POWER TRANSMISSION CORPORATION OF UTTARANCHAL LIMITED

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT REPORT

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CHAPTER I: PTCUL's ENVIRONMENTAL AND SOCIAL POLICY STATEMENT

India has a large projected demand-supply gap and extensive potential for hydropower development. Hydropower generation capacity has lagged behind particularly during the last two decades. Since 1975, the share of hydropower generation capacity has come down to a level of 25% against a desired level of 40%. Therefore, hydropower development is being given priority to improve hydro/thermal mix for optimizing the efficiency of country's power system and usage of resources for sustainable power generation in an environment friendly manner. Apart from being an environmentally clean source of power, hydropower would also provide a peaking power option for the country. Government is showing strong commitment towards hydropower projects and has launched a 50,000 MW Hydro Electric Initiative.

POWER TRANSMISSION CORPORATION OF UTTARANCHAL LIMITED (PTCUL) was established to facilitate transfer of power and to improve the Transmission of electricity system within the state, thus leading to the formation of the State Power Grid. The PTCUL Project in the Phase I of the transmission system and hydropower investments in the Yamuna, Bhagirathi, and Alaknanda river basins. The objectives of PTCUL in the ensuing Asian Development Bank's loan Project is to provide optimized power system expansion of the northern grid and increase the pace of economic development in less-developed regions in Uttaranchal State. The Project supports Government goal of providing affordable universal power service by 2012. The needs of the hour were equitable distribution of energy, augmenting state grid and establishing an overarching grid discipline. PTCUL response was a winning combination of reliability, security and economy. PTCUL believes that these guiding principles must match rising expectations of a cleaner, safer, healthier environment and of people, both affected and benefited by its activities.

1.1.0 PTCUL's goal:

- **Sustainable** use and conservation of natural resources
- **Efficient and safe** technology practices
- **Minimize losses** in energy during transmission
- **Minimize social impacts** such as displacement of people and adverse effects on their livelihood

1.2.0 PTCUL's environmental and social draft policy:

Environmental

- **Avoid** carrying out operations in environmentally sensitive areas with special respect for fragile ecosystems and their inherent biodiversity
- **Consider** environmental variations from rural to urban, forest to open land, from undulating to flat terrain
- **Differentiate** between impacts and balance with practical engineering requirements
- **Abate** pollution in activities and operations
- **Promote** energy efficiency in all its activities and operations

Social

- **Avoid** socially sensitive areas with regard for human habitations and areas of cultural significance
- **Protect** the rights of people affected by PTCUL's projects
- **Involve** local people affected by transmission line projects from inception stage to operation and maintenance
- **Consult** affected people in decisions affecting them be it issues of ROWs, land acquisition or loss of livelihood
- **Encourage** participation when it comes to deciding on routing options and studying environmental and social implications of the projects
- **Pay** special attention to marginalised and vulnerable groups and secure their inclusion in overall public participation

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- **Guarantee** entitlements, compensation and R&R to affected people on the basis of PTCUL's R&R draft policy
- **Secure** appropriate compensation for victims of accidents and proven adverse health impacts
- **Provide** local communities with information on their activities and its environmental and social implications
- **Increase** environmental and safety awareness

1.3.0 PTCUL's operation guidelines:

- **Undertake** suitable analysis of occupational safety and safety of environment and keeping abreast of all potential dangers to people's health.
- **Establish** of preventive mechanisms to guarantee safety
- **Install** appropriate mitigation measures in case of accidents, maintaining the highest standards following both international and national norms on issues of health and safety.

1.3.1 Special Environmental Impact

It is brought to the notice that National Park and Nanda Devi Park are likely to be encountered for the Transmission lines as indicated below:-

- 400 KV DC Tapovan - Kuwaripass line
- 132 KV DC Lata Tapovan - Kuwaripass line
- 132 KV DC Bhinderganga - Kuwaripass line
- LILO of 132 KV DC Bhinderganga - Kuwaripass line at Pulana
- 400 KV DC Kothlibhal - Roorkee line

However, the exact extent of forest shall be known only after detail survey.

Hon'ble Supreme Court approval for the effected forest land in above Wild Life Sanctuaries shall be required. However, alternative routes possibilities shall also be explored during final survey of these lines.

CHAPTER II: POLICY, LEGAL & REGULATORY FRAMEWORK

PTCUL's activities through their inherent nature and flexibility, will have negligible impacts on environmental attributes and a positive impact on the social attributes. Indian laws relating to environmental and social issues have strengthened in the last decade due to realization of the need to protect the habitat from adverse impacts. In addition, commitments emanating from lending funding agencies' directives and guidelines conditions have become more stringent with respect to environmental and social considerations. PTCUL undertakes its activities within the purview of Indian laws keeping in mind appropriate international obligations and guidelines of Indian Environment Protection Act, other prescriptive frameworks, relevant policies and international funding agencies.

2.1.0 ENVIRONMENTAL

2.1.1 MANDATORY REQUIREMENTS (NATIONAL & STATE OF UTTARANCHAL)

- Techno-Economic Clearance by CEA under Electricity (Supply) Act, 1948
- Forest clearance under the Forest (Conservation) Act, 1980

2.1.2 FUNDING AGENCIES

- Environmental Review Assessment (ADB's OM- F F1)

2.1.3 PRESCRIPTIVE FRAMEWORK (NATIONAL & UTTARANCHAL STATE)

- Constitutional Guarantees
- Applicable Legislations

2.1.4 RELEVANT POLICIES

- National Conservation Strategy and Draft policy Statement on Environment and Development, 1992
- Draft policy statement for Abatement of pollution, 1992

2.2.0 SOCIAL

2.2.1 MANDATORY REQUIREMENTS (NATIONAL& UTTARANCHAL STATE)

- Notification under Section 29 of The Electricity (Supply) Act, 1948. (Public Consultation Components)
- Rights of Way And Compensation Under Electricity Laws
- Provisions Under Land Acquisition Act, 1894, as amended in 1984

2.2.2 FUNDING AGENCIES

- *World Bank OD 4.20: Indigenous Peoples*
- *ADB guidelines on Social Dimension ADB OM F2, Om F3*

2.2.3 PRESCRIPTIVE FRAMEWORK (NATIONAL& UTTARANCHAL STATE)

- Constitutional Guarantees
- State-wide Laws and Policies Relating to Land Acquisition and Issues of R&R
  - *Rehabilitation Draft policy December 1998 (THDC)*

2.2.4 RELEVANT POLICIES

- Draft Uttaranchal State Draft policy for Rehabilitation of Persons Displaced as a Consequence of Acquisition of Land
- Draft NGO Position Paper, in response to the above
- Definition of Projects affected persons (PAPs)
- Nature and extent of entitlements.

CHAPTER III : ALAKNANDA & BHAGIRATHI BASINS TRANSMISSION SYSTEM

3.0 INTRODUCTION: -

The Initial Environment Examination Report has been prepared by Power Transmission Corporation of Uttaranchal Ltd. (PTCUL) to comply with the requirements of ADB for its Power Sector Development Loan for the Transmission Improvement project "Transmission system associated with Alaknanda & Bhagirathi basins projects 2876.00 MW HEP being constructed by NTPC, NHPC, THDC and UJVNL at Uttarkashi/Chamoli/Dehradun/Pauri/Rudraprayag districts of Uttaranchal state by the year 2008-2009 to 2011-2012.

The EIA report describes the environment in the State of Uttaranchal, where the proposed transmission project is to be located and various measures that will be taken by PTCUL during design, construction and maintenance stages altogether to avoid and wherever not possible to mitigate the affect on environment of various construction activities – transmission lines and sub-stations. Some of the measures such as line routing and its survey is done by PTCUL.

PROJECT DESCRIPTION & BENEFITS:

The proposed transmission system has been envisaged in consultation with CEA and other beneficiary constituents for the reliable evacuation of 2876 MW Power from Lohari Nagpala and Pala Maneri Hydro Electric Projects and all lines of Alaknanda basin of NTPC & UJVNL for further distribution among beneficiary states. The first unit of this project is scheduled to be commiss oned within 11th plan followed by subsequent units at the interval of six months.

Transmission system for these projects is of a regional state level collaboration as the power from these projects would be shared by Uttaranchal and other Northern region states such as Delhi, Himanchal Pradesh, Punjab, Rajasthan, Haryana and Uttar Pradesh. These will be connected intrastate through the proposed transmission system and through existing lines/interconnection to other regions. Techno-Economic clearance of the proposed project has been obtained from Central Electricity Authority (CEA) vide its order dt. February 2004.

3.1 SCOPE OF WORK:

The transmission system for HEP projects such as Kothli Bahal, Lohari Nagpala, Pala Maneri, Lata Tapovan, Tapovan Vishnugad, Vishnugad (Pipalkoti), Bawala Nand Prayag, Bhinderganga, Pulana, Hanol Tuni, Tuni, SHP's rear Morie, Barkot, Baranwara and Melkhet substations includes the following:

a) Transmission Lines

(i)	400 KV DC Lohari Nagpala - Koteshwar	90 Kms
(ii)	LILO of 400 KV DC Lohari Nagpala - Koteshwar at Pala Maneri	2x8 Kms
(iii)	400 KV DC Kothlibahal - Roorkee	114 Kms
(iv)	400 KV DC Tapovan - Kuwaripass	10.5 Kms
(v)	400 KV DC Kuwaripass - Srinagar	125 Kms
(vi)	400 KV DC Kuwaripass - Karanprayag	65 Kms
(vii)	LILO of 400 KV Kuwaripass - Karanprayag at Vishnugad Pipalkoti	2x2 Kms

(viii)	400 KV DC Srinagar PH - 400 KV Srinagar S/s	9 Kms
(ix)	132 KV DC Lata Tapovan - Kuwaripass	21 Kms
(x)	132 KV DC Karanprayag - Bawla Nandprayag	20 Kms
(xi)	132 KV DC Bhinderganga - Kuwaripass	10 Kms
(xii)	LILO of 132 KV DC Bhinderganga - Kuwaripass at Pulana	2x2 Kms
(xiii)	400 KV SC Srinagar – Kashipur line	155 Kms
(xiv)	400 KV DC Karanprayag – Almora line	85 Kms
(xv)	220 KV DC Roorkee to Roorkee line	35 Kms
(xvi)	132 KV DC Hanol Tuni - Khodri PH Line	80 Kms
(xvii)	LILO of 132 KV Hanol Tuni – Khodri line at Arakot Tuni	2x8 Kms
(xviii)	132 KV DC Baranwara – Srinagar line	66 Kms
(xix)	132 KV DC Barkot - Khodri line	50 Kms
(xx)	132 KV DC Morie - Barkot line	50 Kms
(xxi)	132 KV DC Melkhet - Karanprayag line	61 Kms

b) Sub-Stations (S/S.)

(i) New 400 KV S/s. at Roorkee and associated lines of Alaknanda & Bhagirathi Basins.
(ii) New 400 KV S/s. at Kuwaripass, Karanprayag, Srinagar, Almora and associated lines of Alaknanda & Bhagirathi Basins.
(iii) New 132 KV S/s. at Morie, Barkot, Melkhet, Baranwara and associated lines of Alaknanda, Yamuna & Bhagirathi Basins.

3.2 DESCRIPTION OF ENVIRONMENT:

The main assumption for the project is that the Transmission lines as proposed under the Project will mainly pass through the state of Uttaranchal. The base line data on general conditions as well as environmental details in brief of the above-referred states are described below:

As per discussions with ADB TA Mission only two core projects namely Bhagirathi & Alaknanda Basins have been currently considered for detail analysis.

3.2.1 UTTARANCHAL : -

General Physiography:

1.1 The Uttaranchal State was formed on 9.11.2000 as a result of bifurcation of Uttar Pradesh. It extends over an area of 58848 Sq. km. which generally lies between North Latitude of 28 deg. 50 min. to 31 deg. 20 min and East longitude 77 deg. 40 min to 81 deg. It is bounded by Tibet (China) on North, Himanchal Pradesh, Haryana and Uttar Pradesh (part) on the west, Uttar Pradesh (part) in Southland Nepal towards its East.

1.2 The State has been divided into 13 Districts, namely Uttarkashi, Chamoli, Dehradun, Tehri, Pauri Garhwal, Haridwar, Rudraprayag, Pithoragarh, Bageshwar, Almora, Nainital, Udham Singh nagar and Champawat. The area of the State of Uttaranchal lie mainly in Himalaya region.

1.3 Among the major rivers which account for drainage area of Uttaranchal State, Yamuna, Bhagirathi, Alaknanda & Dhauliganga etc. are important.

1.4 The brief particulars of above major rivers and their principal tributaries of Uttaranchal are given below:

1	Yamuna	Rupin, Tons, Pabbar,
2	Bhagirathi	Bhilangana
3	Alaknanda	Mandakini, Dhauliganga, Pinder Gohua Tal, Birhiganga
4	Ramganga	Kosi, Ladhiya Dhela
5	Sarda	Lidhiya Nandhaur Deoha Gola

Water Resources: Hills & Plains of Uttaranchal are watered by big rivers like Ganga, Yamuna, Tons, Alaknanda, Bhagirathi, Sharda etc. and by smaller rivers like Banas, Saraswati and Damanganga.

ECOLOGICAL RESOURCES:

- ***Tropical moist Deciduous Forest:*** These forests occur in the regions having an annual rainfall of over 1200 mm and are found in the Northern & Eastern part of the state in all the districts. These forests form the main source of commercial timber in the state. Teak, Haldu, Sisam, Khair, Katas, Manvel, Devdar *etc.* are the main species of these forests.
- ***Tropical Dry Deciduous Forest:*** These forests thrive in the region having the rainfall between 600 mm to 1200 mm. These forests are found in the northern part of the state.

The forests are mostly distributed in Northern & Eastern parts of the state. The main forest formations in the state are of teak, devdar and sal. Where annual rainfall approaches 40 inches - the Chamoli & Pithoragarh tablelands and north-eastern mainland - such deciduous species as teak, catechu (cutch), bakligum, axlewood, and Bengal kino (butea gum) are found. Deciduous forests are concentrated in the wetter northern and eastern hills. They produce valuable timbers like woolly tomentosa, Vengai padauk (resembling mahogany).

The maximum forest cover is recorded from Chamoli district having 16.51% of forest and minimum forest cover of only 0.56%, has been recorded from Udham Singh Nagar District.

The common Sp.of animal fauna in the region are Bhutiya Dog, Tiger, Leopard, Sambhar, Jackal.

The lines of proposed transmission system shall pass through mainly four district of this state having forest cover ranging from 0.1% to 6.34%. (The ratio of cutting of No. of trees per Sq. Km. forest land shall be on an average 1:60) It may be noted from the table below that most of the forest cover in the said districts is covered under reserve forest category i.e the forest is degraded in nature having less than 40% canopy density, routing of lines through these forest may not cause further degradation of forest resources.

Details of forest cover of these districts are as follows:

In Sq.Km

District	Geographic area	Dense forest	Open forest	Total	% Forest Cover
Uttarkashi	8016	1	10	11	0.14
Tehri	3796	1	5	6	0.16
Dehradun	3088	1	3	4	0.16
Haridwar	1994	2	12	14	0.71
Pauri	5397	2	10	12	0.20
Rudraprayag	2252	2	10	11	0.49
Chamoli	7626	5	12	17	0.22
Nainital	4767	3	10	13	0.27
Udhamsingh Nagar	2027	1	3	4	0.20

Source: based on primary survey

Fishery:

Data on fishery :

Data are being collected for fish catch centers in Uttaranchal State areas from College of Fishery Pantnagar and shall be supplied in due course of time. However, based on primary survey the fisheries are not available along routes of Transmission lines. Actually all such places are situated at about 1000 m and above sea level; therefore, there is no possibility of fishery. As such there shall not be any chances of change in genetic structure of fishes etc in construction of Transmission lines.

Commercial fishery :

Data's are being collected for fish catch centres in Uttaranchal State areas from College of Fishery Pantnagar and shall be supplied in due course of time.

Fish catch : Data's are being collected for fish catch centers in Uttaranchal State areas from College of Fishery Pantnagar and shall be supplied in due course of time.

