

SNOWFOAM ENERGY PVT LTD

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Ref no. HAMSHU/DFO/FCA/25

Dated: 31/12/22

The Divisional Forest officer,

Kullu Forest Division.

Kullu, Distt. Kullu(H.P)

Sub: - Diversion of 0.5705 ha. of forest land(instead of 0.5948 h.a) in favour of Snowfoam Energy Pvt. Ltd for the construction of Hamshu-1 SHEP (2MW) ,within the jurisdiction of Kullu Forest Division ,Distt. Kullu, H.P

Respected Sir,

With reference to the Government of India Ministry of Environment ,Forest & Climate Change letter No 8B/HP/01/52/2020/FC/590 dated 1/12/22 the point wise reply to the observations are as under :-

1. Environmental and Ecological Impacts has been attached and uploaded on the PARIVESH portal.
2. All components has been mentioned in KML file & revised KML file has been uploaded on the PARIVESH portal.
3. Paradi village VLC has been uploaded on the FCA proposal on additional document & as well as attached in this letter.
4. This point is pertaining to your good office please.

You are therefore requested to kindly send the documents to the concerned Authorities for the diversion of Forest Land.

Thanking you Sir.

Kullu

31/12/22

for: Snowfoam Energies Pvt. Ltd.

[Signature]
Authorised Signator

ENVIRONMENTAL AND ECOLOGICAL IMPACT & ASPECTS

14.1 INTRODUCTION

The Hamsu-I Small Hydro Project proposes on Tundi + PharariNallah, in district Kullu, is being envisaged as run of the river type development without any storage of water. The proposed hydro-electric project does not support the aquatic life. The scheme shall not endanger the species of flora and fauna in the area, adequate provision shall be made that the sufficient water is left in the river as the guide line of environmental department. The component of the project are proposed on barren land and very small area of the cultivated land is required for the project the construction of the project facilities also does not involve felling of any tree. The danger of erosion and disturbances of hill slopes is minimal. The present chapter provides information on baseline environmental setting and also attempts a preliminary assessment of impacts likely to accrue during project construction and operation phases. **The chapter also outlines the framework of environmental Management Plan (EMP) as well.**

14.2 ENVIRONMENTAL BASELINE SETTING

The study area can be divided into two parts:

- **Submergence area:** - As there is **no storage structure**, therefore, no submergence is involved. The water shall be diverted through the diversion weir in the khad bed itself, no land shall be submerged. Only very small area of cultivated land is required for the project component.
- **Catchment area:-** Catchment area up to weir site is about 12.11 sq.km of nallah and comprises mainly of gneisses which are by and large quite compact and do not pose problem of possible potential slide in general. The catchment in the upper reaches of nallah is not approachable. It is proposed to provide engineering measure such as contour drainage easing of critical slope etc. whenever required around the project area. A forestation is proposed in the catchment and sufficient provision has been kept for this purpose.

14.2.1 METEOROLOGY

The climate of Beas Basin is affected by the hot tropical weather systems and the cold weather systems known as western disturbances. The western disturbances have their origins near the Mediterranean Sea and move in the westerly wind regime along Himalayan latitudes during the winter season. These disturbances may be in the form of a depression or a low-pressure area or an upper air cyclonic circulation or a trough in lower isobaric levels. These shift to more northerly latitudes as the summer season approaches.

The climate of the project area is characterized by moderately temperate and dry climate. Climatologically, the year can be divided into three distinct seasons. The winter season, which lasts from October to February and is followed by summer season in the month from March to June? The rainfall in the catchment generally takes place during the monsoon months and the catchment experiences snowfall during the

remaining period of the year. The area receives rainfall under the influence of south-west monsoons from July to September.

The temperature continuously increases from March up to the month of June, which is the hottest month of the year. The mean maximum and minimum monthly temperatures in the month of June are 38°C and 21.2°C respectively. January is the coldest month of the year, which the monthly mean of daily maximum and minimum temperatures being 2°C and -6°C respectively.

The annual average rainfall in the project area is 1600 mm. about 70% the annual rainfall is received under the influence of south-west monsoons. The maximum rainfall is received in the months of July and August. Relative humidity is maximum during the monsoon months and ranges from 75 to 86.4%. Likewise relative humidity is minimum in the summer months of April-May with values ranging from 37.6 to 45.2%.

14.2.2 TOPOGRAPHY

The mountain ranges in the Kullu valley lies above 1500-6900m elevations. The nature of the physical features of the project area can be understood from the toposheet.

14.2.3 WATER QUALITY

The proposed hydroelectric project is located on Tundi+Pharari stream. The population density in the project area as well as the catchment area intercepted at the diversion structure site is low. Mainly traditional form of agriculture characterized by low agro-chemical dosing and absence of mechanization ensures that the pollution loading in agricultural runoff is also quite low. There is no water polluting industries in the area. Thus, it can be concluded that apart from sewage generated from settlements, there are no major sources of pollution in the project area. Even during lean season, sufficient water is available for dilution of pollutants. In such streams, water quality is characterized by high DO and low BOD levels. Various cations and anions too are well within the permissible limits, specified for meeting drinking water requirements.

14.2.4 LAND USE

It is observed that major land cover in the Pharari+Tundi catchment up to Pharari SHEP is snow and rocks/non vegetation. There are small pockets of forest and grass/shrub cover mostly along the main river and its tributaries.

