. No.	Details	Salient features
1	<b>Name of the project</b>	Sonthi Lift Irrigation Scheme
2	<b>Type of project</b> (Irrigation or Multipurpose)	Irrigation
3	<b>Location</b>	
	a) Barrage	Across Bhima river near Sonthi village in Chittapur taluka of Gulbarga District. Latitude - 16° 49' 50" Longitude- 76° 55' 45"
	b) Lift Irrigation Schemes	Lift irrigation scheme at Tarkaspet village of Chittapur taluka of Gulbarga district.
3.1	<b>River Basin</b>	
	a) Name	Krishna
	b) Located in	Bhima river.
	i) State (s)	Karnataka State
	ii) Countries (if international river)	-
3.2	<b>River / Tributary</b>	Bhima river / tributary to Krishna river
3.3	<b>State (s) /District(s)Taluka (s) or Tehsils in which following are located</b>	
	a) Reservoir	Karnataka/Gulbarga /Chittapur
	b) Headwork (Barrage)	Karnataka /Gulbarga/Chittapur.
	c) Command Area	Karnataka /Gulbarga/Chittapur/Yadgir.
	d) Power house. (13.50 MW)	Mini Hydel Scheme, Karnataka/Yadgir/Shahapur.
3.4	<b>Name of village near the head</b>	Tarkaspet village of Chittapur taluka of

	works	Gulbarga district.
3.5	Location of Headwork	<b>Sonthi LIS</b>
	a) Longitude	16 <sup>o</sup> 53' 07"
	b) Latitude	76 <sup>o</sup> 59' 07"
	c) Lies in Earthquake Zone No.	<b>Zone - II</b>
3.6	Project area reference to:	
	a) Degree Sheets	E43W13, E43X1, E43X2
	b) Index Plan	Enclosed
3.7	Total Catchment area	69184 Sq.Km
3.8	Command area	16000 Ha
4.0	Lift Point	Near Tarkaspet village
5.0	Height of the Barrage	16 m above ground level
5.1	Length of the Barrage	665 m
5.2	Crest level	368 m
5.3	FRL	376 m
5.4	Type of gates	Vertical crest gates of size 15.00 x 8.00 m
5.5	No. of gates	37 Nos
5.6	Storage capacity	2.84 TMC
5.7	Utilization	4.00 TMC
6.0	Raising main length	4.32 Km
6.1	Total Head	49 m (With a static head of 43.20 m)
6.2	No. of pumps	04 nos
6.3	Pump capacity	1944 HP of each pump
6.4	Raising main pipe dia	2.20 m

#### Major Components of Sonthi Lift Irrigation Scheme

- Construction of Bridge cum Barrage (Civil and Gate Works)
- Construction of LIS Head work
- Construction of Canal Network System

Name of Canal	Total Km's	Irrigable Command Area in Ha.
1. Sonthi Feeder Canal	1.88 Km	-
2. Sonthi Main Canal	38.00 Km	6100
3. Sonthi Branch Canal	20.02 Km	4213
4. Distributory No.1 Canal	15.32 Km	5227
5. Yargol Minor Canal	9.75 Km	460
<b>Total:</b>		<b>16000</b>

**Date of site visit: 10.02.2014.**

The undersigned visited the project activities such as Main Barrage cum Bridge, Hydro electric power (Three units having 13.5 MW), water intake point, Canal works for the power house, Intake Canal from Bhima river to Jackwell point which is located above 15 Km of upstream of project, Delivery chamber etc along with project authorities and also observed that the Main Bridge cum Barrage with Crest Gate, Delivery chambers and Feeder Canal works are completed. Head works, Intake canal, Jackwell cum pump house and Raising main works are under progress. The status of the construction are as given below in Table-2.