Aquatic/Fish Life Data

Hydropower site	Fish ladder for migration	Stocking of fish (up/down stream)	Catch data	% of Water availability on Downstream	Discharge from adjoining colonies
Pala Maneri	None	Yes	Are being collected	Minimum 2 cusecs	Negligible
Srinagar	None	None	Are being collected	Minimum 3 cusecs	Negligible

Data on water quality :

At all the places in hilly areas, wherever the Transmission lines are crossing the rivers, the flowing water is as pure as distilled water. Generally in hills the water is pure.

Water Quality in Different River basins

Parameters	BIS Limit (Drinking Water)	Bhagirathi River near Gangotri	Tone River near Tuni village	Alaknanda River near Badrinath
Appearance	Colorless	Colorless	Colorless	Colorless
Odour	Unobjectionable	Odourless	Odourless	Odourless
PH Value	6.5 - 8.5	7.8	7.70	7.80
Total dissolved Solids (mg/l)	500	54	114	10
Hardness (mg/l)	300	30	60	50
Dissolved Oxygen (mg/l)		10.2	9.8	9.5
Biological Oxygen Demand (mg/l)		1.0	5.6	4.0

Chemical Oxygen Demand (mg/l)		4.0	60.0	4.0
Nitrates (mg/l)	45	0.013	1.5	0.12
Sodium (mg/l)		4.0	6.0	0.5
Total Kjeldhal Nitrogen (mg/l)		1.6	1.8	1.5
Total Alkalinity (mg/l)	200	8	55	10
Sulphates (mg/l)	200	1.6	9.8	1.8
Calcium (mg/l)		5	6	4
Magnesium (mg/l)		30	31	28
Chlorides (mg/l)	250	10	5	12
Fecal Coliforms (mph/100 ml)	NIL	377 mph/100 ml	4 mph/100 ml	258 mph/97 ml
Total Coliforms (mph/100 ml)	NIL	17500 mph/100 ml	23 mph/100 ml	18400 mph/99 ml
Turbidity (NTU)	5	9.2	11.0	9.0

Data on Air quality :

The air quality data after collecting from Statistical Dpartment shall be supplied at the time of implementation of project. However, air quality is very pure and good for health. In hilly regions no such type of Industries are available which create pollution. Moreover availability of forest itself keeps the air and atmosphere pure and cleaner.

Impact Assessment:

To help transform the environmental impacts before and after the project, weighing exercise was carried out as follows:-

S. No.	Parameter	Average Overall Transmission Project Environmental Impact Units (In case of Substations)			
		Without Project	With Project	Net Change	Magnitude
1.	Crops	0	5%	5%	Medium
2.	Natural Vegetation	0	5%	5%	Medium
3.	Land use	0	5%	5%	Medium
4.	Forests	0	0	0	Medium
5.	Natural Reserves Sanctuaries	0	0	0	Medium
6.	Fisheries	0	0	0	Medium
7.	Eutrophication	0	0	0	Medium
8.	Wildlife	0	0	0	Medium
9.	Rare Species	0	0	0	Medium
10.	Endangered Species	0	0	0	Medium
11.	Species Diversity	0	0	0	Medium
12.	Minerals	0	0	0	Medium
13.	Water Pollution	0	0	0	Medium
14.	Air Pollution	0	0	0	Medium
15.	Noise Pollution	0	10%	10%	Medium
16.	Solid Waste	0	0	0	Medium
17.	Land Pollution	0	0	0	Medium
18.	Soil Erosion	0	20%	20%	Medium
19.	Health	0	10%	10%	Medium
20.	Benefits to Economy	5%	90%	85%	Medium
21.	Displacement of people	0	20%	20%	Medium
22.	Employment opportunities	5	90%	85%	High
23.	Infrastructure	0	80%	80%	High

24.	Hydrological Balance	0	0	0	Medium
25.	Social Upliftment	5	90%	85%	High
26.	Aquaculture Potential	0	0	0	Medium
27.	Archaeological Monuments	0	0	0	Medium
28.	Water Availability	0	80%	80%	High
29.	Siesmicity	80%	90%	10%	High
30.	Alignment	0	0	0	Medium
31.	Tourism	50%	90%	40%	High

Magnitude Range : 0% - No Impact, up to ± 20% - Low, ± 21% to ± 40% - Medium, ± 41% to ± 70% - High and ± 71% to ± 100% - Severe. Based upon the above impacts, it could be concluded that the proposed project has overall positive impact of high magnitude.

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		Without Project	With Project	Net Change	Magnitude
1.	Crops	0	5%	5%	Medium
2.	Natural Vegetation	0	5%	5%	Medium
3.	Land use	0	5%	5%	Medium
4.	Forests	0	41%	41%	Medium
5.	Natural Reserves/Sanctuaries	0	20%	20%	Medium
6.	Fisheries	0	0	0	Medium
7.	Eutrophication	0	0	0	Medium
8.	Wildlife	0	5%	5%	Medium
9.	Rare Species	0	0	0	Medium
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13.	Water Pollution	0	0	0	Medium
14.	Air Pollution	0	0	0	Medium
15.	Noise Pollution	0	5%	5%	Medium
16.	Solid Waste	0	0	0	Medium
17.	Land Pollution	0	0	0	Medium
18.	Soil Erosion	0	20%	20%	Medium
19.	Health	0	40%	40%	High
20.	Benefits to Economy	0	90%	90%	High
21.	Displacement of people	0	0	0	Medium
22.	Employment opportunities	0	90%	90%	High
23.	Infrastructure	0	70%	70%	High
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Note: These data are given in this format to match with such reports from Hydro Electric Projects such as Pala Maneri.

HUMAN AND ECONOMIC DEVELOPMENT:

Uttaranchal having an area of 53,204 Sq. km. constitutes 1.55% of the geographical are the country and a population of 7050634 which is about 1.25% of total population of India. Out which 23.10% is urban population and 76.9% is rural population. The basic composition of above population is 89.5% Hindus, 3.5% Muslims, 0.3% Christians, 0.01% Sikhs and 6.64% others. The literacy rate in the state is about 45.5% and sex ratio is 1000 male & 921 female. The per capita income of Uttaranchal is approx. Rs. 4,500/-.

State of Economy: Electrified villages: 85.02%: Power (installed capacity): 980.85 MW: Industrial employment: 7.07 lakh: No. of industrial units:16,048: SSI units:1,70,000:People per phone:58.52: Road length:72,950 Km (98-99): Domestic airports:10: Ports:41:Inflation:9%.

Important cash crops are grapes, timber, sugar cane, rice, mangoes and bananas. The total foodgrains production during 1993-94 was 37.36 lakh tones that of groundnut 6.77 lakh tones and cotton 16.23 lakh bales. The chief food crops of the state are paddy, wheat bajra, Jowar and maize. New industries, which are coming up, are chemicals, petrochemicals, fertilizers, drugs and pharmaceuticals, dyestuffs and engineering units of multiple types. The state is a producer of inorganic food products such as rice etc.

Data on workers and employment :

During implementation of this Integrated Transmission System in Hilly area of Garhwal and Kumaon, the employment of the peoples of the respective areas shall be employed by department and different implementation agencies.

More than thousands of persons shall be engaged in this project, and many of good workers which may be absorbed at suitable places after completion of project for operation and maintenance purpose.

Employment : 37 % of Uttaranchalis are defined as workers in relation to the rest of the population. There is a perceptile increase in the proportion of marginal workers from six to 10 % from 1991 to 2001 (and decline in the proportion of main workers). There is another aspect too : the highly qualified people of Uttaranchal leave the State for better employment / business opportunities." This is adversely affecting the State in launching any ambitious scheme due to the paucity and unavailability of indigenous human resources."

Distribution of the Working Population

Sl No	Type of workers	Rural (Male)	Rural (Female)	Rural (Total)	Jrban (Male)	Urban (Female)	Urban (Total)	Total (Male)	Total (Female)	Grand Total
1	**Main Worker**	**1123925**	**621637**	**1745562**	**515317**	**61468**	**576785**	**1639242**	**683105**	**2322347**
2	Main Cultivator	522717	533189	1055906	8286	3455	11741	531003	536644	1067647
3	Main Agriculture Worker	113792	18642	132434	9007	1183	10190	122799	19825	142624
4	Main Household worker	25834	11220	37024	9101	2902	12003	34905	14122	49027
5	Main Other Worker	461612	58586	520198	488923	53928	542851	950535	112514	1063049
6	**Marginal Worker**	**312786**	**440494**	**753280**	**44149**	**14260**	**58409**	**356935**	**454754**	**811689**
7	Marginal Cultivator	152742	347554	500296	677	1496	2173	153419	349050	502469
8	Marginal Agriculture worker	64197	47889	112086	3498	1475	4973	67695	49364	117059
9	Marginal Household Worker	7590	12231	19830	1240	2351	3591	8639	14582	23421
10	Marginal Other worker	88248	32820	121068	38734	8938	47672	126982	41758	168740
11	**Total Worker**	**1436711**	**1062131**	**2498842**	**559466**	**75728**	**635194**	**1996177**	**1137859**	**3134036**
12	**Non Worker**	**1707879**	**2103554**	**3811433**	**621868**	**922012**	**1543880**	**2329747**	**3025566**	**5355313**
13	**Total population**	**3144590**	**3165685**	**6310275**	**1181334**	**997740**	**2179074**	**4325924**	**4163425**	**8489349**

CHAPTER IV: PTCUL APPROACH FOR ROUTE SELECTION

4.0 ROUTE SELECTION - (ASSESSMENT & MANAGEMENT PROCESS)

At the planning stage itself, one of the factors that govern the establishment of the transmission system in the state is the infringement of forest area. Wherever such infringements are substantial, different alternative options are to be considered. While identifying the transmission system for a generation project or as a part of State Power Grid, preliminary route selection is done by PTCUL based on the Topo sheets of Survey of India and Forest Atlas (Govt. of India's Publication).

During route alignment all possible efforts are made to avoid the forest area infringement completely or to keep it to the barest minimum. Whenever it becomes unavoidable due to the geographical locations/terrain, mitigation costs have involved towards avoidance needs to be worked out.

4.1.1 *PTCUL approach towards Route selection*

For selection of optimum route, the following points are taken into consideration:

(i) The route of the proposed transmission lines does not involve any human rehabilitation.
(ii) Any monument of cultural or historical importance is not affected by the route of the transmission line.
(iii) The proposed route of transmission line does not create any threat to the survival of any community with special reference to Tribal Community.
(iv) The proposed route of transmission line does not affect any public utility services like playgrounds, schools, other establishments etc.
(v) The line route does not pass through any sanctuaries, National Park etc.
(vi) The line route does not infringe with area of natural resources.

In order to achieve this, PTCUL undertakes route selection for individual transmission lines in close consultation with representatives from State Forest Department, the Ministry of Environment and Forests and the Department of Revenue. Although under National law, PTCUL has right of eminent domain (Indian Electricity (Supply) Act, 1948, Section-42) yet alternative alignments are considered keeping in mind the above-mentioned factors during site selection, *with minor alterations often added to avoid environmentally sensitive areas and settlements at execution stage.*

- As a rule, alignments are generally cited 10-15 km away from major towns, whenever possible, to account for future urban expansion.
- Similarly, forests are avoided to the extent possible. When it is not possible, a route is selected in consultation with the local Divisional Forest Officer that causes minimum damage to existing forest resources.
- Alignments are selected to avoid wetlands and unstable areas for both financial and environmental reasons.

In addition, care is also taken to avoid National parks and sanctuaries and any other forest area rich in wild life.

Keeping above in mind the routes of various lines under Alaknanda & Bhagirathi Basins, the Transmission system has been so aligned that it takes care of above factors. As such different alternatives were studied with the help of Govt. published data like Forest atlas, Survey of India topographical maps etc. to arrive at most optimum route which can be taken up for detailed survey and assessment of environmental & social impacts for their proper management.

CHAPTER V : ENVIRONMENT IMPACT ASSESSMENT OF ALAKNANDA & BHAGIRATHI BASINS GENERATION PROJECT AND PUBLIC CONSULTATION

5.0 INTRODUCTION

As per MOE&F guidelines, Hydro projects are covered under Schedule-I of Environmental (Protection) Act 1986 which stipulates that all such project require prior approval of GOUA GOI (MOE&F) for taking up project activities. This act is comprehensive in nature and supplements existing law on pollution control, lays down standard for the quality of environment and restricts areas in which industrial activity can be carried out. A study on Environment Impact Assessment (EIA) of all such projects is required for the processing of proposal of Environmental Clearance. The major environmental discipline covered under EIA studies includes impact on Air, Water, Noise, Soil, Land use Socio-economic, terrestrial ecology, aquatic ecology and health etc. It will require development of a comprehensive Environment Management Plan (EMP) including safeguards and control measure propose to prevent, mitigate environmental impact, rehabilitation plan, afforestation plan and Environmental monitoring plan during operation of the project, occupational safety and health, Risk Assessment and Disaster Management Plan.

5.1.1 Environmental Social Draft policy & Procedures

As regard transmission projects, which are not covered under the said notification, it is not mandatory. However, PTCUL ESPP had made public consultation as an integral and important part of its project cycle. Public is consulted/informed at every stage of project execution, may it be transmission line routing or construction of sub-station. Whenever, a transmission system is planned and put up for Government's approval, a Gazette Notification of the Transmission Scheme is made in State Gazette under Section 29(II) of the Electricity (Supply) Act, 1948 along with the details of the schemes including the locations (Villages/Towns) from which it is likely to pass. These are also published in daily newspapers of the area for inviting opinion/objections of Public within stipulated period to redress their apprehensions. Wherever the objections/suggestions received are found feasible, they are incorporated/adopted in consultation with the public. During survey also PTCUL's site officials meet people and inform them about the routing of transmission lines. During the construction, every individual, on whose land tower is erected and people affected by ROW, are consulted.

For the proposed projects covered under the report, publication of Gazette Notification under Section 29 (II) of the Electricity (Supply) Act, 1948 and notice through local newspapers. Apart from this, public consultation using different technique like Public Meeting, Small Group Meeting, informal Meeting as per **Draft Environmental Social policy & Procedures of PTCUL (ESPP)** have also been carried out during different activities of project cycle. During such consultation the public was informed about the project in general and in particular about the following:

- complete project plan (i.e. its route and terminating point and substations, if any, in between);
- PTCUL design standards in relation to approved international standards;
- health impacts in relation to EMF;
- measures taken to avoid public utilities such as school, hospitals, etc.;
- other impacts associated with transmission lines and PTCUL's approach to minimizing and solving them;
- land acquisition details, proposed R&R measures and compensation packages in line with PTCUL's draft policy;
- Trees and crop compensation process

5.1.2 Public Consultation:

The people in general had no objection to upcoming of transmission project. However, at few locations people have shown some reservation on passing of the line through their field particularly about the placing of tower. But they were told that status of their land will not change as the land is not acquired by the PTCUL and they may keep utilising land for growing crops even after construction of transmission line. It was told to them that re-routing of line wherever possible shall be considered during final/detailed survey to minimise the loss of crop trees/structures etc. They were briefed about the importance off the project for the country and for their own state. They were also explained about the criteria for deciding the route alignment for the proposed system.

Another major query that was encountered at every places pertains to compensation to their land, crops, trees etc. They were informed that all damages during construction like foundation, tower erection, stringing and operation stage will be compensated at the prevailing market rate after due assessment of damages immediately. They were also informed that orchards will be avoided completely as far as possible by using extension tower.

People also demanded that electricity be given to their villages from the proposed line of the project but were explained in detail about the problem of high voltage line as well as about the PTCUL role in transmitting/supplying of power vis a vis distribution of power by concerned electricity boards. At few places, particularly in areas near to town people enquired about safety from high voltage transmission lines. It was explained to the local residents that PTCUL was following the approved international standards and design of high voltage transmission lines, which are absolutely safe. They were also informed about the studies carried out by different countries on the safety of EHV lines in reference to EMF affect. They were also informed that **PTI, USA** and **CPRI, Bangalore** have also carried out such studies on PTCUL design and have inferred that the PTCUL design are safe and follow the required international standard. The process of such consultation would be continued during project implementation and even during O&M stage.