14.2.5 VEGETATION

The Himalayan sub-tropical pine forest is the major forest category observed in the project area. Normally, this type of forests occurs between altitude range from 800-1800m. The Himalayan Chirpine forests and Himalayan sub-tropical scrubs are the major sub-types observed for this forest category. Amongst the Himalayan chir Pine forest, Chir Pine (*Pinus roxburghii*) is the dominant species, alongwith associates, e.g., Banj (*Quercus leucotrichophora*), Kainth (*Pyrus pashia*), Phagoora (*Ficus palmate*). In the lower

reaches with dense human population, the tree cover of Himalayan chir pine forests is quite poor as a result of human interferences in the form of three cutting or excessive grazing. Therefore large area of the catchment comprises this type of scrub forests. Shallow soil cover is another reason for stunted tree cover. Species of shrubs observed in this area includes kemal (*Berberis lyceum*), Karer (*rosa macrophylla*), Dharoos (*Celebrookia oppositifolia*) etc. it was observed during field investigations that the regeneration is poor in these forests.

The major floral species observed in the project as well as the study area are given in Table-9.1.

Table-9.1 Major Floral species observed in the project area	
Local Name	Scientific Name
Allocha	<i>Prunus communis</i>
Badda	<i>Sali alba</i>
Talanj	<i>Viburnum cotinifolium</i>
Bav	<i>Quercus leucotrichophora</i>
Bramhi	<i>Taxus baccata</i>
Cheu	<i>Rhododendram arboretum</i>
Chalunj	<i>Populous ciliate</i>
Chil	<i>Prunus armenica</i>
Kemal	<i>Berberis lyceum</i>
Dauri	<i>Toona serrata</i>
Deodor	<i>Cedrus deodara</i>
Goou	<i>Aesculus indica</i>
Haleu	<i>Gornus macrophylla</i>
Jammu	<i>Prusus padus</i>
Khirak	<i>Edits australis</i>
Kharsu	<i>Quercus semicarpifolia</i>
Kurmuru	<i>Albizia jublirissin</i>
Phogoora	<i>Fixus palmate</i>
Makh	<i>Pyrus communis</i>
Piak	<i>Alnus nitida</i>
Ain	<i>Girardiana hetrophylla</i>
Akhre	<i>Rubus febrifuge</i>
Kullui	<i>Diplomorpha cencsceus</i>
Kullui	<i>Flemingia chappar</i>
Punna	<i>Cotoneaster bacillaris</i>
Seo	<i>Malus pumila</i>
Sharoo	<i>Sorbus lavata</i>
Sunnu	<i>Fraxinus florinunda</i>
Rav	<i>Abies pindorw</i>
Tosh	<i>Picea smithiana</i>
Trithu	<i>Euonymus fimbriatus</i>

14.2.6 FAUNA

Himalayan forests have variety of faunal species. However, Forests in the project area is generally degraded and therefore does not support good habitat for wild life. Human interference and agricultural activities also might to be the reason for the poor occurrence of wildlife in the area. There is no National Park, wildlife sanctuary in this area. Therefore, due to less forest cover, difficult terrain conditions, terrestrial fauna is rather limited in due to less forest cover, difficult terrain conditions, terrestrial fauna is rather limited in the study area. The major faunal species reported in the project area are given in Table-2.

TABLE-2	
Major faunal species reported in the project area	
Scientific Name	Local Name
Mammals	
Muntiacus muntjack	Barking deer
Nemorhaedus goral	Goral
Macaca mulatta	Monkey
Canis aureus	Jackal
Vulpes vulpes	Fox
Reptiles	
Ptyas koras	Rate snake
Lycodon sulicus	Walf snake
Varanus bengalensis	Monitor lizard
Birds	
Alectoris gracea	Chakor
Arbosophieo torqueola	Common hill partridge
Genueons hamiltonin	White crested Kalij Pheasant
Catreus wallichi	Cheer pheasant
Lophophorus imajanus	Monal pheasant
Cariornis mecrolophos	Koklash pheasant
Tragopan melanocephalus	The western Horned Tragopan
Tetraogallus himalayensis	Snow cock
Streptopelia decaocto	Indian king dove
Streptopelia chinensis	Spotted dove

14.3 PREDICTION OF IMPACTS

Prediction is essentially a process to forecast the future environmental conditions of the project area that might be expected to occur because of the implementation of the project. Based on the project details and the baseline environmental status, potential impacts as a result of the construction and operation of the proposed project have been identified. A detailed CEIA study is being conducted, which shall cover impacts assessment in detail. The present Chapter however outlines the key impacts likely to accrue as a result of construction and operation of the proposed project.

- Land environment
- Water resources
- Water quality
- Ecology
- Aquatic ecology
- Noise environment
- Ambient air quality
- Socio-economic environment

14.3.1 IMPACTS AND LAND ENVIRONMENT

a) Construction phase Environmental degradation due to immigration of labour population

About 40 workers and 5 technical staff are likely to work in the project area during peak period. Separate accommodation and related facilities for workers, service providers and technical staff are to be provided as a part of the project. Unless adequate measures are taken, the congregation of labour force is likely to create problems of sewage disposal, solid waste management and felling of trees for meeting fuel requirements, etc.