**Table-2: Present status of the project.**

Sl. No.	Name of work	Total cost of work (in lakhs)	Date of commencement	Status of work	Total upto date expenditure (in lakhs)	% age of progress
1.	Const. of Sonthi Bridge cum Barrage (Civil works)	7113.00	28.06.2003	Completed - 30.12.2009	6944.88	100%
2.	Const. of Sonthi Bridge cum Barrage (Gate works)	7148.64	21.03.2007	Completed - 15.04.2011	7148.64	100%
3.	Sonthi LIS Head works	5054.46	24.08.2006	Ongoing	2966.72	58%
4.	Sonthi Feeder Canal	235.69	29.04.2010	Completed - 29.05.2012	217.12	100%
5.	Other Canal network systems	19835.23	19.11.2012	Ongoing /To be tendered	949.92	4.8 %
6.	Power supply and protection works	33.00	-	To be tendered	-	-
7.	R and R works	5322.99	-	Ongoing	48.00	90 %
8.	Land acquisition cost for canal and other works	1726.87	-	LAQ process is underway	0.00	
9.	FIC works	5440.00	-	To be tendered	0.00	-
10.	Drainage works	244.00	-	To be tendered	0.00	-
11.	Buildings, maintenance and Miscellaneous	884.76	-	To be tendered -	0.00	-
12.	Establishment	5518.65	-		2208.10	40 %
13.	Tools and plants	530.39	-		184.47	34 %
14.	Indirect charges	883.00	-		187.00	21 %
	<b>Total:</b>	<b>59970.68</b> Say <b>60000.00</b> <b>lakhs</b>			<b>20854.85</b>	<b>34 %</b>

**Photographs taken during the visit are attached herewith as Annexure -I**

Further, a power plant namely Sugnaneshwara Hydel Power Project (2.5x3 MW) with intake canal has also been constructed but it is not under operation due to some reason. The power company has obtained permission from State Department of Environment, Government of Karnataka.

**R and R works:**

As gathered-that the Rehabilitation and Resettlement work (R & R) works is also involved and the details are as given below.

**Details of villages coming within Barrage Submergence.**

Name of Fully Submerged villages Acre –Guntas	Name of Partially Submerged Villages Acres –Guntas (Only lands)
Hurasagundagi Village – 471.33	Sirwal Village – 243.15
	Kollur Village – 329.14
	Sonthi Village – 396.10
	Anabi and Roja S Sirwal – 169.70

Total Submergence area of Sonthi Barrage is 1608 Acres - 70 Guntas

One village namely Hurasagundagi in Shahapur Taluk, Yadgir District would be submerged fully in the catchment area. The total population of the village is 3590 having 852 families and total structures is 915 nos. To rehabilitate the Hurasagundagi village an area of 100-19 acres has been acquired and Rehabilitation and Resettlement works are in progress. The civic amenities such as Rehabilitation center are Construction of internal roads, School buildings, Community Hall, Anganwadi center, Bus shelter, Temples, Toilets, Mosque, Church, Water supply and Dhobighat etc are established in the R&R Centre. Displacement has not yet started. In four villages namely Sirwal, Kollur, Sonthi, Anabi and Roja S Sirwal partial submergence is there. Here there is no displacement of people and only land is coming under submergence.

**Major observations:**

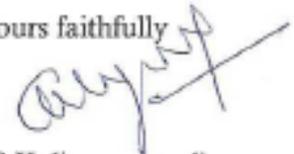
1. Famous ancient pilgrimage center- Sri Chandrala Parameshwari Devi Temple, is located on the upstream of the barrage and the distance is about 350 to 400 mtr but not in the submergence area.
2. Baghwan Bhudda temple and Exhibition Centre of Department of Archeology are located just on the downstream of the barrage (200 to 300 mtr).
3. Power house (13.5 MW) has been constructed and it is not in operation.

**Conclusion:**

1. The total cost of the project is Rs. 600.00 crores and about 208.00 crores has been spent for various works involved in the project so far. Details are given in table no.
- 2.