CHAPTER VI: SCREENING OF POTENTIAL ENVIRONMENT IMPACT AND MITIGATIVE MEASURES

6.0 Impact Due to Project Location and Design

Potential environmental impacts of transmission lines must be avoided or mitigated through careful route and site selection as explained above. The explanations in brief with regard to specific environment review criteria are as follows:

(i) Resettlement

PTCUL will ensure all possible care during the line routing stage itself to avoid settlements such as cities, villages etc. keeping in mind that no land must be acquired for tower foundation as per existing law and that the project does not require any resettlement of local inhabitants. Project envisages construction of 8 Nos. substations located at Kuwari Pass, Karanprayag, Srinagar, Almora, Barkot, Morie, Melkhet and Baranwara for which suitable site involving minimum social impact have been selected (Details in Social checklist).

(ii) Land value depreciation

Based on past experience land prices are generally expected to rise in the areas receiving power. Further, transmission lines generally pass through uninhabited area, agriculture fields and forests, where the land-use is not going to change in foreseeable future. Infact, it is anticipated that the value of land will appreciate in areas where substations are set up because of potential of business activities in the vicinity.

(iii) Historical/cultural monuments/value

PTCUL shall finalize a particular route alignment which will avoid all the historical and cultural monuments. As per the preliminary assessment carried out currently in consultation with State revenue authorities and ASI, there are no such monuments are coming in the proposed route alignment.

(iv) Encroachment into precious ecological areas

All precautions have been taken to avoid routing of line through forest and ecological sensitive areas and National park/Sanctuaries. In spite of this, it was not possible to avoid reserved forest and National Parks areas completely in this project. The route of the proposed transmission line is being finalized that will affect minimum forest area, which has also been certified by concerned Divisional Forest Officer (DFO). As can be seen from the above referred tables (para-4.1.2), of the total transmission line of 1101.5 Kms, about 537 Kms (48.75% only) length shall pass through forest land consisting of 2137.55 Ha. forest area in the Uttaranchal state. Most of forests to be traversed by the lines are already heavily degraded and the wildlife species that are present there have adapted to open or disturbed habitat. Therefore with provision of Compensatory Afforestation the overall forest status will in many cases improve. Nonetheless, to mitigate losses to existing forests, clearing of the transmission line Right-Of-Way will be done under supervision of Forest Department, and some low canopy seed trees and shrubs may be kept intact if they do not interfere with tower erection and line installation. The wood will be sold by the Forest Department, who will also retain the sale proceeds. Three-meter wide strips of land under each conductor will be cleared and maintained as maintenance rows, but the remaining land will be allowed to regenerate. Lopping of trees to maintain line clearance will be done under the direction of Forest Department. PTCUL will provide construction crews with fuel wood or alternative fuels as a precaution against collection of fuel wood from nearby forest. Transmission lines can serve as new access routes into previously inaccessible or poorly accessible forests, thereby accelerating forest and wildlife loss. In such cases, PTCUL cannot take action itself, but local Forest Department personnel will normally assess the dangers and take appropriate action, such as establishing guard stations at the entrance to the forest. Given the already easy access and degraded conditions at the proposed projects sites, this problem is not expected to be encountered. Nonetheless, PTCUL staff will report to the Forest Department any noticeable encroachment induced by the Projects.

(v) Encroachment into other valuable lands

Impacts on agricultural land will be restricted to the construction phase and when large-scale maintenance measures are required. Some stretch of the line will pass through Agricultural fields. Agricultural land will be lost at the base of the tower, which is estimated to be 0.2-1 sq. m per average farm holding. In areas where lines will traverse agricultural land, compensation will be paid to owners for any crop damage incurred as a result of construction activities. PTCUL field staff will consult affected villagers and local revenue department and apprise him about the project and tower location, which shall be erected in the agricultural land, for compensation. Revenue department

after evaluating the loss due to construction activity and productivity of land will arrive at the compensation cost which is paid to farmer. Agricultural activities will be allowed to continue following the construction period. If bunds or other on-farm works are disturbed during construction or maintenance, they will be restored to the owner's satisfaction following cessation of construction or maintenance activities. In the event that private trees are felled during construction or maintenance operations, compensation will be paid to the owner in an amount determined by the estimated loss of products from the tree over an eight year period (for fruit bearing trees). Agricultural lands under private ownership will be identified, and in accordance with normal PTCUL procedures compensation will be paid to the affected villagers.

(vi) **Interference with other utilities and traffic**

As per regulations enacted by Government of India and Uttaranchal, it is mandatory for PTCUL to seek clearance prior to construction from department of Railways, Telecommunications and wherever necessary from aviation authorities that are likely to be affected by the construction of transmission lines. The transmission lines affect nearby telecommunication circuits by causing electrical interference. A standing committee - Power Telecom Co-ordination Committee (P.T.C.C.) has been constituted by Government of India to plan and implement the mitigating measures for the induced voltage which may occur to nearby telecom circuit and suggest necessary protection measures to be adopted. The committee suggests measures like rerouting of the telecom circuits, conversion of overhead telecom circuits into cables etc. to minimize the interference. The cost of such measures is determined by the Committee and is shared by PTCUL and Telecom Department on the basis of prevailing norms and guidelines. Though the exact cost to mitigate the impacts of induction in neighboring telecom circuits would vary from case to case. Wherever transmission line crosses the railways, clearance is taken from that department. In general, the system is planned and executed in such a way that adequate clearance is maintained between transmission lines on the one hand, and railways, civil aviation and defense installations on the other. Wherever the transmission lines passes near the airport, the towers beyond specified height are painted in alternate orange and white stripes for easy visibility and warning lights are placed atop these towers.

(vii) **Interference with drainage pattern**

As the transmission lines are constructed aerially and the blockage of ground surface is limited to area of tower footprint which is very small, there is little possibility of affecting drainage pattern. In the infrequent instances where the drainage is affected, flow will be trained and guided to safe zones.

6.1 Environmental Problems Due to Design

(i) **Escape of polluting materials**

The equipments installed on lines and substations are static in nature and do not generate any fumes or waste materials.

(ii) **Explosion/fire hazards**

During the survey and site selection for transmission lines and sub-stations, it has been ensured that these are kept away from oil/gas pipelines and other sites with potential for creating explosions or fires. Fires due to flashover from lines can be a more serious problem in forest. Since no reserved forest is involved in the proposed project it is not going to be a problem. However, regular lopping of trees in the ROW will be carried out with the help of Forest Department and PTCUL to ensure that the required clearances are maintained throughout the stretch so that the chances of fire due to flash are avoided.

(iii) **Erosion hazards due to inadequate provision for resurfacing of exposed area**

Adequate measures are taken to re-surface the area where excavation works are done. Topsoil disturbed during the development of sites will be used to restore the surface of the platform. Infertile and rocky material will be dumped carefully at selected dumping areas and used as filling for tower foundations.

(iv) **Environmental aesthetics**

Since spacing between the towers in case of both 400 KV & 132 KV lines is approx. 200 meters these will not affect the visual aesthetics of the localities particularly when it is ensured to route the lines as far away from the localities as possible. PTCUL takes up plantation of trees to buffer the visual effect around its substations and to provide better living conditions. Wherever PTCUL feels it appropriate, discussions will be held with local Forest Department officials to determine feasibility of planting trees along roads running parallel to transmission lines to buffer visual effect in these areas. In addition, towers may be painted grey or green to merge with the background.

(v) **Noise/vibration nuisances at Pump station**

The equipments installed at sub-station are mostly static and are so designed that the noise level always remains within permissible limits i.e. 85 dB as per Indian and International standard-7194. To contain the noise level within the permissible limits, measures such as providing sound and vibration dampers and rectification of equipments are undertaken. In addition, plantations of sound absorbing species like Casuarinas, Tamarind, Banyan and Neem are raised at the sub-stations that reduce the sound level appreciably. It is reported that 93 m^2 of woodland can reduce the noise level by 8 dB.

(vi) **Blockage of wildlife passage**

Since the line is passing through mostly agricultural, wasteland and partly through forest area only which is already degraded in nature, possibility of disturbance to wild life are negligible. In spite of this, all precautions have been taken to avoid known recorded wild life migration path and sanctuary.

6.2 Environmental Problems During Construction Phase

(i) **Uncontrolled silt runoff**

The Project involves only small scale excavation for tower foundations at scattered locations and leveling of land at substation sites that are re-filled with excavated material therefore uncontrolled silt run off is not expected.

(ii) **Inadequate construction stage monitoring**

Monitoring is a continuous process for PTCUL projects at all the stages – pre-construction, site selection, construction or maintenance. The substation sites are selected where a good water table and soil characteristics exist. Soil analysis, which includes tests pertaining to its composition, bearing capacity, compressive strength, cohesion and shearing strength, resistivity and water holding capacity, permeability and porosity is conducted. In addition, detailed water analysis for its pH value, chemical composition and conductivity is also done to satisfy for its usage.

PTCUL's success of implementing the project lies in establishing strong monitoring systems. Apart from the site managers reviewing the progress on a daily basis, regular project review meetings will be held at least on monthly basis which will be chaired by Executive Director of PTCUL wherein apart from construction issues the environmental aspects of the projects would be discussed and remedial measures taken wherever required. The exceptions of these meetings are submitted to the Chairman, Managing Director and Directors of the Corporation.

(iii) **Nuisance to nearby properties**

Due care will be taken during site selection to keep the transmission lines and substations away from settlements. Further, all construction activities will be undertaken through the use of small mechanical devices e.g. tractors and manual labour therefore nuisance to the nearby properties if any, is not expected.

(iv) **Interference with utilities and traffic and blockage of access way**

Access to the site will be along existing roads or village paths; minor improvements to paths may be made where necessary, but no major construction of roads will be necessary either during construction or as a part of maintenance procedures. Whenever the transmission line crosses any road/ railways line, the terminal towers are located at sufficient distances so as not to cause any hindrance to the movement of traffic. Stringing at the construction stage is carried out during lean traffic period in consultation with the concerned authorities and angle towers are planted to facilitate execution of work in different stages.

(v) **Inadequate resurfacing for erosion control**

Since proposed lines are to be constructed at suitable platform with retaining and revetment walls provisions where erosion problem is properly taken into consideration. However, if transmission towers are placed on slopes and erosion prone soils, internationally accepted engineering practices will be undertaken to prevent soil erosion. This will include cutting and filling slopes wherever necessary. The back cut slopes and downhill slopes will be treated with revetments. As explained at Para 4.3 (i) adequate steps shall be taken to resurface the area after construction. Wherever sites are affected by active erosion or landslides, both biological and engineering treatment will be carried out, e.g. provision of breast walls and retaining walls, and sowing soil binding grasses around the site. Furthermore, construction is generally undertaken outside the rainy season.

(vi) **Inadequate disposition of borrow area**

Transmission tower foundations involve excavations on small scale basis and the excavated soil is utilized for back filling. In case of substations, generally the sites are selected in such a manner that the volume of cutting is equal to volume of filling avoiding borrowing of the area.

(vii) **Protection of Worker's health/safety**

Provisions for workers' health and safety will be guided by the Safety Regulations/Safety Manual published by PTCUL, and included in tender documents. Aspects such as, work and safety regulations, workmen's compensation, insurance would be adequately covered under the Erection Conditions of Contract (ECC), a part of bidding documents. In addition training is imparted to the workers in fire fighting and safety measures. Safety tools like helmet, safety belt, gloves etc. would be provided to them in accordance to the provisions of Safety Manual. First aid facilities will be made available with the labour gangs, and doctors called in from nearby towns when necessary. The number of outside (skilled) labourers will be quite small, of the order of 25-30 people per group. The remaining workforce of unskilled labourers will be comprised of local people. Workers are also covered by the statutory *Workmen (Compensation) Act*.

6.3 Environmental Problems Resulting from Operation

(i) **O&M Staff/Skills less than acceptable resulting in variety of adverse effects**

The O&M program in PTCUL is normally implemented by sub-station personnel. However in respect of the long distance transmission lines, there are monitoring offices which are located at various points en-route. Monitoring measures employed include patrolling and thermo-vision scanning. The supervisors and managers entrusted with O&M responsibilities would need to be intensively trained for necessary skills and expertise for handling these aspects.

A monthly preventive maintenance program will be carried out to disclose problems related to cooling oil, gaskets, circuit breakers, vibration measurements, contact resistance, condensers, air handling units, electrical panels and compressors. Any sign of soil erosion is also reported and rectified. Monitoring results are published monthly, including a report of corrective action taken and a schedule for future action.

(ii) **Inadequate periodic environmental monitoring**

Monitoring of impacts on ecological resources is generally performed by the Divisional Forest Officer, Chief Wildlife Warden and their staff. A monitoring system of the Forest Department is also in place for compensatory forest to be established as part of the Project. Since no ecological impact are envisaged by the proposed project it may not be required. However, PTCUL through its staff will do the required monitoring as per the ESPP.

6.4 ENVIRONMENTAL MONITORING PROGRAM IN PTCUL

6.4.1 Corporate Level

An Environmental Management Cell at corporate level headed by Advisor, General Manager (Trans.), Executive Engineer (A) as member was created within PTCUL in 2004 and subsequently PTCUL shall upgrade it to an Environment Management Department (EMD) and then it shall be further upgraded to Environment & Social Management Deptt. (ESMD) by incorporating social aspect of project. Briefly, the ESMD's responsibilities are as follows:

- Advising and coordinating RHQs and DHQs to carry out environmental and social surveys for new projects.
- Assisting RHQs and DHQs to finalise routes of entire power transmission line considering environmental and social factors that could arise enroute
- Help RHQs and DHQs to follow-up with the state forest offices and other state departments in expediting forest clearances and the land acquisition process of various ongoing and new projects
- Act as a focal point for interaction with the MOEF for expediting forest clearances and follow-ups with the Ministry of Power.
- Imparts training to PTCUL's RHQs & DHQs on environment and social issues and their management plan.

6.4.2 Corporate Level

At its Corporate Office, PTCUL has established an Environmental and Social Management cell (ESMC) headed by Advisor, General Manager (Trans.), Executive Engineer (A) as member to manage Environmental and Social issues and to coordinate between ESMD at the Corporate level and the Divisional Headquarters headed by Divisional Engineer. The key functions envisaged for ESMC are :

- Advising and coordinating field offices to carry out environmental and social surveys for new projects envisaged in the Corporate Investment Plan
- Assisting the ESMD and DHQs to finalise routes of entire power transmission lines considering the environmental and social factors that could arise en-route
- To follow-up forest clearances and land accuisition processes with state forest offices and other state departments for various ongoing and new projects
- Acting as a focal point for interaction with the ESMD and DHQs on various environmental and social aspects.

6.4.3 Divisional Office

At the Divisional Headquarters level, PTCUL has made the head of the division responsible for implementing the Environmental and Social aspects of project as part of the Environmental and Social Management Team (ESMT). Key functions of the ESMT are:

- Conduct surveys on environmental and social aspects to finalise the route for the power transmission projects.
- Conduct surveys for the sites to being considered for land acquisition.
- Interact with the Forest Departments to make the forest proposal and follow it up for MOEF clearance.
- Interact with Revenue Authorities for land acquisition and follow it up with Authorized Agencies for implementation of Social Management Plan (SMP).
- Implementation of Environment Management Plan (EMP) and SMP.
- Monitoring of EMP and SMP and producing periodic reports on the same.

It may be noted that PTCUL shall be well equipped to implement and monitor its environment and Social Management plans in a phase manner within 3-4 months.

6.5 CRITICAL ENVIRONMENTAL REVIEW CRITERIA

(i) **Loss of irreplaceable resources**

The transmission projects do not involve any large scale excavation and land is lost to the extent of 0.2-1 sq m only for each tower foundation. Rest of the area under the tower continues to be under use. Forest cover felled in the Right of Way is allowed to regenerate except in 3 meter wide strips, after construction work is over. The compensatory afforestation on double the area of forest land in ROW is undertaken by the Forest Department to compensate for the loss. As the lines in the subject project are passing through forest area, the compensatory afforestation on more than 2137.55 ha. of land shall be carried out by forest department on PTCUL expenses to minimize the impact of loss of vegetation as per existing norms under the Forest (Conservation) Act, 1980.