Quarrying operations

A project of this magnitude would require significant amount of construction material. The quarrying operations are semi-mechanized in nature. Normally, in a hilly terrain like Himachal Pradesh, quarrying is normally done by cutting a face of the hill. A permanent scar is likely to be left, once quarrying activities are over. With the passage of time, rock from the exposed face of the quarry under the action of wind and other erosion causing forces, get slowly weathered and after some time, they become a potential source of landslide. Thus it is necessary to implement appropriate slope stabilization measures to prevent the possibility of soil erosion and landslides in the quarry sites.

Operation of construction equipment

During construction phase, various types of equipment will be brought to the site. These include crushers, batching plant, drillers, earth movers, rock bolters, etc. the sitting of these construction equipments would require significant amount of space. In addition, land will also be temporarily acquired, i.e. for the duration of project construction for storage of the quarried material before crushing, crushed material, cement, rubble, etc. Efforts must be made for proper sitting of these facilities. Various criteria for selection of these sites would be:

- Proximity to the site of use
- Sensitivity of forests in the nearby areas
- Wildlife, if any, in the nearby area
- Proximity from habitations.

Efforts shall be made to select the site for locating the construction equipment in such a way that the adverse impacts on environment are minimal. Efforts must be made to site the construction equipment, so that the residents of nearby villages are not adversely affected.

Soil erosion

The runoff from the construction sites will have a natural tendency to flow towards river Beas or its tributaries. For some distance downstream of major construction sites, such as weir, power house, etc. There is a possibility of increased sediment levels which will lead to reduction in light penetration which may have an impact on the primary biological productivity of the affected stretch of the receiving water body. Since, river Beas has sufficient flows, the impact on this account are not expected to be significant. However, some adverse impacts are anticipated on streams and nallahs, which have low flows during lean season.

Problems of muck disposal

The project would generate significant amount of muck due to various operations, including tunneling operations, construction of access roads, etc. the muck needs to be properly disposed otherwise it can lead to significant adverse impacts on environment. Normally muck is disposed along the river bank which ultimately finds its way into the water body, leading to adverse impacts on riverine ecology.

The other option is to dispose muck over low lying areas, preferably over non-forest land. Efforts need to be made so that the site selected for muck disposal has minimum vegetation. After disposal of muck, the site needs to be stabilized using bio-engineering measures. Specific site specific measures shall be suggested as a part of EIA study.

Construction of roads

The project construction would entail significant vehicular movement for transportation of construction material, for construction equipment. Some of the roads in the project area would require widening. The topography of the project area has steep to precipitous slopes which descends rapidly into narrow valleys. Construction of roads in such area can give rise to erosion hazards due to net downhill movement of soil aggregates, if adequate protection measures are not undertaken. Construction of new roads may lead to removal of trees on slopes and re-working of the slopes in the immediate vicinity of road, which may lead to landslides, soil erosion, gully formation, etc. Adequate management measures need to be implemented to ameliorate such impacts.

b) Operation phase

In addition to the submergence area, land will be acquired for the various project appurtenances as well. Detailed investigations are being conducted as a part of the EIA study to ascertain the ownership status of land to be acquired from the project.

14.3.2 IMPACTS ON WATER RESOURCES

Modification of Hydrologic Regime

The construction of dam leads to the formation of a reservoir. The passage of floods through a reservoir leads to the reduction in peak flow. The dry season flow in the river too is regulated. The river stretch downstream of the dam site up to the confluence point of tail race discharge from power house will have reduced flow. The reduction in flow of the river in the intervening stretch is not likely to have any adverse impact on the downstream users. This is mainly because of the fact that settlements/villages within this stretch are not dependent on the water of river Beas, as the villagers use the water of the adjacent flowing streams. However, reduced flow in this river stretch can have adverse impacts on the aquatic ecology.

It is proposed to assess the requirements for minimum flow to maintain the riverine ecology. If the same is not available from nallahs and streams in the intervening stretch, then possibility of downstream releases from the barrage needs to be explored.

14.3.3 IMPACTS ON WATER QUALITY

a) Construction phase

About 30 workers and 3 technical staff are likely to work during project construction phase. However, most of employees/workers during construction phase are likely to be employed from outside the project area. But, the construction phase also leads to mushrooming of various allied activities to meet the demand of immigrant labour population in the project area. Therefore, the maximum increase in the population during construction phase is expected to be of the order of 300. The domestic water requirements of the immigrant population are expected to be of the order of 0.14 mld @ 70 lpcd. It is assumed that about 80% of the water supplied will be generated as sewage. Thus, the total quantum of sewage generated is expected to be of the order of 0.11 mld. The BOD load contributed by domestic sources will be about 90 kg/day. Even if the sewage is discharged without treatment, in river Beas, then the flow required for dilution is of the order of 0.3 to 0.4 cumecs. The minimum flow in river Beas is much higher, higher than this flow. Thus, no major adverse impacts are anticipated as a result of disposal of even untreated sewage from labour camp.

b) Operation Phase Effluent from project colony

In the project operation phase, about 50 families will be residing in the area which would generate about 0.15 mld of sewage. The quantum of sewage generated is not expected to cause any significant adverse impact on riverine water quality. Adequate facilities for sewage treatment including secondary treatment units shall be commissioned to ameliorate whatever marginal impact that is expected to occur.

Impacts on reservoir water quality

The flooding of previously forest and agricultural land in the submergence area will increase the availability of nutrients resulting from decomposition of the vegetative matter. Phytoplankton productivity can supersaturate the euphotic zone with oxygen before contributing to the accommodation of organic matter in the sediments. Enrichment of impounded water with organic and inorganic nutrients will be the main water quality problem immediately on commencement of the operation. However, this phenomenon is likely to last for a short duration of few years from the filling up of the reservoir.