2. The Main Bridge cum Barrage with Crest Gate, Delivery chambers and Feeder Canals works are completed. Submergible barrage cum bridge was raised and constructed into non-submergible barrage and bridge and also changed/provided automated vertical type crest gate instead of needle gate.
3. As gathered that, these works were started in the year 2003.
4. Head works, Intake canal, Jackwell cum pump house and raising main works are under progress. As stated by the project authorities these are all the main components both for minor as well major irrigation project. The project is still under construction stage.  
Further, as gathered that as per the original scope of minor irrigation project, 797 ha area has to be brought under this project including the canal networks. But still the canal networks and distributory canal networks involving/required to irrigate 797 ha of minor irrigation project are still under progress.
5. The canal works involving for major irrigation works i.e Sonthi Main canal from 15 km to 38 km works, Sonthi branch canal works are yet to be taken up.
6. The project authorities have submitted application in Form -I for obtaining Environmental Clearance (EC) on 21.3.2012. Later on the Managing Director, M/s KBJNL, Government of Karnataka had requested the Ministry to accord deemed EC, since no communication was received from MoEF, New Delhi.
7. The project authorities have obtained permission under Forest (Conservation) Act, 1980 for diversion of 0.78 ha of forest land for canal path way from MoEF. As gathered that there is no wildlife sanctuary located within 10 km of the project/canal.

Yours faithfully



(Dr.C.Kaliyaperumal)  
Director(S)

ANNEXURE-III

CURUPADASWAMY B.G., I.A.S.,  
SECRETARY TO GOVERNMENT  
WATER RESOURCES DEPARTMENT



Karnataka Government  
Government of Karnataka  
Town No. 307, 2<sup>nd</sup> Floor, Vikas Complex  
Ch. S.H. Ambekar Vasthi  
BANGALORE - 560001

No.WRD 210 KBN 2011

08/01/2014

To:

The Secretary,  
Ministry of Environment and Forest,  
Government of India, Paryavaran Bhawan,  
CGO Complex, Lodhi Road,  
New Delhi-110003.

Sir,

**Sub:-** Issue of Environmental Clearance for Sonthi Lift Irrigation Scheme in Yadgir District (MoEF File No. 1-12011/17/72012-1 IA I) in Karnataka - Reg.

- Ref:-**
- 1) 69<sup>th</sup> meeting of Expert Appraisal Committee (EAC) for River valley and hydroelectric power projects dated 12<sup>th</sup> November, 2013, Ministry of Environment and Forests (MoEF), New Delhi.
  - 2) Minutes of the 69<sup>th</sup> meeting of Expert Appraisal Committee (EAC) for River valley and hydroelectric power projects, MoEF, New Delhi.

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Kindly refer to proceedings cited at reference (2) above. The Sonthi Lift Irrigation project was appraised by EAC of MoEF and technically cleared for issue of Terms of Reference (ToR) with some suggestions. It was also noted that State Govt had gone ahead with studies of three season required for preparation of EIA report.

During the said meeting, South Asia Network for Dams, Rivers and People (SANDRP), a New Delhi based NGO, has brought to the notice of the EAC through a complaint representation that the construction work for the project has already been started and therefore it constituted violation of the MoEF guidelines. In this regard, the EAC has informed KBJNL to furnish a detailed response to the said complaint against the project.

In view of the above, the following facts are submitted to emphasize that there is no deliberate violation of MoEF guidelines;

- a) Sonthi Lift Irrigation Scheme was started during 2003 as minor irrigation barrage with submersible bridge to facilitate communication facilities to famous pilgrimage center-Sri Chandralamba Devi Temple and also between the two Taluka head quarters Chittapur and Shahapur. The Barrage was proposed to be constructed with vertical needle gates over a weir in the gorge portion in the river, to impound water and confine it within the river flanks to provide irrigation facilities to 797 Ha of land in Rabi season. At that time, for this proposal there was no clearance required to be taken from MoEF, GOI.
- b) Later, due to persistent demands from farmers and public representatives decision was taken to modify the Sonthi Minor Irrigation Barrage as "SONTHI LIFT IRRIGATION SCHEME" which contemplated utilization of 4 TMC of water to irrigate GCA of 16800 Ha of land situated on the left bank of Bhima river covering Chittapur Taluka of Gulburga Dist. and Yadgir Taluka of Yadgir District. Subsequent to this modification of the submersible bridge is modified as non-submersible bridge with the provision of automated vertical type crest gates instead of needle gates needed to correlate structural and hydraulic requirements. The finalised DPR with the above modification was submitted to Central Water Commission during March'2011.
- c) The project has metamorphed many times since 2003 to 2010. The work of Barrage civil works and Crest Gates had been entrusted on tender basis, in order to fulfill the contractual obligations and also to provide provisions/alterations needed for the barrage, gates and head works at the construction phase to accommodate further extension/ modification. The entire details of development of the project has been narrated in the DPR of Modified Sonthi Lift Scheme submitted to MoEF through Central water commission.
- d) The project is still under construction phase and the project as per original scope is not yet implemented, as irrigation facilities to 797 ha is yet to be realized through canal network. The alteration/ provision made during the construction phase in barrage / gates / head works / canals have been carried out which were time bound and essential.