(ii) **Accelerated use of resources for short-term gains**

The project will not be making use of any natural resources occurring in the area during construction as well as maintenance phases. The construction material such as tower members, cement etc shall come from factories while the excavated soil shall be used for backfilling to restore the surface. Thus the project shall not cause any accelerated use of resources for short term gains.

(iii) **Endangering of species**

No endangered species of flora and fauna exist in the project area as well as in the affected forest thus there seems to be no possibility of endangering/causing extinction of any species.

(iv) **Promoting undesirable rural-to urban migration**

The project will not cause any submergence or loss of land holdings that normally trigger migration. It also does not involve acquisition of any private land holdings. Hence, there is no possibility of any migration.

(v) **Increase in affluent/poor income gap**

The project will increase availability and reliability of power in Uttaranchal State. It is well known that power is a key input to the economic development of any area. Past experience indicates that economic development leads to generation of more jobs which in turn should raise the living standards of poor. Thus the project is expected to contribute in reduction of affluent poor income gap.

6.6 CONCLUSIONS :

The project area is rich in physical resources where the forest area getting affected is generally selected to include on the forest area that is degraded in nature and the lines are not going to affect any rare, threatened or endangered species. The infrastructural constraints are very real and pose a limiting factor on the development of the area.

INITIAL SOCIAL ASSESSMENT OF 400 KV AND 132 KV NEW S/STN. UNDER INTEGRATED TRANSMISSION SYSTEM

1. Beneficiaries Group

- ***Identify the target client population that is expected to consume the power which will be produced or distributed.***

The agreement reached with NTPC and other constituents of Uttaranchal State, allocation of power from their projects to the various constituents of Western Region tentatively in the following manner and proportion:

STATE	POWER ALLOCATION
UP	200-400 MW
Haryana	100-200 MW
Punjab	185-300 MW
Delhi	200-300 MW
Rajasthan	100-200 MW
TOTAL	**1228 MW**

Likewise NHPC/THDC/UJVNL have also framed out the allocation for their projects.

- ***Identify and quantify the subgroups, within the client population (e.g. industrial consumers, residential consumers, electric co-operatives etc.), which are likely to have different needs and demands.***

Not applicable, since PTCUL role is restricted only up to transmission of bulk power from generating station to different load centre and further distribution of available power is taken up by concerned State Power Corporations looking after Power Trading and Consumers side.

2. Beneficiaries Demands

- ***Assess the ability and willingness of the major consumer groups to pay tariffs for electricity which are needed to sustain the operations of the facilities.***

All Hydro Electric power projects have been conceived as "State" projects wherein all the constituents of the northern region would be the beneficiaries and avail their shares of power from the projects in line with Government of India guidelines. All constituents of Uttaranchal State are expected to share the transmission tariff associated with the transmission component of the project in the ratio of shares allocated.

Transmission system is evolved after extensive discussions with all the beneficiaries individually and collectively at the NREB forum. The views of the states are taken into account while developing the project scope and is then finalized with CEA. Before submitting the Feasibility Report to CEA, it is ensured that the beneficiary PCL accepts the project configuration and the project cost along with the modality of sharing the transmission tariff associated with the scheme.

3. Potential Adverse Impacts

- ***Determine if some groups of people will have to be relocated according to the power generation, transmission or distribution plan (e.g. from project sites, rights-of-way).***

As per the existing Indian laws, land for ROW of transmission line is not acquired. As such there is no resettlement and rehabilitation involved in transmission line construction works. However, for the proposed new substations, approx. 123.5 Acres of land at various locations may be acquired that may affect about 185 people.

- *Determine if the project will cause the loss of farmland, grazing land, forests, streams or groundwater which supply local livelihoods, provide food or water sources.*

- *Determine the possible exposure of certain groups to health hazards (e.g. from downstream river pollution, vector-borne diseases through creation of breeding sites, from vibrations, fly ash from thermal power sites, hazardous wastes, explosions).*

- *Determine possibility of conflict over water rights, e.g., water used for downstream irrigation diverted to cool boilers etc.*

- *Determine if traditional lands, heritage and cultural property of indigenous people will be damaged or lost (e.g. ancestral burial grounds, ritual sites, links with plants/substances essential for traditional medicine etc.). Determine any significant changes in affected groups 'life-styles'.*

In most of the cases either land belongs to Goat or it is lying banzer (unutilized). The remaining land is generally used for agriculture and does not come under the category of ancestral burial ground or ritual sites. Details assessment of the impact of acquisition of the land shall be carried out as per the provisions of ESPP.

- *Determine how pricing policies would affect the distribution of and access to project benefits by poor clients. Assess the ability of client groups who are defined as poor to afford a basic level of service; identify financing measures which are affordable for the poor groups on a sustainable basis.*

A detailed Social Assessment & Management Plan (SAMP) shall be prepared after section 4/9 notifications as per the provision of ESPP that include R&R measures to be adopted for minimizing the likely impact of land acquisition

- *Prepare a socio-economic profile for each group which would be adversely affected to describe and quantity the impact(s) on the affected group.*

As per the ESPP, whenever project affected families are more than 40, a detailed socio-economic survey of the proposed area is undertaken by the outside agency for making a detailed socio-economic profile. However, if the project affected families are less than 40 Social Assessment and Management Plan (SAMP) is prepared by PTCUL in-house. Since in the instant case the No. of affected families are far below the limit i.e. 40, only SAMP shall be prepared after Sec 4/9 notification, the details of which shall be provided in the proposed SAMP to be finalized soon.

4.0 Substations:

4.1 Debris disposal costs:

PTCUL Transmission project consis: of 4 Nos. 400 KV substations and 4 Nos. 132 KV substations in different basins of Uttaranchal hilly areas. Being a hilly terrain land for substations, it is to be made workable leveled platform by cutting the hill slopes in different terrain for installation of equipment and casting of foundations. In case of land pertaining to 400 KV S/s Karanprayag, 400 KV S/s Srinagar, 132 KV S/s Barkot and 132 KV S/s Morie, the land is almost plain. In other cases also the volume of stone cutting shall be utilized in the concreting of pillars for land fencing and making the platforms leveled in different terrain of hills. As such, thee shall not be left any extra debris for disposal. The labour cost for disposal of extra debris as per Civil schedule of rates of PTCUL is Rs. 50/- per cu m upto 100 metre lead.

Sl. No.	Name of Substation	Quantity of debris (cu mtr.)	Quantity of debris at this stage at substation land (cu mtr.)	Quantity of extra debris (cu mtr.)	Rate (Rs.)	Extra cost of debris disposal
1.	400 KV S/s Almora	30000	30000	NIL	Rs. 50/- upto 100 mtr lead	0
2.	400 KV S/s Kuwaripass	35000	35000	NIL	Rs.50/- upto 100 mtr lead	0
3.	400 KV S/s Karanprayag	100	100	NIL	Rs.50/- upto 100 mtr lead	0
4.	400 KV S/s Srinagar	25000	25000	NIL	Rs.50 - upto 100 mtr lead	0
5.	132 KV S/s Barkot	200	200	NIL	Rs.50 - upto 100 mtr lead	0
6.	132 KV S/s Melkhet	15000	15000	NIL	Rs.50 - upto 100 mtr lead	0
7.	132 KV S/s Baranvara	30000	30000	NIL	Rs.50 - upto 100 mtr lead	0
8.	132 KV S/s Morie	1500	1500	NIL	Rs.50 - upto 100 mtr lead	0

Note : The extra debris volume will be negligible, therefore, there shall not be any cost impact due to disposal of extra debris.

4.1.1 Ground Stabilization:

PTCUL had measured the soil resistivity of all existing substations land and of Transmission lines specified tower locations. Similarly the soil resistivity shall be measured at all substations land and accordingly remedial measures shall be implemented. For land slides etc., proper retaining walls and revetment walls shall be constructed. At the time of actual implementation of Transmission line & Substation work, the soil testing shall be carried out through geological department of Govt. of India and remedial measures shall be taken accordingly while casting of foundation etc.

4.1.2 Noise level:

Being a hilly area, where population is also very thin, therefore, the noise level is in very low range. Moreover the noise built industries are also not installed in hills.

Noise Quality in Different River basins

Parameters	Particulars (Max.)	Dam Site	Power House	Colony Site
Bhagirathi River at Pala Maneri	1600 hrs	59.4	61.2	56.4
Alaknanda River at Srinagar	1400 hrs	49.8	53.2	45.4

4.1.3 Ground run off into river:

Substation :

The rainy water or otherwise, which will flow through the land of substation shall pass through mesh provided in the weep holes of retaining/revetment walls around the periphery of substation land and water will come out through these weep holes without any impurity. Apart, from this arrangement a sump tank is also provided at one corner of substation where complete run off water shall be collected wherein a mesh shall be provided at its outlet so that water may come out without any impurity. For the safety of environment and pollution a 2 metres deep, 2 metres wide pits shall be created around all the power transformers for collection of transformers oil to come out at any point of time from transformers or any other related equipment having transformers oil. This transformers oil is collected and auctioned on yearly basis to safeguard the environment.

Transmission Line:

At different tower locations for its protection retaining/revetment walls shall be constructed in which weep holes shall be provided alongwith a mesh so that ground runoff water may passed through this mesh loaded weep holes dully filtered.

4.1.4 EVALUATION OF ROUTE ALIGNMENT ALTERNATIVES OF ALAKNANDA & BHAGIRATHI BASINS TRANSMISSION SYSTEM:

BHAGIRATHI BASIN

a) 400 KV DC Lohari Nagpala - Koteshwar line:

Three different alignments (**Map-1**) were studied to arrive at most optimum route for detailed survey. The comparative details of these three alternatives are as follows:

Sl. No.	Description	Alignment-I	Alignment-II	Alignment-III
I	Route Particulars			
	ength	90 Kms	88 Kms.	82 Kms.
ii)	Terrain	HILLY	HILLY	HILLY
a)	Hilly/Plain in(Kms.)%	100% HILLY	100% HILLY	100% HILLY
	Agriculture	-	-	-
	Wet Marshy	-	-	-
	esturaine	-	-	-
	other type of land	-	-	-
	Environmental Details	-	-	-
i)	Name of District District details (through which transmission Line Pass)	Uttarkashi, Tehri	Uttarkashi, Tehri	Uttarkashi, Tehri
ii)	Population of district	239709 500686	239709 500686	239709 500686
a)	Details of poverty line (In Rs.)	Rs. 2500/-	Rs. 2500/-	Rs. 2500/-
b)	No. of People/ Percentage of people below poverty line	37%	37%	37%
iii)	Town in Alignment(Near by)	Lambgaon, Tehri, Pratapnagar, Gangnari, Maneri, Uttarkashi		
iv)	House with in ROW	NIL	NIL	NIL
v)	Forest in Km./ Ha	75Km/345000 sqm	78Km/358800 sqm	76Km/349600 sqm
a)	Type of forest: Reserve protected Mangrove Wild life area Biosphere reserve any other environment sensitive area	Reserve & Social forest 28000 Nos. trees requires cutting	Reserve & Social forest 39500 Nos. trees requires cutting	Reserve & Social forest 50500 Nos. trees requires cutting
b)	Density of forest	0.2 to 0.6	0.3 to 0.7	0.3 to 0.8
c)	Type of Fauna & Flora	Jungle, fox, cat etc. Trees Sal, Teak etc	Jungle, fox, cat etc. Trees Sal, Teak etc.	Jungle, fox, cat etc. Trees Sal, Teak etc.
d)	Endangered species if any	NIL	NIL	NIL
e)	H storical/Cultural monument	NIL	NIL	NIL
f)	Any other relevant information	NIL	NIL	NIL
3	Consumption cost			
i)	Crop	Extent of damage can be evaluated during detailed survey construction		
ii)	Forest			
4	No. of Crossing			
i)	Railway	NIL	NIL	NIL
ii)	Trans. line	NIL	NIL	NIL
iii)	River Xing etc.	3 Nos. (Normal)	3 Nos. (Normal)	3 Nos. (Normal)

5	Construction Problem	No specific problem other than forest clearance	No specific problem other than forest clearance is required	No specific problem other than much more forest clearance is required
6	O&M problem	Minimum	Moderate	Maximum
7	Overall Remarks	Best suitable	-	-

Reasons for selection of final Route :

Considering the various reasons based on informations in the table Alternative - I is best suitable. It involves lesser forest and minimum ROW problems. Hence selected for detailed Survey as final route.

b) LILO of 400 KV DC Lohari Nagpala - Koteshwar line at Pala Maneri:

Three different alignments **(Map-2)** were studied to arrive at most optimum route for detailed survey. The comparative details of these three alternatives are as follows:

Sl. No.	Description	Alignment-I	Alignment-II	Alignment-III
I	Route Particulars			
	Length	9.0 Kms	8.0 Kms	8.5 Kms.
ii)	Terrain	HILLY	HILLY	HILLY
a)	Hilly/Plain in (Kms.)%	100% HILLY	100% HILLY	100% HILLY
	Agriculture	-	-	-
	Wet/ Marshy	-	-	-
	esturaine	-	-	-
	other type of land	-	-	-
	Environmental Details	-	-	-
i)	Name of District/ District details (through which transmission line Pass)	Uttarkashi	Uttarkashi	Uttarkashi
ii)	Population of district	239709	239709	239709
a)	Details of poverty line (In Rs.)	2500 -	2500 -	2500 -
b)	No. of People/ Percentage of people below poverty line	37%	37%	37%
iii)	Town in Alignment(Near by)	Maneri	Maneri	Maneri
iv)	House with in ROW	NIL	NIL	NIL
v)	Forest in Km./ Ha	2.5Km/115000sqm	3Km/138000sqm	4.2Km/193200sqm
a)	Type of forest Reserve protected Mangrove Wild life area/ Biosphere reserve / any other environment sensitive area	Social forest 885 Nos. trees requires cutting	Social forest 609 Nos. trees requires cutting	Social forest 649 Nos. trees requires cutting
b)	Density of forest	0.3 to 0.4	0.2 to 0.3	0.3 to 0.5
c)	Type of Fauna & Flora	Jungle, fox, cat etc. Trees Sal etc.	Jungle, fox, cat etc. Trees Sal etc.	Jungle, fox, cat etc. Trees Sal etc.
d)	Endangered species if any	NIL	NIL	NIL
e)	Historical Cultural monument	NIL	NIL	NIL
f)	Any other relevant information	NIL	NIL	NIL
3	Consumption cost			
i)	Crop	Extent of damage can be evaluated during detailed survey construction		
ii)	Forest			
4	No. of Crossing			
i)	Railway	NIL	NIL	NIL
ii)	Trans. line	NIL	NIL	NIL
iii)	River Xing etc.	NIL	NIL	NIL
5	Construction Problem	No specific problem other than forest clearance		

6	O&M problem	Moderate	Minimum	Maximum
7	Overall Remarks	-	Best suitable	-

Reasons for selection of final Route :

Considering the above factors based on informations as above in the table alternative - II is best suitable. It involves lesser forest and minimum ROW problems. Hence selected for detailed Survey as final route.

c) 400 KV DC Kothlibhal - Roorkee Line:

Three different alignments **(Map-3)** were studied to arrive at most optimum route for detailed survey. The comparative details of these three alternatives are as follows:

Sl. No.	Description	Alignment-I	Alignment-II	Alignment-III
I	Route Particulars			
	Length	114 Kms	120 Kms	125 Kms.
ii)	Terrain	HILLY	HILLY	HILLY
a)	Hilly Plain In(Kms.)%	83% HILLY 17% PLAIN	85% HILLY 15% PLAIN	87% HILLY 13% PLAIN
	Agriculture	25%	15%	20%
	Wet Marshy	-	-	-
	esturaine	-	-	-
	other type of land	-	-	-
	Environmental Details	-	-	-
i)	Name of District District details (through which transmission line Pass)	Pauri Tehri Dehra Dun Haridwar	Pauri Tehri Dehra Dun Haridwar	Pauri Tehri Dehra Dun Haridwar
ii)	Population of district	682535/500686/ 1025679/1124488	682535/500686/ 1025679/1124488	682535/500686/ 1025679/1124488
a)	Details of poverty line (In Rs.)	3000/2500/5000/ 4500	3000/2500/5000/ 4500	3000/2500/5000/ 4500
b)	No. of People/ Percentage of people below poverty line	37%	37%	37%
iii)	Town in Alignment(Near by)	Vyasi, Rishikesh, Hardwar	Vyasi, Rishikesh, Hardwar	Vyasi, Rishikesh, Hardwar
iv)	House with in ROW	NIL	NIL	NIL
v)	Forest in Km. Ha	82Km 3772000sqm	105Km 4830000sqm	110Km 5060000sqm
a)	Type of forest Reserve protected Mangrove Wild life area Biosphere reserve any other environment sensitive area	Rajaji National Park (20 Kms) Reserve & Social forest 17475 Nos. trees required cutting	Rajaji National Park (20 Kms) Reserve & Social forest 17475 Nos. trees required cutting	Rajaji National Park (20 Kms) Reserve & Social forest 17475 Nos. trees required cutting
b)	Density of forest	0.1 to 0.5	0.2 to 0.6	0.2 to 0.8
c)	Type of Fauna & Flora	Jungle, fox, cat etc. Trees Sal, Haldu, Kanya, Am a mixed etc.	Jungle, fox, cat etc. Trees Sal, Haldu, Kanya, Amla mixed etc.	Jungle, fox, cat etc. Trees Sal, Haldu, Kanya, Amla mixed etc.
d)	Endangered species if any	NIL	NIL	NIL
e)	Historical Cultural monument	NIL	NIL	NIL
f)	Any other relevant information	NIL	NIL	NIL
3	Consumption cost			
i)	Crop	Extent of damage can be evaluated during detailed survey construction		
ii)	Forest			

4	No. of Crossing			
i)	Railway	1 No.	1 No.	No.
ii)	Trans. line	8 No.	9 No.	9 No.
iii)	River Xing etc.	8 No.	10 No.	11 No.
5	Construction Problem	No specific problem other than forest clearance		
6	O&M problem	Minimum	Moderate	Maximum
7	Overall Remarks	Best suitable	-	-

Reasons for selection of final Route :

Considering the various reasons based on informations in the table Alternative - I is best suitable. It involves lesser forest and minimum ROW problems. Hence selected for detailed Survey as final route.

ALAKNANDA BASIN

a) 400 KV DC Tapovan - Kuwaripass line:

Three different alignments **(Map-1)** were studied to arrive at most optimum route for detailed survey. The comparative details of these three alternatives are as follows:

Sl. No.	Description	Alignment-I	Alignment-II	Alignment-III
1	Route Particulars			
i)	Length	10.5 Kms	12 Kms	11.5 Kms.
ii)	Terrain	HILLY	HILLY	HILLY
a)	Hilly Plain Fr(Kms.)%	100% HILLY	100% HILLY	100% HILLY
	Agriculture	90%	60%	55%
	Wet Marshy	-	-	-
	esturaine	-	-	-
	other type of land	-	-	-
2	Environmental Details	-	-	-
i)	Name of District/ District details Chrough which transmission line Pass)	Chamoli	Chamoli	Chamoli
ii)	Population of district	354999	354999	354999
a)	Details of poverty line (In Rs.)	Rs. 1500 -	Rs. 1500 -	Rs. 1500 -
b)	No. of People Percentage of people below poverty line	37%	37%	37%
iii.	Town in Alignment(Near by)	Vishnugad, Joshimath, Tapovan Vishnugad		
iv)	House with in ROW	NIL	NIL	NIL
v)	Forest in Km. Ha	2.5Km 115000sqm	5Km 230000sqm	6Km 276000sqm
a)	Type of forest Reserve protected Mangrove Wild life area Biosphere reserve any other environment sensitive area	Reserve & Social forest 15 Nos trees required cutting	Reserve & Social forest 30 Nos trees required cutting	Reserve & Social forest 35 Nos trees required cutting
b)	Density of forest	0.1 to 0.3	0.2 to 0.5	0.2 to 0.6
c)	Type of Fauna & Flora	Jungle, Bhutiya dog, etc. Trees Devdar, Pine etc.	Jungle, Bhutiya dog, etc. Trees Devdar, Pine etc.	Jungle, Bhutiya dog, etc. Trees Devdar, Pine etc.
d)	Endangered species if any	NIL	NIL	NIL
e)	Historical Cultural monument	NIL	NIL	NIL

f)	Any other relevant information	NIL	NIL	NIL
3	Consumption cost			
i)	Crop	Extent of damage can be evaluated during detailed survey construction		
ii)	Forest			
4	No. of Crossing			
i)	Railway	NIL	NIL	NIL
ii)	Trans. line	NIL	NIL	NIL
iii)	River Xing etc.	1 No.	2 No.	3 No.
5	Construction Problem	No specific problem other than forest clearance		
6	O&M problem	Minimum	Moderate	Maximum
7	Overall Remarks	Best suitable	-	-

Reasons for selection of final Route :

Considering the various reasons based on informations in the table Alternative - I is best suitable. It involves lesser forest and minimum ROW problems. Hence selected for detailed Survey as final route.

b) 400 KV DC Kuwaripass - Srinagar line:

Sl. No.	Description	Alignment-I	Alignment-II	Alignment-III
1	Route Particulars			
	Length	125 Kms	135 Kms	130 Kms
ii)	Terrain	HILLY	HILLY	HILLY
a)	Hilly Plain In(Kms.)%	90% HILLY 10% PLAIN	95% HILLY 5% PLAIN	100% HILLY
	Agriculture	10%	5%	-
	Wet/ Marshy	-	-	-
	esturaine	-	-	-
	other type of land	-	-	-
2	Environmental Details	-	-	-
i)	Name of District/ District details through which transmission line Pass)	Chamoli, Rudraprayag, Pauri	Chamoli, Rudraprayag, Pauri	Chamoli, Rudraprayag, Pauri
ii)	Population of district	354999 179339 682	354999 179339 68	354999 179339 68
a)	Details of poverty line (In Rs.)	535 Rs. 1500 2000 3000	2535 Rs. 1500 2000 3000	2535 Rs. 1500 2000 3000
b)	No. of People Percentage of people below poverty line	37%	37%	37%
iii)	Town in Alignment(Near by)	Vishnugad, Joshimath, Pipalkoti, Chamoli, Rudraprayag, Nandprayag, Srinagar, Karanprayag		
iv)	House with in ROW	NIL	NIL	NIL
v)	Forest in Km./ Ha	105Km 4830000 sqm	115Km 5290000 sqm	118Km/5428000 sqm
a)	Type of forest Reserve protected Mangrove Wild life area Bio-sphere reserve any other environment sensitive area	Private; Reserve & Social forest 9250 trees requires cutting	Private; Reserve & Social forest 11150 trees requires cutting	Private; Reserve & Social forest 13250 trees requires cutting
b)	Density of forest	0.1 to 0.5	0.2 to 0.8	0.2 to 0.9
c)	Type of Fauna & Flora	Jungle, fox, cat etc. Trees Sal, Teak etc.	Jungle, fox, cat etc. Trees Sal, Teak etc.	Jungle, fox, cat etc. Trees Sal, Teak etc.
d)	Endangered species if any	NIL	NIL	NIL
e)	Historical Cultural monument	NIL	NIL	NIL
f)	Any other relevant information	NIL	NIL	NIL

3	Consumption cost	Extent of damage can be evaluated during detailed survey/construction		
i)	Crop			
ii)	Forest			
4	No. of Crossing			
i)	Railway	NIL	Nil	NIL
ii)	Trans. line	9 Nos.	10 Nos	12 Nos.
iii)	River Xing etc.	7 Nos.	9 Nos.	10 Nos.
5	Construction Problem	No specific problem other than forest clearance		
6	O&M problem	Minimum	Moderate	Maximum
7	Overall Remarks	Best suitable	-	-

Reasons for selection of final Route :
Considering the various reasons based on informations in the table Alternative - I is best suitable. It involves lesser forest and minimum ROW problems. Hence selected for detailed Survey as final route.

c) 400 KV DC Kuwaripass - Karanprayag line:

Sl. No.	Description	Alignment-I	Alignment-II	Alignment-III
1	Route Particulars			
	Length	65 Kms	70 Kms	72 Kms.
ii)	Terrain	HILLY	HILLY	HILLY
a)	Hilly Plain In(Kms.)%	100% HILLY	100% HILLY	100% HILLY
	Agriculture	15%	10%	5%
	Wet Marshy	-	-	-
	esturaine	-	-	-
	other type of land	-	-	-
2	Environmental Details	-	-	-
i)	Name of District District details (through which transmission line Pass)	Chamoli, Rudraprayag	Chamoli, Rudraprayag	Chamoli, Rudraprayag
ii)	Population of district	354999 179339	354999 179339	354999 179339
a)	Details of poverty line (In Rs.)	Rs. 1500/2000	Rs. 1500/2000	Rs. 1500/2000
b)	No. of People Percentage of people below poverty line	37%	37%	37%
iii)	Town in Alignment(Near by)	Vishnuprayag, Joshimath, Pipalkoti, Chamoli, Nandprayag, Karanprayag		
iv)	House with in ROW	NIL	NIL	NIL
v)	Forest in Km. Ha	52Km 239.2000sqm	64Km 2944000sqm	66Km 30.6000 sqm
a)	Type of forest Reserve protected Mangrove Wild life area Biosphere reserve any other environment sensitive area	Private Reserve & Social forest 7335 Nos. trees required cutting	Private Reserve & Social forest 9150 Nos. trees required cutting	Private Reserve & Social forest 10105 Nos. trees required cutting
b)	Density of forest	0.1 to 0.4	0.2 to 0.6	0.2 to 0.8
c)	Type of Fauna & Flora	Jungle, fox, cat etc. Trees Sal, Teak etc.	Jungle, fox, cat etc. Trees Sal, Teak etc.	Jungle, fox, cat etc. Trees Sal, Teak etc.
d)	Endangered species if any	NIL	NIL	NIL
e)	Historical Cultural monument	NIL	NIL	NIL
f)	Any other relevant information	NIL	NIL	NIL

3	Consumption cost			
i)	Crop	Extent of damage can be evaluated during detailed survey/ construction		
ii)	Forest			
4	No. of Crossing			
i)	Railway	NIL	NIL	NIL
ii)	Trans. line	4 No.	6 No.	7 No.
iii)	River Xing etc.	4 No.	5 No.	6 No.
5	Construction Problem	No specific problem other than forest clearance		
6	O&M problem	Minimum	Moderate	Maximum
7	Overall Remarks	Best suitable	-	-

Reasons for selection of final Route :

Considering the various reasons based on informations in the table Alternative - I is best suitable. It involves lesser forest and minimum ROW problems. Hence selected for detailed Survey as final route.

d) 400 KV DC Srinagar PH - 400 KV Srinagar S/s line:

Sl. No.	Description	Alignment-I	Alignment-II	Alignment-III
1	Route Particulars			
	Length	6.0 Kms	6.8 Kms	7.25 Kms
ii)	Terrain			
a)	Hilly/Plain In(Kms.)%	80% HILLY 20% PLAIN	90% HILLY 10% PLAIN	95% HILLY 5% PLAIN
	Agriculture	15%	10%	5%
	Wet Marshy	-	-	-
	esturaine	-	-	-
	other type of land	-	-	-
2	Environmental Details	-	-	-
i)	Name of District District details (through which transmission line Pass)	Pauri	Pauri	Pauri
ii)	Population of district	225000	225000	225000
a)	Details of poverty line (In Rs.)	Rs. 3000 -	Rs. 3000 -	Rs. 3000 -
b)	No. of People Percentage of people below poverty line	37%	37%	37%
iii)	Town in Alignment(Near by)	Kirtinagar	Kirtinagar	Kirtinagar
iv)	House with in ROW	NIL	NIL	NIL
v)	Forest in Km./ Ha	61 Kms	80 Kms	82 Kms
a)	Type of forest Reserve/protected Mangrove Wild life area/ Biosphere reserve / any other environment sensitive area	Reserve & Social forest 280 Nos. trees requires cutting	Reserve & Social forest 350 Nos. trees requires cutting	Reserve & Social forest 410 Nos. trees requires cutting
b)	Density of forest	0.1 to 0.3	0.2 to 0.4	0.2 to 0.5
c)	Type of Fauna & Flora	Jungle, fox, cat etc. Trees Sal, etc.	Jungle, fox, cat etc. Trees Sal, etc.	Jungle, fox, cat etc. Trees Sal, etc.
d)	Endangered species if any	NIL	NIL	NIL
e)	Historical Cultural monument	NIL	NIL	NIL
f)	Any other relevant information	NIL	NIL	NIL
3	Consumption cost	Extent of damage can be evaluated during detailed survey construction		
i)	Crop			
ii)	Forest			
4	No. of Crossing			
i)	Railway	NIL	NIL	NIL
ii)	Trans. line	1 No.	1 No.	1 No.
iii)	River Xing etc.	1 No.	1 No.	1 No.
5	Construction Problem	No specific problem other than forest clearance		
6	O&M problem	Minimum	Moderate	Maximum
7	Overall Remarks	Best Suitable	-	-

Reasons for selection of final Route :

Considering the various reasons based on informations in the table Alternative - I is best suitable. It involves lesser forest and minimum ROW problems. Hence selected for detailed Survey as final route.

e) 132 KV DC Baranvara-Srinagar

Sl. No.	Description	Alignment-I	Alignment-II	Alignment-III
1	Route Particulars			
i)	Length	66 Kms	70 Kms	71 Kms
ii)	Terrain	HILLY	HILLY	HILLY
a)	Hilly Plain			
	n(Kms.)%	100% HILLY	100% HILLY	100% HILLY
	Agriculture	50%	35%	30%
	Wet Marshy	-	-	-
	esturaine	-	-	-
	other type of land	-	-	-
	Environmental Details	-	-	-
i)	Name of District/ District details (through which transmission line Pass)	Pauri, Rudraprayag	Pauri, Rudraprayag	Pauri, Rudraprayag
ii)	Population of district	179339/682535	179339/682535	179339/682535
a)	Details of poverty line (In Rs.)	Rs. 2000/3000	Rs. 2000/3000	Rs. 2000/3000
b)	No. of People/ Percentage of People below poverty line	37%	37%	37%
iii)	Town in Alignment(Near by)	Gupt Kashi, Rudraprayag, Srinagar, Kirtinagar	Gupt Kashi, Rudraprayag, Srinagar, Kirtinagar	Gupt Kashi, Rudraprayag, Srinagar, Kirtinagar
iv)	House with in ROW	NIL	NIL	NIL
v)	Forest in Km. Ha	48Kms 1296000 sqm	59Kms 1593000 sqm	60Kms 1620000 sqm
a)	Type of forest Reserve protected Mangrove Wild life area Biosphere reserve / any other environment sensitive area	Reserve & Social forest 5850 Nos. trees requires cutting	Reserve & Social forest 7250 Nos. trees requires cutting	Reserve & Social forest 7850 Nos. trees requires cutting
b)	Density of forest	0.1 to 0.4	0.2 to 0.6	0.2 to 0.8
c)	Type of Fauna & Flora	Jungle, bhutiya dog,fox, cat etc. Trees Sal, Teak etc.	Jungle, bhutiya dog,fox, cat etc. Trees Sal, Teak etc.	Jungle, bhutiya dog,fox, cat etc. Trees Sal, Teak etc.
d)	Endangered species if any	NIL	NIL	NIL
e)	Historical/Cultural monument	NIL	NIL	NIL
f)	Any other relevant information	NIL	NIL	NIL
3	Consumption cost			
i)	Crop	Extent of damage can be evaluated during detailed survey/ construction		
ii)	Forest			
4	No. of Crossing			
i)	Railway	NIL	NIL	NIL
ii)	Trans. line	NIL	NIL	NIL
iii)	River Xing etc.	4 No.	6 No.	10 No.
5	Construction Problem	No specific problem other than forest clearance		
6	O&M problem	Minimum	Moderate	Maximum
7	Overall Remarks	Best suitable	-	-