Eutrophication risks

Another significant impact observed in the reservoir is the problem of eutrophication which occurs mainly due to the disposal of nutrient rich effluents from the agricultural fields. The fertilizer use in the project area is negligible, hence, runoff at present does not contain significant amount of nutrients. Even in the post-project phase, the use of fertilizers in the project catchment area is not expected to rise significantly. Thus, in the post-project phase, problems of eutrophication, which is primarily caused by enrichment of nutrients in water, are not anticipated.

14.3.4 IMPACTS ON ECOLOGY

a) Construction phase increased human interferences

As mentioned earlier, about 20 technical staff, workers and other group of people are likely to congregate in the area during the project construction phase. Workers and other population groups residing in the area may use fuel wood (if no alternate fuel is provided) for whom firewood/coal depot could be provided.

Impacts due to increased accessibility

During project operation phase, accessibility to the area will improve due to operation of the project, which in turn may increase human interferences leading to marginal adverse impacts on the terrestrial ecosystem. Since significant increase in human population is not anticipated during project operation phase, adverse impacts of such interferences are likely to be marginal.

a. Operation phase Acquisition of forest land

Land will be acquired for other project appurtenances as well. A part of the land to be acquired for the project could be forest land. Based on the present level of investigations, no rare or endangered species are reported in the project area. Detailed studies will be conducted as a part of the CEIA study to assess the impacts on forests due to the proposed project.

Disturbance to wildlife

During construction phase, a large number of machinery and construction labour will have to be mobilized. This activity may have some disturbance to the wildlife population. The operation of various construction equipment is likely to generate significant noise, especially during blasting. The noise may scare the fauna and force them to migrate to other areas. Likewise, siting of construction equipment, godowns, stores, labour camps, etc. may generally disturb whatever fauna is left in the area. However, no large-scale fauna is observed in the area. Thus, impacts on this account are not expected to be significant. However, few stray animals sometimes venture in and around the project site. Thus, to minimize any harm due to poaching activities from immigrant labour population strict anti-poaching surveillance measures need to be implemented, especially during project construction phase.

Impacts on wildlife migration

Perusal of various faunal species observed in the project area, indicates that there are no migratory faunal species observed in the area. River Beas in the project area, even in the pre-project phase, acts as a barrier to wildlife movement. Thus, construction of the reservoir as a part of the proposed project, it not expected to cause any additional barrier to wildlife movement in the project area.

14.3.5 IMPACTS ON AQUATIC ECOLOGY

a) Construction phase Impacts due to discharge of sewage from labour camp/colony

The proposed hydro-power project would envisage the construction of temporary and permanent residential colonies to accommodate labour and staff engaged in the project. This would result in emergence of domestic waste water which is usually discharged into the river. However, it is proposed to commission appropriate units for treatment of domestic sewage before its disposal in to the river. Due to perennial nature of river Beas, it maintains sufficient flow throughout the year which is sufficient to dilute the treated sewage from residential colonies. Therefore, as mentioned earlier, no adverse impacts on water quality are anticipated due to discharge of sewage from labour camp/colony.

Impacts due to muck disposal

During construction of a river valley project, huge quantity of muck is generated at various construction sites, which if not properly disposed, invariably would flow down the river during heavy precipitation. Such condition can lead to adverse impacts on the development of aquatic life, which needs to be avoided.

Increased human interferences

The increased labour population during construction phase, could lead to increased pressure on fish fauna, as a result of indiscriminate fishing by them. Adequate protection measures at sensitive locations, identified on the basis of fisheries survey in the EIA study shall be implemented.

b) Operation phase

Among the aquatic animals, it is the fish life which would be most affected. The presence of migratory fish species will be ascertained through detailed studies and if present, adverse impacts due to obstruction to their migratory route created by the proposed project will be studied. The dispersal and migration pattern of various species have been ascertained as a part of EIA study to assess the severity of impacts, as a part of EIA study. The findings of the survey shall be suitably incorporated in the EIA study.

14.3.6 IMPACTS ON NOISE ENVIRONMENT

In a hydro-electric project, increase in noise levels is anticipated only during construction phase. Increased noise level is anticipated only during project construction phase, due to operation of various equipment, increased vehicular movement and blasting, etc. It is proposed to conduct detailed noise modeling studies as a part of EIA study to assess the impact on noise level as a result of various construction activities.

14.3.7 AIR POLLUTION

In a hydro-electric projects, impacts on ambient air quality is anticipated only during project construction phase. The impacts occur due to fuel consumption during operation of various construction equipment and emissions from various crushers.

Pollution due to fuel combustion in various equipments

Normally, diesel is used in construction equipment. The major pollutant, which gets emitted as a result of diesel combustion, is SO_2 , even assuming that all the equipment are operating at a common point, is quite low, i.e. of the order of less than $1\mu\text{g}/\text{m}^3$. Hence, no major impact is anticipated on this account.

Emissions from various crushers

The operation of the crusher during the construction phase is likely to generate fugitive emissions, which can move even up to 1 km along the predominant wind direction. During construction phase, one crusher each is likely to be commissioned at the barrage and the power house sites. During crushing operations, fugitive emissions comprising of the suspended particulate will be generated. Since, there are few settlements close to the project site, some adverse impacts on this account are anticipated. The severity of the adverse impact shall be studied through a detailed modeling study, as a part of the EIA study.