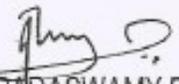
- e) To expedite the process of Environmental clearance the project documents- Form-1, Draft ToR and PER were submitted to MoEF on 21.03.2012. The necessary forest clearance and certification from Deputy Commissioner regarding "no tribal population and forest area under submergence" was obtained and communicated to MoEF during processing of DPR of the project for CWC clearance. In the event of no communication from MoEF for more than a year, deemed environmental clearance was sought as per EIA Notification- 2006 and three seasons studies for preparation of EIA were also conducted along with the preparation of draft EIA report. All these facts ha been brought to the notice of EAC in its 69<sup>th</sup> meeting.

From the above narrated facts, it is evident that there is no deliberate violation of EIA notification.

Also the required undertaking duly countersigned is enclosed. The resolution of the Board of the Krishna Bhagya Jala Nigam Limited and the required Affidavit will be submitted separately in due course.

It is requested to issue the Environmental Clearance at the earliest.

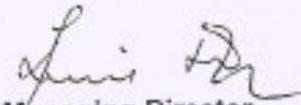
Yours faithfully,

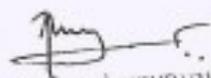
  
(GURUPADASWAMY.B.G)

**ANNEXURE-IV**  
**UNDERTAKING**

Krishna Bhagya Jala Nigam Limited (A Government of Karnataka Undertaking) submits an undertaking in respect of Sonthi LIS as follows;

1. It is submitted that Sonthi LIS taken up by KBJNL is in construction phase. The construction works were initiated so as to extend irrigation benefits to the farmers, thereby mitigate the sufferings of the farmers of the drought prone areas.
2. KBJNL requests MoEF to allow KBJNL to continue the construction activities for the above projects and simultaneously would initiate the process of obtaining Environmental Clearance from MoEF, New Delhi. This is necessary as it would speed up the project and enable boost in agricultural productivity in the area which is critical for the economy of the region and the State. The area fall under Article 371(J) which had special development needs.
3. KBJNL is committed to give more thrust to new areas of development such as participatory irrigation management, encouragement to modern irrigation practices with higher duty of water, exploration of new possibility of conjunctive use of water, advocating a holistic approach towards agricultural farming practices for economic security to the farmers and using modern technologies in survey and design of canal systems.
4. KBJNL is committed to protect and improve the overall environment through appropriate measures as per Environmental Management Plan (EMP).
5. KBJNL would like to submit that there will not be recurrence of violation if any, of the EIA Notification, 2006 and its subsequent amendments by thereon by KBJNL.

  
Managing Director  
Krishna Bhagya Jala Nigam  
BANGALORE

  
Gurupadaswamy B.G  
Secretary to Government  
Water Resources Department

ANNEXURE-V

Extract of the Circular Resolution No.53 dated 16.01.2014 of the Board of Directors of the Nigam

**"RESOLVED THAT:**

- (i) The Board of Directors would like to humbly submit that Sonthi Lift Irrigation Scheme taken up by KBJNL is in construction phase. The construction works were initiated so as to extend irrigation benefits to the farmers, thereby mitigate the sufferings of the farmers of the perennially drought prone areas*
- (ii) the implementation of the project at the earliest will enable to boost the agricultural productivity in the area which is critical for the economy of the region and the State*
- (iii) the KBJNL is committed to protect and improve the overall environment through appropriate measures as per Environmental Management Plan (EMP)*
- (iv) the Board hereby undertakes that KBJNL will always follow guidelines of Government of India, Ministry of Environment and Forests and violations of Environment (Protection) Act, 1986 will not be repeated in future"*

**CERTIFIED TRUE COPY**

For Krishna Bhagya Jal Nigam Ltd.

*[Signature]*

Company Secretary