Reasons for selection of final Route :

Considering the various reasons based on informations in the table Alternative - I is best suitable. It involves lesser forest and minimum ROW problems. Hence selected for detailed Survey as final route.

f) 132 KV DC Lata Tapovan - Kuwaripass line:

Sl. No.	Description	Alignment-I	Alignment-II	Alignment-III
1	Route Particulars			
i)	Length	21 Kms	22 Kms	24 Kms
	Terrain	HILLY	HILLY	HILLY
a)	Hilly Plain In(Kms.)%	100% HILLY	100% HILLY	100% HILLY
	Agriculture	35%	40%	45%
	Wet/ Marshy	-	-	-
	esturaine	-	-	-
	other type of land	-	-	-
2	Environmental Details	-	-	-
i)	Name of District/ District details through which transmission line Pass)	Chamoli	Chamoli	Chamoli
ii)	Population of district	354999	354999	354999
a)	Details of poverty line (In Rs.)	Rs. 1500 -	Rs. 1500 -	Rs. 1500 -
b)	No. of People Percentage of people below poverty line	37%	37%	37%
iii)	Town in Alignment(Near by)	Vishnugad, Joshimath, Tapovan		
iv)	House with in ROW	NIL	NIL	NIL
v)	Forest in Km./ Ha	8Km 216000sqm	10Km 270000sqm	12Km 324000sqm
a)	Type of forest Reserve/protected Mangrove/ Wild life area/ Biosphere reserve / any other environment sensitive area	Nanda Devi National Park 350 Nos. trees required cutting	Nanda Devi National Park 450 Nos. trees required cutting	Nanda Devi National Park 550 Nos. trees required cutting
b)	Density of forest	0.1 to 0.4	0.2 to 0.6	0.2 to 0.6
c)	Type of Fauna & Flora	Jungle, Bhutiya dog, etc. Trees Devdar, Pine mixed etc.	Jungle, Bhutiya dog, etc. Trees Devdar, Pine mixed etc.	Jungle, Bhutiya dog, etc. Trees Devdar, Pine mixed etc.
d)	Endangered species if any	NIL	NIL	NIL
e)	Historical Cultural monument	NIL	NIL	NIL
f)	Any other relevant information	NIL	NIL	NIL
3	Consumption cost			
i)	Crop	Extent of damage can be evaluated during detailed survey construction		
ii)	Forest			
4	No. of Crossing			
i)	Railway	NIL	NIL	NIL
ii)	Trans. line	NIL	NIL	NIL
iii)	River Xing etc.	2 No.	4 No.	4 No.
5	Construction Problem	No specific problem other than forest clearance		
6	O&M problem	Minimum	Moderate	Maximum
7	Overall Remarks	Best suitable	-	-

Reasons for selection of final Route :

Considering the various reasons based on informations in the table Alternative - I is best suitable. It involves lesser forest and minimum ROW problems. Hence selected for detailed Survey as final route.

g) 132 KV DC Karanprayag - Bawla Nandprayag line:

Sl. No.	Description	Alignment-I	Alignment-II	Alignment-III
1	Route Particulars			
	Length	20 Kms	22 Kms	24 Kms
ii)	Terrain	HILLY	HILLY	HILLY
a)	Hilly Plain n(Kms.)%	100% HILLY	100% HILLY	100% HILLY
	Agriculture	95%	10%	5%
	Wet Marshy	-	-	-
	esturaine	-	-	-
	other type of land	-	-	-
	Environmental Details	-	-	-
i)	Name of District/ District details (through which transmission line Pass)	Rudraprayag	Rudraprayag	Rudraprayag
ii)	Population of district	179339	179339	179339
a)	Details of poverty line (In Rs.)	Rs. 2000 -	Rs. 2000 -	Rs. 2000 -
b)	No. of People/ Percentage of people below poverty line	37%	37%	37%
iii)	Town in Alignment(Near by)	Nandprayag, Karanprayag, Simli		
iv)	House with in ROW	NIL	NIL	NIL
v)	Forest in Km./ Ha	15Km 40500 sqm	20Km 54000 sqm	22Km 59400 sqm
a)	Type of forest Reserve protected Mangrove Wild life area/ Biosphere reserve any other environment sensitive area	Reserve & Social forest 210 Nos. trees requires cutting	Reserve & Social forest 360 Nos. trees requires cutting	Reserve & Social forest 480 Nos. trees requires cutting
b)	Density of forest	0.1 to 0.3	0.2 to 0.5	0.2 to 0.6
c)	Type of Fauna & Flora	Jungle, fox, cat etc. Trees Sal, Teak etc.	Jungle, fox, cat etc. Trees Sal, Teak etc.	Jungle, fox, cat etc. Trees Sal, Teak etc.
d)	Endangered species if any	NIL	NIL	NIL
e)	Historical Cultural monument	NIL	NIL	NIL
f)	Any other relevant information	NIL	NIL	NIL
3	Consumption cost			
i)	Crop	Extent of damage can be evaluated during detailed survey/construction		
ii)	Forest			
4	No. of Crossing			
i)	Railway	NIL	NIL	NIL
ii)	Trans. line	2 No.	3 No.	4 No.
iii)	River Xing etc.	3 No.	4 No.	5 No.
5	Construction Problem	No specific problem other than forest clearance		
6	O&M problem	Minimun	Moderate	Maximum
7	Overall Remarks	Best suitable	-	-

Reasons for selection of final Route :

Considering the various reasons based on informations in the table Alternative - I is best suitable. It involves lesser forest and minimum ROW problems. Hence selected for detailed Survey as final route.

h) 132 KV DC Bhinderganga - Kuwaripass line:

Sl. No.	Description	Alignment-I	Alignment-II	Alignment-III
1	Route Particulars			
i)	Length	10 Kms	12.5 Kms	11 Kms
ii)	Terrain	HILLY	HILLY	HILLY
a)	Hilly Plain In(Kms.)%	100% HILLY	100% HILLY	100% HILLY
	Agriculture	10%	12%	13%
	Wet/ Marshy	-	-	-
	esturaine	-	-	-
	other type of land	-	-	-
2	Environmental Details	-	-	-
i)	Name of District/ District details (through which transmission line Pass)	Chamoli	Chamoli	Chamoli
ii)	Population of district	354999	354999	354999
a)	Details of poverty line (In Rs.)	Rs. 1500 -	Rs. 1500 -	Rs. 1500 -
b)	No. of People/ Percentage of people below poverty line	37%	37%	37%
iii)	Town in Alignment(Near by)	Vishnugad, Joshimath	Vishnugad, Joshimath	Vishnugad, Joshimath
iv)	House with in ROW	NIL	NIL	NIL
v)	Forest in Km. /Ha	9Km 243000 sqm	10Km 270000 sqm	10.5Km 283500sqm
a)	Type of forest Reserve/protected/Mangrove Wild life area/ Biosphere reserve / any other environment sensitive area	Nanada Devi National Park 15 Nos. trees required cutting	Nanada Devi National Park 25 Nos. trees required cutting	Nanada Devi National Park 30 Nos. trees required cutting
b)	Density of forest	0.1 to 0.2	0.2 to 0.4	0.2 to 0.4
c)	Type of Fauna & Flora	Jungle, Bhutiya dog etc. Trees Devdar etc.	Jungle, Bhutiya dog etc. Trees Devdar etc.	Jungle, Bhutiya dog etc. Trees Devdar etc.
d)	Endangered species if any	NIL	NIL	NIL
e)	Historical/Cultural monument	NIL	NIL	NIL
f)	Any other relevant information	NIL	NIL	NIL
3	Consumption cost			
i)	Crop	Extent of damage can be evaluated during detailed survey/ construction		
ii)	Forest			
4	No. of Crossing			
i)	Railway	NIL	NIL	NIL
ii)	Trans. line	NIL	NIL	NIL
iii)	River Xing etc.	2 No.	3 No.	4 No.
5	Construction Problem	No specific problem other than forest clearance		
6	O&M problem	Minimum	Moderate	Maximum
7	Overall Remarks	Best suitable	-	-

Reasons for selection of final Route :

Considering the various reasons based on informations in the table Alternative - I is best suitable. It involves lesser forest and minimum ROW problems. Hence selected for detailed Survey as final route.

i) LILO of 132 KV DC Bhinderganga - Kuwaripass at Pulana line:

Sl. No.	Description	Alignment-I	Alignment-II	Alignment-III
1	Route Particulars			
i)	Length	2 Kms	2.1 Kms	2.2 kms.
ii)	Terrain	HILLY	HILLY	HILLY
a)	Hilly Plain			
	In(Kms.)%	100% HILLY	100% HILLY	100% HILLY
	Agriculture	-	-	-
	Wet/ Marshy	-	-	-
	esturaine	-	-	-
	other type of land	-	-	-
2	Environmental Details	-	-	-
i)	Name of District/ District details (through which transmission line Pass)	Chamoli	Chamoli	Chamoli
ii)	Population of district	354999	354999	354999
a)	Details of poverty line (In Rs.)	Rs. 1500 -	Rs. 1500 -	Rs. 1500 -
b)	No. of People/ Percentage of people below poverty line	37%	37%	37%
iii)	Town in Alignment(Near by)	-	-	-
iv)	House with in ROW	NIL	NIL	NIL
v)	Forest in Km./ Ha	2Km/54000 sqm	2.1Km/56700 sqm	2.2Km/59400 sqm
a)	Type of forest Reserve protected Mangrove/ Wild life area/ Biosphere reserve any other environment sensitive area	Reserve 105 Nos. trees requires cutting	Reserve 150 Nos. trees requires cutting	Reserve 280 Nos. trees requires cutting
b)	Density of forest	0.1 to 0.3	0.2 to 0.4	0.2 to 0.5
c)	Type of Fauna & Flora	Jungle, fox, cat etc. Trees Sal, Teak etc.	Jungle, fox, cat etc. Trees Sal, Teak etc.	Jungle, fox, cat etc. Trees Sal, Teak etc.
d)	Endangered species if any	NIL	NIL	NIL
e)	Historical/Cultural monument	NIL	NIL	NIL
f)	Any other relevant information	NIL	NIL	NIL
3	Consumption cost			
i)	Crop	Extent of damage can be evaluated during detailed survey/construction		
ii)	Forest			
4	No. of Crossing			
i)	Railway	NIL	NIL	NIL
ii)	Trans. line	NIL	NIL	NIL
iii)	River Xing etc.	NIL	NIL	NIL
5	Construction Problem	No specific problem other than forest clearance		
6	O&M problem	Mininum	Moderate	Maximum
7	Overall Remarks	Best suitable	-	-

Reasons for selection of final Route :

Considering the various reasons based on informations in the table Alternative - I is best suitable. It involves lesser forest and minimum ROW problems. Hence selected for detailed Survey as final route.

For the proposed new Sub/Stns. under the Integrated Transmission System, the details of land are given under below:

Performa for Environmental and Social details for substation

400 KV S/s SIMLI (KARANPRAYAG)

Sl No.	Study Point	Alt.-I	Alt.-II	Alt.-III	Remarks
01	Location	Karanprayag	Simli	Nandprayag	
02	Village Name	Karanprayag	Simli	Nandprayag	
03	Size of Land	18 Acres	20 Acres	15 Acres	
04	Type of Land Govt. Pvt. others)	Private	Govt.	Private	
05	General Geography of Area	Hilly	Plain	Hilly	
06	Agriculture/Cropping Pattern				
i)	Main Types of Crops	Rice,Wheat etc.	Barrain	Rice,Wheat etc.	
ii)	Irrigation Facility	No	Yes	Yes	
07	Socio-economic condition area:				
i)	Profession of existing population Agricultural (self employment, Merchants, Manufacturer, Transporters & Handicrafts etc.)	Agriculture & Labourers	-	Agriculture & Labourers	
ii)	Wage Earner (Skilled Unskilled labour)	Unskilled labour	-	Unskilled labour	
iii)	Others if any	-	-	-	
iv)	Natural resources base	Service Agriculture	-	Service Agriculture	
v)	Political influence	90%	-	80%	
08	No. Name of villages effected				
i)	Partly	NIL	NIL	NIL	
ii)	Fully	NIL	NIL	NIL	
09	Total No. of families likely to be effected	12 Nos	-	16 Nos	
10	No. of families whose part holding likely to be acquired	10 Nos	-	5 Nos	
11	No. of families whose total holding likely to be acquired				
a)	Land+Home	-	-	-	
b)	Land only	22 Nos	-	21 Nos	
c)	Home only	-	-	-	
12	Cast of PAPs PAFs				
a)	GC	10 Nos	-	11 Nos	
b)	OBC	2 Nos	-	1 Nos	
c)	SC/ST	10 Nos	-	9 Nos	
13	General Pattern of Cultivation i.e. by owner on lease (Registered Un-registered)	By Owner	-	By Owner	
14	Loss of structure House shop along with the status of occupants (owner Telant/Lease Holder/squater)	By Owner	-	By Owner	

15	Others			
a)	Common property resources like school, Ponds Grazing Ground, Religious Places	-	-	-
b)	Drainage facility	-	Yes available	
16	Tree Plantation Orchads (Approx.)	-	-	-
17	Cost of land	Rs. 2.30 crores	Rs. 2.40 crores	Rs. 2.10 crores
18	Reasons for selection	-	Best suitable being least loss to general public occurred	-

COMMITTEE RECOMMENDATION:- Committee visited all the site locations (details are mentioned in the table cited above) and considering various parameters recommended

Alternative II as best suitable due to following reasons:

- No of PAP's involved are less
- No common properties resources like school, ponds, grazing, grounds, religious places etc. are encountered w thin the selected site land. The land is almost plain terrain in nature.
- Enough corridors available for incoming and outgoing lines.
- The location is near Simli town and no approach road is required to be constructed
- Infrastructure facilities like electricity, water supply etc. and all other amenities like hospital, post & te egraph office, schools for children education etc. are available since the Karanprayag town is located or ly 8 Km from it

Note: (i) The cost of land does not include site preparation (grading, stabilizing, drainage, erosion control etc.)

(ii) At Corporate level Committee of PTCUL headed by GM (Trans.), DGM (Trans.), DGM (Dist.), DGM / EE (Civil) is constituted for the selection of land for 400 KV/220 KV/132 KV Substations.