14.3.8 IMPACTS ON SOCIO-ECONOMIC ENVIRONMENT

a) Construction phase

Sr. No.	Parameters	Impact	Management Measures	Implementing Agency
1.	Land Environment			
	Construction phase	<ul style="list-style-type: none"> • Soil erosion due to the extraction of construction material from various quarry sites. • Increase in turbidity in the river downstream of dam and power house sites • Creation of stagnant water pool in the dry stretch of river. 	<ul style="list-style-type: none"> • Measures for quarry stabilization to be implemented • Proper collection and disposal of construction spoils. • Minimum flow of water of sustains river in ecology. 	<ul style="list-style-type: none"> • Project proponent • Project proponent • Project proponent
		<ul style="list-style-type: none"> • Temporary acquisition of land for siting of construction equipment & material, waste material, etc. • Increased incidence of water related diseases and other health problems. 	<ul style="list-style-type: none"> • Non-forest area to be used for such purposes to the extent possible • Development of PHC's and proper surveillance 	<ul style="list-style-type: none"> • Project proponent • Project proponent District Public Health Department
	Operation phase	<ul style="list-style-type: none"> • Generation of solid wastes from labour camps/colonies • Acquisition of private, forest and government land. 	<ul style="list-style-type: none"> • Disposal at designated landfill sites. • Compensatory measures shall be suggested as per the ownership category of land. 	<ul style="list-style-type: none"> • Project proponent • Project proponent
2.	Water Resources			
	Operation phase	<ul style="list-style-type: none"> • River stretch from barrage site to tailrace outfall will have reduced flow during lean season. • Moderation of hydrologic Regime. 	<ul style="list-style-type: none"> • Minimum flow will be released to maintain the riverine ecology & dilution of sewage and domestic effluents. 	<ul style="list-style-type: none"> • Project proponent
3.	Water Quality			
	Construction phase	<ul style="list-style-type: none"> • Water pollution due to disposal of sewage from labour colonies. • Disposal of effluents with high turbidity from crushers commissioned at various sites and effluents from adits at tunnel. 	<ul style="list-style-type: none"> • Provision of community toilets • Provision of Sewage Treatment Plant • Provision of settling tanks. 	<ul style="list-style-type: none"> • Project proponent • Project proponent

	Operation phase	<ul style="list-style-type: none"> Deterioration of water quality in the dry stretch of river due to reduced flow during the lean season. Disposal of sewage from project colony. 	<ul style="list-style-type: none"> Minimum flow will be released Commissioning of sewage treatment plant. 	<ul style="list-style-type: none"> Project proponent Project proponent
4.	Terrestrial flora			
	Construction phase	<ul style="list-style-type: none"> Cutting of trees for meeting fuel wood requirements by labour 	<ul style="list-style-type: none"> Provision of community kitchen by the contractors. 	<ul style="list-style-type: none"> Project contractor
5.	Terrestrial fauna			
	Construction phase	<ul style="list-style-type: none"> Disturbance to wildlife due to operation of various construction equipments. 	<ul style="list-style-type: none"> No major wildlife is found, hence impact is not expected to be significant. Detailed assessment to be conducted as a part of the CEIA study. 	
	Operation phase	<ul style="list-style-type: none"> Disturbance to wildlife due to increased accessibility in the area. 	<ul style="list-style-type: none"> No major wildlife is found, hence, impact is not expected to be significant. The impacts to be studied in detail as a part of CEIA study. 	
6.	Aquatic ecology			
	Construction phase	<ul style="list-style-type: none"> Marginal decrease in aquatic productivity due to increased turbidity and lesser light penetration. 	<ul style="list-style-type: none"> Marginal impact, hence, no management measures are suggested. 	
	Operation phase	<ul style="list-style-type: none"> Obstruction in the path of migratory fishes. Profiliation of species adapted to the lacustrine environment. Drying of river stretch downstream of barrage up to tail race outfall. 	<ul style="list-style-type: none"> Development of hatchery for artificial seed production and stocking of reservoir & river stretch Provision of release minimum flow Release of minimum flow 	<ul style="list-style-type: none"> Department of fisheries, Govt. of Himachal Pradesh. Project proponent Project proponent

7.	Noise Environment			
	Construction phase	<ul style="list-style-type: none"> • Increase in noise levels due to operation of various construction equipments. 	<ul style="list-style-type: none"> • Marginal impact, hence, no management measures are suggested. 	-
8.	Air environment			
	Construction phase	<ul style="list-style-type: none"> • Fugitive emissions due to crusher operation at various sites. 	<ul style="list-style-type: none"> • Commissioning of cyclone in each crusher. 	<ul style="list-style-type: none"> • Project contractor
9.	Socio-economic Environment			
	Construction phase	<ul style="list-style-type: none"> • Increase in employment potential. • Acquisition of land and other properties. 	<ul style="list-style-type: none"> • Compensation as per R&R package. 	<ul style="list-style-type: none"> • Project proponent
	Operation phase	Increased power generation and Greater employment opportunities.	-	-

Labour population is likely to migrate in the area during construction phase. Those who would migrate to this area are likely to come from various parts of the country mainly having different cultural, ethnic and social backgrounds. Due to longer residence of this population in one place, a new culture, having a distinct socio-economic similarity would develop which will have its own entity. Job opportunities will improve significantly in the area. The project will open a large number of jobs to the local population.

b) Operation phase

In addition to submergence, land will be acquired for the various project appurtenances as well. Detailed investigations are being conducted as a part of the EIA study to ascertain the ownership status of land to be acquired from the project.