Performa for Environmental and Social details for substation

400 KV S/s ALOMRA

Sl. No.	Study Point	Alt.-I	Alt.-II	Alt.-III	Remarks
01	Location	Almora	Almora	Almora	
02	Village Name	Almora	Almora	Almora	
03	Size of Land	25 Acres	15 Acres	12 Acres	
04	Type of Land (Govt./Pvt./others)	Private	Private	Private	
05	General Geography of Area	Hilly	Hilly	Hilly	
06	Agriculture/Cropping Pattern	Two Crops per year	Two Crops per year	Two Crops per year	
i)	Main Types of Crops	Wheet & Rice	Wheet & Rice	Wheet & Rice	
ii)	Irrigation Facility	Rain	Rain	Rain	
07	Socio-economic condition area:				
i	Profession of existing population Agricultural (self employment, Merchants, Manufacturer, Transporters & Handicrafts etc.)	Mostly Agriculture	Mostly Agriculture	Mostly Agriculture	
ii)	Wage Earner (Skilled Unskilled labour)	Unskilled labour	Unskilled labour	Unskilled labour	

iii)	Others if any	-	-	-
iv)	Natural resources base	Agriculture	Agriculture	Agriculture
v)	Political influence	Moderate	Moderate	Moderate
08	No. Name of villages effected	Almora	Almora	Almora
i)	Partly	One	One	Two
ii)	Fully	NIL	NIL	NIL
09	Total No. of families likely to be effected	15 Nos	20 Nos	22 Nos
10	No. of families whose part holding likely to be acquired	By owner	By owner	By owner
11	No. of families whose total holding likely to be acquired			
a)	Land+Home	-	-	-
b)	Land only	15 Nos	20 Nos	22 Nos
c)	Home only	-	-	-
12	Cast of PAPs PAFs			
a)	GC	15 Nos	18 Nos	20 Nos
b)	OBC	-	-	-
c)	SC/ST	-	2 Nos	2 Nos
13	General Pattern of Cultivation i.e. by owner on lease Registered/Un-registered)	By owner	By owner	By owner
14	Loss of structure House/shop along with the status of occupants (owner/Telant/Lease Holder/squater)	NIL	NIL	NIL
15	Others			
a.	Common property resources like school, Ponds Grazing Ground, Religious Places	Not affected	Not affected	Not affected
b)	Drainage facility	Not required	To be provided	To be provided
16	Tree Plantation Orchads (Approx.)	NIL	NIL	NIL
17	Cost of land	Rs. 3.0 crores	Rs. 2.75 crores	Rs. 2.5 crores
18	Reasons for selection	Best suitable		

COMMITTEE RECOMMENDATION:- Committee visited all the site locations (details are mentioned in the table cited above) and considering various parameters recommended

Alternative I as best suitable due to following reasons:

- No of PAP's involved are less
- No common properties resources like school, ponds, grazing, grounds, religious places etc. are encountered within the selected site land. The land is of mix terrain in nature 80% Hilly and 20% plain.
- Enough corridors available for incoming and outgoing lines.
- The location is near Almora town and no approach road is required to be constructed
- Infrastructure facilities like electricity, water supply etc. and all other amenities like hospital, post & telegraph office, schools for children education etc. are available since the Almora town is located only 4 Km from it

Note: (i) The cost of land does not include site preparation (grading, stabilizing, drainage, erosion control etc.)

(ii) At Corporate level Committee of PTCUL headed by GM (Trans.), DGM (Trans.), DGM (Dist.), DGM / EE (Civil) is constituted for the selection of land for 400 KV/220 KV/132 KV Substations.

400 KV S/s SRINAGAR

Sl. No.	Study Point	Alt.-I	Alt.-II	Alt.-III	Remarks
01	Location	Srinagar	Kaddukhal	Kirtinagar	
02	Village Name	Srinagar	Kaddukhal	Kirtinagar	
03	Size of Land	35 Acres	40 Acres	30 Acres	
04	Type of Land (Govt. Pvt. others)	Private	Govt.	Private	
05	General Geography of Area	Hilly	Plain	Hilly	
06	Agriculture Cropping Pattern	Two crops per year	-	Two crops per year	
i)	Main Types of Crops	Rice, Wheat etc.	Barrain	Rice, Wheat etc.	
ii)	Irrigation Facility	No	Yes	Yes	
07	Socio-economic condition area:				
i)	Profession of existing population Agricultural (self employment, Merchants, Manufacturer, Transporters & Handicrafts etc.)	Agriculture & Labourers	-	Agriculture & Labourers	
ii)	Wage Earner (Skilled/Unskilled labour)	Unskilled labour	-	Unskilled labour	
iii)	Others if any	-	-	-	
iv)	Natural resources base	Service/Agriculture	-	Service/Agriculture	
v)	Political influence	90%	-	80%	
08	No. Name of villages effected				
i)	Partly	NIL	NIL	NIL	
ii)	Fully	NIL	NIL	NIL	
09	Total No. of families likely to be effected	12 Nos	-	16 Nos	
10	No. of families whose part holding likely to be acquired	10 Nos	-	5 Nos	
11	No. of families whose total holding likely to be acquired				
a)	Land+Home	-	-	-	
b)	Land only	22 Nos	-	21 Nos	
c)	Home only	-	-	-	
12	Cast of PAPs/PAFs				
a)	GC	10 Nos	-	11 Nos	
b)	OBC	2 Nos	-	1 Nos	
c)	SC/ST	10 Nos	-	9 Nos	
13	General Pattern of Cultivation i.e. by owner on lease (Registered/Un-registered)	By owner	-	By owner	
14	Loss of structure House/shop along with the status of occupants (owner/Telant/Lease Holder/squater)	NIL	NIL	NIL	
15	Others				
a)	Common property resources like school, Ponds/Grazing Ground, Religious Places	-	-	-	
b)	Drainage facility	-	-	-	
16	Tree Plantation Orchads (Approx.)	-	-	-	

17	Cost of land	Rs. 5.0 crores	Rs. 4.8 crores	Rs. 4.6 crores
18	Reasons for selection	-	Best suitable being least loss to general public	-

COMMITTEE RECOMMENDATION:- Committee visited all the site locations (details are mentioned in the table cited above) and considering various parameters recommended **Alternative II as best suitable due to following reasons:**

- No of PAP's involved are less
- No common properties resources like school, ponds, grazing, grounds, religious places etc. are encountered within the selected site land. The land is almost plain in nature.
- Enough corridors available for incoming and outgoing lines.
- The location is near Srinagar town and no approach road is required to be constructed
- Infrastructure facilities like electricity, water supply etc. and all other amenities like hospital, post & telegraph office, schools for children education etc. are available since the Srinagar town is located only 7 Km from it

Note: **(i)** **The cost of land does not include site preparation (grading, stabilizing, drainage, erosion control etc.)**

(ii) **At Corporate level Committee of PTCUL headed by GM (Trans.), DGM (Trans.), DGM (Dist.), DGM / EE (Civil) is constituted for the selection of land for 400 KV/220 KV/132 KV Substations.**

132 KV S/s BARKOT

Sl. No.	Study Point	Alt.-I	Alt.-II	Alt.-III	Remarks
01	Location	Barkot	Barkot	Barkot	
02	Village Name	Tumalkha	Chhamtango	Ponatti	
03	Size of Land	5 Acres	4.2 Acres	3.5 Acres	
04	Type of Land (Govt, Pvt. others)	Private	Private	Private	
05	General Geography of Area	Hilly	Hilly	Hilly	
06	Agriculture Cropping Pattern	Two crops per year	Two crops per year	Two crops per year	
i)	Main Types of Crops	Rice, Wheat etc.	Rice, Wheat etc.	Rice, Wheat etc.	
ii)	Irrigation Facility	Rain	Rain	Rain	
07	Socio-economic condition area:				
i)	Profession of existing population Agricultural (self employment, Merchants, Manufacturer, Transporters & Handicrafts etc.)	Mostly Agriculture	Mostly Agriculture	Mostly Agriculture	
ii)	Wage Earner (Skilled/Unskilled labour)	Unskilled labour	Unskilled labour	Unskilled labour	
iii)	Others if any	NIL	NIL	NIL	
iv)	Natural resources base	Agriculture	Agriculture	Agriculture	
v)	Political influence	Negligible	Moderate	Moderate	
08	No. Name of villages effected	Tumalkha	Chhamtango	Ponatti	
i)	Partly	One	One	One	
ii)	Fully	NIL	NIL	NIL	
09	Total No. of families likely to be effected	10 Nos	15 Nos	20 Nos	
10	No. of families whose part holding likely to be acquired	-	5 Nos	10 Nos	
11	No. of families whose total holding likely to be acquired				

a)	Land+Home	-	-	-
b)	Land only	10 Nos	20 Nos	30 Nos
c)	Home only	-	-	-
12	Cast of PAPs PAFs			
a)	GC	10 Nos	15 Nos	15 Nos
b)	OBC	-	-	5 Nos
c)	SC ST	-	5 Nos	-
13	General Pattern of Cultivation i.e. by owner on lease (Registered Un-registered)	By owner	By owner	By owner
14	Loss of structure House/shop along with the status of occupants (owner Telant Lease Holder squater)	NIL	NIL	NIL
15	Others			
a)	Common property resources like school, Ponds Grazing Ground, Religious Places	Not effected	Not effected	Not effected
b)	Drainage facility	Not effected	Not effected	Not effected
16	Tree/ Plantation Orchads (Approx.)	NIL	NIL	NIL
17	Cost of land	Rs. 0.65 crores	Rs. 0.65 crores	Rs. 0.68 crores
18	Reasons for selection	Best suitable	-	-

COMMITTEE RECOMMENDATION:- Committee visited all the site locations (details are mentioned in the table cited above) and considering various parameters recommended

Alternative I as best suitable due to following reasons:

- No of PAP's involved are less
- No common properties resources like school, ponds, grazing, grounds, religious places etc. are encountered within the selected site land.
- Enough corridors available for incoming and outgoing lines.
- The location is on Barkot-Dehradun Highway and a very small approach road is required to be constructed
- Infrastructure facilities like electricity, water supply etc. and all other amenities like hospital, post & telegraph office, schools for children education etc. are available since the site is located only 4 Km from the Barkot town.

Note: (i) The cost of land does not include site preparation (grading, stabilizing, drainage, erosion control etc.)

(ii) At Corporate level Committee of PTCUL headed by GM (Trans.), DGM (Trans.), DGM (Dist.), DGM / EE (Civil) is constituted for the selection of land for 400 KV/220 KV/132 KV Substations.

132 KV S/s MORIE

Sl. No.	Study Point	Alt.-I	Alt.-II	Alt.-III	Remarks
01	Location	Purola	Purola	Morie	
02	Village Name	Mangel	Shivala	Morie	
03	Size of Land	3.5 Acres	3.2 Acres	5 Acres	
04	Type of Land (Govt. Pvt. others)	Private	Private	Private	
05	General Geography of Area	Hilly	Hilly	Plain	
06	Agriculture Cropping Pattern	Two crops per year	Two crops per year	Two crops per year	
i)	Main Types of Crops	Rice, Wheat etc.	Rice, Wheat etc.	Rice, Wheat etc.	
ii)	Irrigation Facility	Rain	Rain	Rain Canal	
07	Socio-economic condition area:				

i)	Profession of existing population Agricultural (self employment, Merchants, Manufacturer, Transporters & Handicrafts etc.)	Mostly Agriculture	Mostly Agriculture	Mostly Agriculture
ii)	Wage Earner (Skilled Unskilled labour)	Unskilled labour	Unskilled labour	Unskilled labour
iii)	Others if any	NIL	NIL	NIL
iv)	Natural resources base	Agriculture	Agriculture	Agriculture
v)	Political influence	Moderate	Moderate	Negligible
08	No. Name of villages effected	Mangeli	Shivala	Morie
i)	Partly	15	20	2
ii)	Fully	NIL	NIL	1
09	Total No. of families likely to be effected	15 Nos	20 Nos	3 Nos
10	No. of families whose part holding likely to be acquired	15 Nos	20 Nos	2 Nos
11	No. of families whose total holding likely to be acquired			
a)	Land+Home	-	-	-
b)	Land only	15 Nos	20 Nos	3 Nos
c)	Home only	-	-	-
12	Cost of PAPs PAFs			
a)	GC	GC	GC	GC
b)	OBC	-	-	-
c)	SC ST	-	-	-
13	General Pattern of Cultivation i.e by owner on lease (Registered Un-registered)	By owner	By owner	By owner
14	Loss of structure House shop along with the status of occupants (owner Telant Lease Holder/squater)	NIL	NIL	NIL
15	Others			
a)	Common property resources like school, Ponds Grazing Ground, Religious Places	Not effected	Not effected	Not effected
b)	Drainage facility	Not effected	Not effected	Not effected
16	Tree Plantation Orchads (Approx.)	NIL	NIL	NIL
17	Cost of land	Rs. 1.48 crores	Rs. 0.50 crores	Rs. 0.45 crores
18	Reasons for selection	-	-	Best suitable

COMMITTEE RECOMMENDATION:- Committee visited all the site locations (details are mentioned in the table cited above) and considering various parameters recommended

Alternative I as best suitable due to following reasons:

- No of PAP's involved are less
- No common properties resources like school, ponds, grazing, grounds, religious places etc. are encountered within the selected site land.
- Enough corridors available for incoming and outgoing lines.
- The location is on Morie-Tuni Highway and no approach road is required to be constructed
- Infrastructure facilities like electricity, water supply etc. and all other amenities like hospital, post & tele graph office, schools for children education etc. are available since the site is located only 2 Km from the Morie town.

Note: (i) The cost of land does not include site preparation (grading, stabilizing, drainage, erosion control etc.)

(ii) At Corporate level Committee of PTCUL headed by GM (Trans.), DGM (Trans.), DGM (Dist.), DGM / EE (Civil) is constituted for the selection of land for 400 KV/220 KV/132 KV Substations.

400 KV S/s KUWARIPASS

Sl. No.	Study Point	Alt.-I	Alt.-II	Alt.-III	Remarks
01	Location	Kuwaripass	Joshimath	Kuwaripass	
02	Village Name	Chumargaur	Joshimath	Gorang	
03	Size of Land	20 Acres	20 Acres	20 Acres	
04	0	Private/Govt.	Private	Private/Govt.	
05	General Geography of Area	Hilly	Hilly	Hilly	
06	Agriculture/Cropping Pattern	One crop per year	One crop per year	Two crops per year	
i)	Main Types of Crops	Rice	Rice	Rice	
ii)	Irrigation Facility	By Canal	By Canal	By Canal	
07	Socio-economic condition area:				
i)	Profession of existing population Agricultural (self employment, Merchants, Manufacturer, Transporters & Handicrafts etc.)	Agriculture & Labourers	Agriculture & Labourers	Agriculture & Labourers	
ii)	Wage Earner (Skilled/Unskilled labour)	Unskilled labour	Unskilled labour	Unskilled labour	
iii)	Others if any	-	-	-	
iv)	Natural resources base	Service/Agricultur e	Service/Agricultur e	Service/Agricultur e	
v)	Political influence	Moderate	Moderate	Moderate	
08	No. Name of villages effected				
i)	Partly	NIL	NIL	NIL	
ii)	Fully	NIL	NIL	NIL	
09	Total No. of families likely to be effected	100 Nos	25 Nos	12 Nos	
10	No. of families whose part holding likely to be acquired	1 No	-	-	
11	No. of families whose total holding likely to be acquired	-	-	-	
a)	Land+Home	-	-	-	
b)	Land only	100 Nos	25 Nos	12 Nos	
c)	Home only	-	-	-	
12	Cast of PAPs PAFs	-	-	-	
a)	GC	100 Nos	25 Nos	12 Nos	
b)	OBC	-	-	-	
c)	SC/ST	-	-	-	
13	General Pattern of Cultivation i.e. by owner on lease (Registered/Un-registered)	By owner	By owner	By owner	
14	Loss of structure House shop along with the status of occupant (owner Telant Lease Holder squatter)	NIL	NIL	NIL	
15	Others	-	-	-	
a)	Common property resources like school, Ponds Grazing Ground, Religious Places	-	-	-	
b)	Drainage facility	Yes	Yes	Yes	
16	Tree, Plantation Orchads (Approx.)	-	-	-	

17	Cost of land	Rs. 10 crores	Rs. 15 crores	Rs. 10 crores
18	Reasons for selection	-	-	Best suitable being least loss to general public

COMMITTEE RECOMMENDATION:- Committee visited all the site locations (details are mentioned in the table cited above) and considering various parameters recommended

Alternative III as best suitable due to following reasons:

- No of PAP's involved are less
- No common properties resources like school, ponds, grazing, grounds, religious places etc. are encountered within the selected site land. The land is Hilly
- Enough corridors available for incoming and outgoing lines except in the northern side.
- The location is near Joshimath town and approach road is required to be constructed
- Infrastructure facilities like electricity, water supply etc. and all other amenities like hospital, post & telegraph office, schools for children education etc. are available since the Joshimath town is located only 6 Km from it.

Note: (i) The cost of land does not include site preparation (grading, stabilizing, drainage, erosion control etc.)

(ii) At Corporate level Committee of PTCUL headed by GM (Trans.), DGM (Trans.), DGM (Dist.), DGM / EE (Civil) is constituted for the selection of land for 400 KV/220 KV/132 KV Substations.