Based on the present level of investigations, the number of project affected families is not available. As a part of EIA study, the number of families likely to lose land will be finalized. In addition, information of any family losing homestead or other private properties shall also be ascertained. Socio-economic survey for the Project Affected Families (PAFs) will be conducted. Based on the findings of the survey an appropriate resettlement and Rehabilitation Plan will be formulated.

9/10/015 (Forest Right Committee khlilhar) वन अधिकार समिति पिछली
अध्यक्षता: श्री अमर चन्द जी उपस्थित 7/10
आज दिनांक 9/10/015 को समय पंचायत पिछलीधार के अध्यक्ष श्री
FRC की मासिक बैठक अध्यक्ष महोदय श्री अमर चन्द जी अध्यक्ष
में हुई जिस में निम्न लिखित सदस्यों ने भाग लिया व
निम्न कार्यवाही अमल में लाई गई।

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| (1) | अमर चन्द जी. सहायक R10 काठोरी | अध्यक्ष |
| (2) | श्रीराज जी. सहायक R10 काठोरी | उपस्थित |
| (3) | बलराम जी. सहायक चन्द R10 काठोरी | Beer Pur |
| (4) | श्री. लाल जी. सहायक चन्द R10 नेरी | श्री. लाल |
| (5) | श्री. लाल जी. सहायक चन्द R10 लुन्ही | श्री. लाल |
| 6 | श्री. लाल जी. सहायक चन्द R10 नेरी | श्री. लाल |
| (7) | अमर चन्द जी. सहायक चन्द R10 लुन्ही | श्री. लाल |

उपस्थित 7/10

प्रस्ताव नं 1: यह बैठक, जो कार्यवाही की जाए →
FRC की मासिक बैठक में सब प्रमुख गुरु लमय
में की गई यह बैठक की कार्यवाही उपस्थित
सदस्यों की समय द्वारा यह कार्य सुनाई जिस
बिना किसी लेखाधन के आमुष्टि की गई

प्रस्ताव नं 2: (Forest Right Committee khlilhar) व
अधिकार समिति पिछलीधार द्वारा संयुक्त-वन अधिक
परती से समी-द्वारा जंगल में आमुष्टि
समय-धी आमुष्टि के लक्ष्य में प्रस्ताव :-

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(नियम 10 और 34 देखें)

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तिथि, मास और वर्ष	उपस्थित सदस्यों का नाम	निष्पादित कार्य का विवरण	Signature of the Panches Present पंचों के हस्ताक्षर
प्रस्ताव नं० ३ :	शुभांग भंडार	पटलीकुइल में अल्पमत दुकान के सन्दर्भ में प्रस्ताव :- सब समझते हैं ग्राम सभा बैठक में यह प्रस्ताव पारित हुआ कि विकास रक्षक नगर के कार्पिलर के लक्ष लगती इमारत शुभांग भंडार में पंचायत के लक्षिकृत कीं की प्लान परिवार के लक्षिकृत व कीं की प्लान के लक्षिकृत प्रदान यशुदा के लक्षिकृत को शुभांग भंडार में करके के प्रवधान पर लक्षिकृत देते हुए अवगत करना गया। इस पर ग्राम सभा बैठक के गहन चर्चा हुई व कीं की प्लान के परिवार में शुभांग भंडार में दुकान मांग देर लक्षिकृत प्रदान करते हुए आगामी कार्पिलर का लिखित उत्तर पारित किया	
प्रस्ताव नं० ५ :	हामेश -I हड़दुल पॉवर प्रोजेक्ट	को अनापत्ति के लक्षिकृत में प्रस्ताव :- ग्राम सभा बैठक में यह प्रस्ताव सब समझते हैं पारित हुआ कि ग्राम पंचायत पिछली घर के अन्तर्गत आने वाला क्षेत्र पहाड़ी नला व तुन्दी नला जो कि कुछ दूरी पर पहाड़ी नला में ही लुप्त रूप से मिलता है, जिस में उक्त लिखित प्रोजेक्ट कंपनी विषय लक्षिकृत 2 मेघा घट पॉवर प्रोजेक्ट का निर्माण कार्य आरम्भ करना चाहती है जिस के लिए दस्तावेज औपचारिकताएं हेतु पंचायत क्षेत्र से लक्षिकृत ग्राम सभा में (NOC) अनापत्ति मांग का विषय ग्राम सभा के समक्ष रखा, जिस में गहन विचार विमर्श एवं चर्चा हुई। ग्राम सभा पिछली घर ने प्रोजेक्ट के अधिकारी को लक्षिकृत अपनी मुख्य मांग रखी व मांग एवं नतीजे की अनुपालना पर लक्षिकृत उपरान्त ही अनापत्ति प्रमाण देने में सहमत है। इस के लक्षिकृत 2 प्रोजेक्ट के लिए लक्षिकृत के लक्षिकृत लक्षिकृत	

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तिथि, मास और वर्ष	उपस्थित सदस्यों का नाम	निष्पादित कार्य का विवरण	Signature of the Panches Present पंचों के हस्ताक्षर
		<p>अभिलेख दुलाई से खम्बी-दुल रोप व लगान जाने तथा बिस्फाटक लगान प्रयोग व रखने हेतु ग्राम सभा को कोई आपत्ति नहीं है बशर्त यह कि रख-रखाव व उपभोग व्यवस्था पूर्ण हो। ग्राम सभा की मांग एवं शर्तों को मानने का इकरारनामा लिखित रूप में होने पर ही अभिलेख को ग्राम सभा माध्यम से प्रदान करती है।</p> <p>ग्राम सभा की शर्तों एवं मांगों निम्न प्रकार हैं।</p> <ol style="list-style-type: none"> 1. गाँव दराल से खम्बी-दुल तक पक्का रास्ता 2. नरगुडी से खम्बी-दुल तक पक्का रास्ता 3. निर्माण पक्का रास्ता एवं नाली सड़क से गाँव परगडी तक 4. सब जैय पैप जल सप्लाई बुजाल नाग से परगडी दराल तक 5. प्रोजेक्ट निर्माण कार्य में निकलने वाले मलबे हेतु डिम्पा साइट की उपलब्धता है 6. प्रोजेक्ट में स्थानीय पुवाओं को रोजगार 7. किसी मानव अधिकार का हनन न हो व लिजेंड लम्ब-दी-मण्डा कुहा में पानी निरन्तर जुगाद रूप से चलता रहे। <p>ग्राम सभा में यह भी निर्णय लिया गया कि उक्त लिखित शर्तों को यदि अनुपालना नहीं हुई तो ग्राम सभा पिछली दार प्रोजेक्ट के निर्माण कार्य को बन्द करने का पूर्ण अधिकार रखेगी।</p> <p>अतः (NOC) अनापत्ति प्रमाण जारी किया जाता है।</p> <p>प्रस्तावक : श्री महेन्द्र नारायण कन्हूवर्शन हारदो पाँच</p>	

Secretary
Gram Panchayat
Dev. Block Naggar Kullu (H.P.)

ग्राम पंचायत

विकास खण्ड.....

जिला.....

the
present
प्रक्षर

तिथि, मास और वर्ष	उपस्थित सदस्यों का नाम	निष्पादित कार्य का विवरण	Signature of the Panches Present पंचों के हस्ताक्षर
	कुल नाम	पिता / पति	गांव
	७ श्रीकाश चंड ४७	शिवरा २५	चतरानी
	(३१) श्रीमद्वारा ६७. दुर्गा		५२६
	(३१) मेधन ५७०. गीताराम		नेत्र
	(५) मीरा ५५. उनेमनाथ २१०		दीप
	(५) माता देवी ५५. मोहनाराम		वाराही
	(६) लाली ५५. मेहरा ५५		रेगिन
	(७) श्रीमद्वारा ६७. दुर्गा		५२६
	(८) मीरा २५ ५५. मोहनाराम		नेत्र
	(९) मोहनाराम ५५. दुर्गा		नेत्र
	(१०) शिवरा ५५. ५५		५२६
	(११) मीरा ५५ ५५. ५५		५२६
	(१२) मीरा ५५. मोहनाराम		५२६
	(१३) मीरा ५५. मोहनाराम		५२६
	(१४) मीरा ५५. मोहनाराम		५२६
	(१५) मीरा ५५. मोहनाराम		५२६
	(१६) मीरा ५५. मोहनाराम		५२६
	(१७) मीरा ५५. मोहनाराम		५२६
	(१८) मीरा ५५. मोहनाराम		५२६
	(१९) मीरा ५५. मोहनाराम		५२६
	(२०) मीरा ५५. मोहनाराम		५२६
	(२१) मीरा ५५. मोहनाराम		५२६

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तिथि, मास और वर्ष	उपस्थित सदस्यों का नाम	निष्पादित कार्य का विवरण	Signature of the Panches Present पंचों के हस्ताक्षर
(22)	कांतू श. चौधरी	R10 नेरी	
(23)	राजदीन श. सु. सु.	R10 पगड़ी	
(24)	दा. सी. देवी ल. अनिरुध	R10 शेमीन	
(25)	मिशन दा. श. श. श.	R10 शाल	
(26)	भारत श. श. श.	R10 पगड़ी	
27	कांतू श. श. श.	R10 पगड़ी	
28	शिव ल. श. श.	R10 पगड़ी	
29	मोश श. श. श.	R10 शाल	
30	पारस श. श. श.	R10 पगड़ी	
31	श्रीने श. श. श.	R10 पगड़ी	
32	श्रीने श. श. श.	R10 पगड़ी	
33	श्रीने श. श. श.	R10 पगड़ी	
34	श्रीने श. श. श.	R10 पगड़ी	
35	श्रीने श. श. श.	R10 पगड़ी	
36	श्रीने श. श. श.	R10 पगड़ी	
37	श्रीने श. श. श.	R10 पगड़ी	
38	श्रीने श. श. श.	R10 पगड़ी	
39	श्रीने श. श. श.	R10 पगड़ी	
40	श्रीने श. श. श.	R10 पगड़ी	
41	श्रीने श. श. श.	R10 पगड़ी	
42	श्रीने श. श. श.	R10 पगड़ी	
43	श्रीने श. श. श.	R10 पगड़ी	
44	श्रीने श. श. श.	R10 पगड़ी	
45	श्रीने श. श. श.	R10 पगड़ी	
46	श्रीने श. श. श.	R10 पगड़ी	

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तिथि, मास और वर्ष	उपस्थित सदस्यों का नाम	निष्पादित कार्य का विवरण	Signature of the Panches Present पंचों के हस्ताक्षर
47	आनन्द शर्मा जल 2 सड़क R10 पञ्चायती		आनन्द शर्मा
48	प्रीतिशर्मा इन. धर्मशर्मा R10 रेजीन		प्रीतिशर्मा
49	मेरी शर्मा इन. पञ्चायती R10 पञ्चायती		मेरी शर्मा
50	अनन्द इन. दुधू शर्मा R10 पञ्चायती		अनन्द
51	दुधू शर्मा इन. वालेशर्मा R10 पञ्चायती		दुधू शर्मा
52	गोविन्द इन. जीतलाल R10 पञ्चायती		गोविन्द
53	Darshan Sharma Supervisor PHC Nagda		Darshan Sharma
54	कुशला देवी लाल. प्रेमचन्द		कुशला देवी
55	कैलाश इन. गेरु लाल R10 डमरु		कैलाश
56	मेहर चन्द इन. डेवरु R10 डमरु		मेहर चन्द
57	मेहर लाल इन. देवी R10 डमरु		मेहर लाल
58	शमला देवी लाल. माधु शर्मा R10 मेरी		शमला देवी
59	माता देवी लाल. माधु शर्मा R10 मेरी		माता देवी
60	प्रेमचन्द इन. माधु शर्मा R10 पञ्चायती		प्रेमचन्द
61	रमणदास इन. पञ्चायती R10 पञ्चायती		रमणदास
62	चन्द इन. देवी R10 डमरु		चन्द
63	भानु लाल लाल. दुधू शर्मा R10 डमरु		भानु लाल
64	लाल लाल लाल. चन्देश्वर R10 डमरु		लाल लाल
65	लाल लाल लाल. लाल R10 डमरु		लाल लाल
66	कविशर्मा इन. लालेश्वर R10 डमरु		कविशर्मा
67	भोवन इन. लाल R10 मेरी		भोवन
68	शिवेश्वर इन. लाल R10 मेरी		शिवेश्वर
69	श्रीकाश इन. लाल R10 मेरी		श्रीकाश
70	लाल लाल. शिवेश्वर R10 मेरी		लाल लाल
71	शिवेश्वर इन. लाल R10 मेरी		शिवेश्वर
72	इतीश्वर लाल लाल R10 मेरी		इतीश्वर

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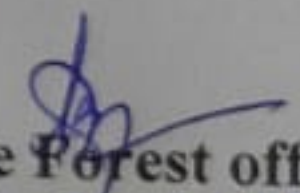
जिला

तिथि, मास और वर्ष	उपस्थित सदस्यों का नाम	निष्पादित कार्य का विवरण	Signature of the Panches Present पंचों के हस्ताक्षर
73	रामेश्वर शर्मा श्री. दिलेश्वर R10 21/2/85		
74	शिवजी लाल शर्मा R10 21/2/85		
75	शिवजी लाल शर्मा R10 21/2/85		
76	शिवजी लाल शर्मा R10 21/2/85		
77	शिवजी लाल शर्मा R10 21/2/85		
78	शिवजी लाल शर्मा R10 21/2/85		
79	शिवजी लाल शर्मा R10 21/2/85		
80	शिवजी लाल शर्मा R10 21/2/85		
81	शिवजी लाल शर्मा R10 21/2/85		
82	शिवजी लाल शर्मा R10 21/2/85		
83	शिवजी लाल शर्मा R10 21/2/85		
84	शिवजी लाल शर्मा R10 21/2/85		
85	शिवजी लाल शर्मा R10 21/2/85		
86	शिवजी लाल शर्मा R10 21/2/85		
87	शिवजी लाल शर्मा R10 21/2/85		
88	शिवजी लाल शर्मा R10 21/2/85		
89	शिवजी लाल शर्मा R10 21/2/85		
90	शिवजी लाल शर्मा R10 21/2/85		
91	शिवजी लाल शर्मा R10 21/2/85		
92	शिवजी लाल शर्मा R10 21/2/85		
93	शिवजी लाल शर्मा R10 21/2/85		
94	शिवजी लाल शर्मा R10 21/2/85		
95	शिवजी लाल शर्मा R10 21/2/85		
96	शिवजी लाल शर्मा R10 21/2/85		
97	शिवजी लाल शर्मा R10 21/2/85		
98	शिवजी लाल शर्मा R10 21/2/85		

BILL OF NET PRESENT VALUE

In respect of diversion 0.5705 hac. area of Forest Land in favour of Snowfoam Energy Pvt. Ltd. for the construction of Hamshu -I SHEP (2MW) within the jurisdiction of Kullu Forest Division, Distt. Kullu H.P.

Name of Project		Construction of Hamshu -I SHEP (2MW)					
Name of User Agency		Snowfoam Energy Pvt. Ltd.					
Sr. No	Name of Forest	Location	Area involved Area in Ha.	Category of NPV	Category of rate for NPV	Rate (Rs.) Per ha.	Amount Net Payable
1.	Hurang-III	Neri Beat Fozal Block Patlikuhai Forest Range	0.5705 hac.	Open Forest	Eco Class-VI	1069470.00	610132.00
(Rs. Six Lakh Ten Thousand One Hundred & Thirty Two Only)							


Range Forest officer
Patlikuhai Forest Range
Patlikuhai Forest Range