132 KV S/s Baranwara

Sl. No.	Study Point	Alt.-I	Alt.-II	Alt.-III	Remarks
01	Location	Baranwara	Baswara	Baswara	
02	Village Name	Baranwara	Baranwara	Jalhi Bhatwaria	
03	Size of Land	2.5 Acres	3.5 Acres	3.5 Acres	
04	Type of Land (Govt, Pvt, others)	Private	Private	Private	
05	General Geography of Area	Hilly	Hilly	Hilly	
06	Agriculture/Cropping Pattern	Two crops per year	-	Two crops per year	
i)	Main Types of Crops	Rice, Wheat etc.	Barrain	Rice, Wheat etc.	
ii)	Irrigation Facility	Yes	Yes	Yes	
07	Socio-economic condition area:				
i)	Profession of existing population Agricultural (self employment, Merchants, Manufacturer, Transporters & Handicrafts etc.)	Agriculture & Labourers	Agriculture & Labourers	Agriculture & Labourers	
ii)	Wage Earner (Skilled/Unskilled labour)	Unskilled labour	Unskilled labour	Unskilled labour	
iii)	Others if any	-	-	-	
iv)	Natural resources base	Business Agriculture	Business Agriculture	Service Agriculture	
v)	Political influence	Moderate	Moderate	Moderate	
08	No. Name of villages effected				
i)	Partly	-	-	-	
ii)	Fully	-	-	-	
09	Total No. of families likely to be effected	60 Nos	50 Nos	40 Nos	
10	No. of families whose part holding likely to be acquired	-	-	-	

11	No. of families whose total holding likely to be acquired			
a)	Land+Home			
b)	Land only	60 Nos	50 Nos	40 Nos
c)	Home only	-	-	-
12	Cast of PAPs PAFs			
a)	GC	60 Nos	50 Nos	40 Nos
b)	OBC	-	-	-
c)	SC/ST	-	-	-
13	General Pattern of Cultivation i.e. by owner on lease (Registered/Un-registered)	By owner	By owner	By owner
14	Loss of structure House shop along with the status of occupants (owner/Telant/Lease holder/squater)	NIL	NIL	NIL
15	Others	-	-	-
a)	Common property resources like school, Ponds Grazing Ground, Religious Places	-	-	-
b)	Drainage facility	-	-	-
16	Tree Plantation Orchads (Approx.)	-	-	-
17	Cost of land	Rs. 2.5 crores	Rs. 2.8 crores	Rs. 2.8 crores
18	Reasons for selection	-	-	Best suitable being least loss to general public

COMMITTEE RECOMMENDATION:- Committee visited all the site locations (details are mentioned in the table cited above) and considering various parameters recommended

Alternative III as best suitable due to following reasons:

- No of PAP's involved are less
- No common properties resources like school, ponds, grazing, grounds, religious places etc. are encountered within the selected site land. The land is Plain
- Enough corridors available for incoming and outgoing lines except in the northern side.
- The location is near Baswara town and approach road is required to be constructed
- Infrastructure facilities like electricity, water supply etc. and all other amenities like hospital, post & telegraph office, schools for children education etc. are available since the Delvara town is located only 18 Km from it.

Note: **(i)** **The cost of land does not include site preparation (grading, stabilizing, drainage, erosion control etc.)**

(ii) **At Corporate level Committee of PTCUL headed by GM (Trans.), DGM (Trans.), DGM (Dist.), DGM / EE (Civil) is constituted for the selection of land for 400 KV/220 KV/132 KV Substations.**

132 KV S/s Melkhet

Sl. No.	Study Point	Alt.-I	Alt.-II	Alt.-III	Remarks
01	Location	Melkhe	Melkhet	Me khet	
02	Village Name	Silingbag id	Bustra	Meckhet	
03	Size of Land	10 Acres	5 Acres	5 Acres	
04	Type of Land (Govt, Pvt, others)	Private	Private	Private	
05	General Geography of Area	Hilly	Hilly	Hilly	
06	Agriculture Cropping Pattern	Two crops per year	-	Two crops per year	
i)	Main Types of Crops	Barrain	Barrain	Barrain	
ii)	Irrigation Facility	No	No	No	
07	Socio-economic condition area:				
i)	Profession of existing population Agricultural (self employment, Merchants, Manufacturer, Transporters & Handicrafts etc.)	Labourers	Labourers	Labourers	
ii)	Wage Earner (Skilled/Unskilled labour)	Unskilled labour	Unskilled labour	Unskilled labour	
iii)	Others if any	-	-	-	
iv)	Natural resources base	Service	Service	Service	
v)	Political influence	Negligible	Negligible	Negligible	
08	No. Name of villages effected				
i)	Partly	-	-	-	
ii)	Fully	-	-	-	
09	Total No. of families likely to be effected	25 Nos	25 Nos	5 Nos	
10	No. of families whose part holding likely to be acquired	-	-	-	
11	No. of families whose total holding likely to be acquired				
a)	Land+Home	-	-	-	
b)	Land only	25 Nos	25 Nos	5 Nos	
c)	Home only	-	-	-	
12	Cast of PAPs/PAFs				
a)	GC	25 Nos	25 Nos	11 Nos	
b)	OBC	-	-	-	
c)	SC/ST	-	-	-	
13	General Pattern of Cultivation i.e. by owner on lease (Registered/Un-registered)	-	-	-	
14	Loss of structure House/shop along with the status of occupants (owner/Telant/Lease Holder/squater)	By Owner	-	By Owner	
15	Others	-	-	-	
a)	Common property resources like school, Ponds/Grazing Ground, Religious Places	-	-	-	
b)	Drainage facility	-	-	-	
16	Tree/Plantation/Orchads (Approx.)	-	-	-	

17	Cost of land	Rs. 7.0 crores	Rs. 3.5 crores	Rs. 3.5 crores
18	Reasons for selection			Best suitable being least loss to general public

COMMITTEE RECOMMENDATION:- Committee visited all the site locations (details are mentioned in the table cited above) and considering various parameters recommended

Alternative III as best suitable due to following reasons:

- No of PAP's involved are less
- No common properties resources like school, ponds, grazing, grounds, religious places etc. are encountered within the selected site land. The land is almost Plain terrain in nature.
- Enough corridors available for incoming and outgoing lines except in the northern side.
- The location is near Melkhet town and approach road is required to be constructed
- Infrastructure facilities like electricity, water supply etc. and all other amenities like hospital, post & telegraph office, schools for children education etc. are available since the Devol town is located only 7 Km from it.

Note: **(i)** **The cost of land does not include site preparation (grading, stabilizing, drainage, erosion control etc.)**

(ii) **At Corporate level Committee of PTCUL headed by GM (Trans.), DGM (Trans.), DGM (Dist.), DGM / EE (Civil) is constituted for the selection of land for 400 KV/220 KV/132 KV Substations.**

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The state government here, while taking stock of this flight of investment, still thinks that the damage is temporary and limited.

"The companies which have units with low capital investment and high output have been migrating to the states like Uttaranchal. It may not by possible for companies with big machinery to shift their bases," Hariharan, special chief secretary of the state revenue department told *Business Standard*

"These companies are merely going there to take advantage of these tax sops without factoring in other disadvantages like markets and manpower which means the whole incentive package for those states may serve only a temporary purpose," he observed.

The state industry department officials though are much more worried over this trend, because, according to them, the incentive package available in those states can never be matched by states like Andhra Pradesh on their own.

"An 18 per cent central excise exemption will mean much more to the companies than what we offer at state level. More over, the VAT regime will more or less do away with all the state level tax sops," an industry department official said.

According to him, the threat from Uttaranchal seems to be much more decisive as 62 per cent of the future power supply in that state would be from cheaper hydel power sources.

Poverty And Social Analysis for the ADB-funded Power Transmission (Improvement) Loan for the Project : Transmission system associated with Alaknanda & Bhagirathi basin Projects (2876 MW) of **Uttaranchal State : Inception Report : Annex : News Reports**

CONTENTS

ANNEX

Call for people-friendly changes in domicile laws (Hindu, 26.11.04)

DEHRA DUN, NOV. 25. The Bharatiya Janata Yuva Morcha has accused the Narain Dutt Tiwari Government of following anti- people domicile and industrial policies.

The Uttaranchal domicile laws say that a person will be considered a bona fide resident of the State only if he has been the owner of a piece of land here for at least 15 years. "More than a third of the State's population is living in such economically adverse conditions that they cannot purchase property and live in hired accommodations. How can these natives be denied a domicile certificate?" asked Pushkar Singh Dhami, State president of the Morcha, seeking a suitable people-friendly amendment to the domicile laws.

Similarly, the Congress after coming to power at the Centre had reduced the time limit for availing subsidies and tax relaxations by industrial units being established here. The BJP-led Government had given such concessions for 15 years to units that would be established till 2014 but the Congress- led Government has limited this facility to industries that would be set up by the year 2007. This indicates that the Congress was not interested in the development of industries in Uttaranchal, he said.

Mr Dhami also alleged serious irregularities in the allotment of industrial land.

ANNEX

Uttaranchal to have eight new radio stations (Hindu, Dec 7'04)

New Delhi, Dec. 7. (UNI): In order to further strengthen the radio coverage in Uttaranchal, eight new Radio Stations have been proposed in the state during the 10th Five Year Plan, the Rajya Sabha was told yesterday. These new stations have been proposed at Dehradun, Haldwani (10 KW each), Bhageshwar (5 KW), Champawat, Gairsin, Rudraprayag, New Tehri and Dharchula (1 KW each). A Captive Earth Station is also proposed to be set up at Almora.

The schemes will be implemented subject to approval and availability or resources, Information & Broadcasting and Culture Minister, S. Jaipal Reddy, told the House.

ANNEX

Essar keen on Uttaranchal power project

Business Standard / Dehra Dun December 21, 2004

The Rs 2,500-crore Essar group is keen on Uttaranchal. "We are looking for business in hydro power," said Mukesh Tyagi, the head of the business development group, which held talks with top government officials here.

Tyagi headed a business development team, which collected some preliminary data regarding the business opportunities in the state where the tax holiday scheme has attracted investments of Rs 8,000-9,000 crore from various industrial houses.

Top companies like LG, Hero Honda, and Britannia are putting up their units in the state. More such proposals are also in the pipeline, officials said.

In the hydro power sector, the Essar group is looking for investments in the run-of-the-river hydro projects because the state has scope to increase its power output to 15,000 Mw.

The Tehri hydro project will alone generate 2,400 Mw, the first phase of which is scheduled to be commissioned in June-July next year. In addition to hydro power, the company was also looking for opportunities in business process outsourcing and petrol pumps, Tyagi said.

Tyagi had detailed talks with Industrial Secretary Sanjiv Chopra in this regard. "We have had constructive talks with Essar people. I think some proposals are likely come up in the near future," Chopra told ***Business Standard***.

ANNEX

Uttaranchal proposes to develop integrated industrial estates

Business Standard / Chennai December 22, 2004

Uttaranchal has tremendous potential for investments in sectors such as agri and food processing, biotechnology, general manufacturing, hydro power, information technology, tourism and industrial infrastructure, said Sanjeev Chopra, secretary (industrial development), Government of Uttaranchal, at an interactive session organised by the Confederation of Indian Industry (CII).

Investors can take advantage of the concession package announced by the Government of India for Uttaranchal till March 31, 2007.

Chopra said that after the formation of Uttaranchal in 2000, and the special category status offered by the Government of India, the state has attracted investments to the tune of Rs 10,000 crore.

He highlighted some of the key incentives that the state offers to investors such as 100 per cent outright excise exemption for 10 years, 100 per cent income tax exemption for five years, capital investment subsidy at 15 per cent of cost of plant and machinery with a maximum of Rs 30 lakh.

"Sectors like tourism, IT, bio technology and floriculture are given industrial status, matching subsidy for horticulture, while the food processing and floriculture units are being financed under schemes of Apeda, NMPB etc," he said.

Speaking on the opportunities available in the infrastructure sector, Chopra said that the Uttaranchal government has proposed to develop world-class integrated industrial estates in the state.

In Haridwar alone, 1,500 acres of land has already been sold for developing world-class industrial estates. The state is also planning to develop another world-class industrial estate at Pantnagar spreading across 3,000 acres of land.

He also said that the government has identified a consultant to develop world-class IT park in the state. A daily flight service from Delhi to Dehradun will be in operation from December 23, 2004 and there are also plans for building a new airport at Pantnagar, he added.

Commenting on the power sector in the state, Chopra said that the state is offering power at Rs 1.90 per unit for industrial sector, which is very competitive compared to many states. Out of the hydro power potential of 15,000 mw, the state has tapped only 1124 mw. Forty seven small hydro sites and 13 major hydro sites have been identified for prospective investors, he added.

"Agri and food processing sector presents opportunities for coldchain technology, organic farming, herbal cultivation, floriculture, lychee and basmati export zones," he said.

ANNEX

Leading corporates shift plans from Andhra Pradesh to Uttaranchal

B Dasarath Reddy / Hyderabad December 14, 2004 / Business Standard

Andhra Pradesh is facing competition on the industrial investment side from an unlikely competitor in the form of Uttaranchal. All thanks to the special tax incentive package announced by the Government of India for one of the newest states of the Indian Union, carved out of Uttar Pradesh.

Several leading Indian corporates like Colgate, Britannia and ITC have now decided to allocate their investments to the hill state to avail the incentives offered by the Centre. All this, of course, has meant that the much-awaited and delayed industrial policy of the Y S Rajasekhara Reddy government in the state may well be rendered ineffective.

"ITC was to set up a biscuit plant in Andhra Pradesh. Now the company has shifted its plans to Uttaranchal to avail of the huge central tax incentives besides other benefits announced by the Uttaranchal government," a senior government official told *Business Standard*.

Similarly, Colgate, which had plans to increase its manufacturing capacity at the Balanagar industrial estate in Hyderabad has now decided to set up a new plant in Uttaranchal rather than invest in increasing capacities in Hyderabad. Same has been the case with Marico, the Mumbai based edible oil company which sells the Saffola brand oil.

Amway, the international direct marketing major, Britannia and Duke, two biscuit companies which have their bases in the state are among those who are planning to set up their new units only in Uttaranchal, according to industry department sources.

Though this early migratory trend is visible in operations that come under FMCG category, several other companies which originally thought of Andhra Pradesh as the base for their future plans also learnt to be in a serious rethink mode.

Response from Asahi, which is setting up a glass manufacturing unit in Uttaranchal could be an example for the shape of things to come.

According to a state government official, who spoke to one of the senior executives of Asahi for prospective investment in Andhra Pradesh, though the company representative was very appreciative of the policies in Andhra Pradesh, all incentives dwarfed when they compared it with the incentive package announced for Uttaranchal, Himachal Pradesh and the Kutch region by the centre.

Concessions available under the central government's industrial package include, 100 per cent excise tax exemption for ten years, 100 per cent income tax exemption for first five years and there after 30 per cent for companies and 25 per cent exemption for other categories, central investment subsidy at 15 per cent with a maximum of Rs 30 lakh on plant and machinery and a central transport subsidy.

Apart from this, the Uttaranchal government is providing several other advantages like an interest incentive, entertainment tax exemption for tourism projects including multiplexes, exemption of entry tax on plant and machinery among others.

ANNEX

Uttaranchal's plan outlay pegged at Rs. 2,700 crores (Hindu, 8.01.05)

NEW DELHI, JAN. 7. The Planning Commission today finalised Uttaranchal's Annual Plan outlay for 2005-06 at Rs. 2,700 crores, which is Rs. 890 crores more compared with the previous year. It includes Rs.100 crores as special assistance for priority projects in the Himalayan State.

The Annual Plan was finalised in a meeting between the State Chief Minister, N.D. Tiwari, and the Planning Commission Deputy Chairperson, Montek Singh Ahluwalia. Complimenting Uttaranchal for improvement in the social sector, Mr. Ahluwalia said the State was better than the national average in health and education.

Tourism and hydel power generation were the two potential areas for revenue generation; so more focused attention on these two sectors would help the State accelerate its pace of development, Mr. Ahluwalia asserted, pointing out that the State's plan expenditure contributed 36 per cent of total expenditure against the average of 25 per cent across all States.

He also advised the State Government to develop accreditation and certification for its organic food besides going for more appropriate manpower development and fill regular vacancies of teachers.

ANNEX

TVS Motors to ride up north

(S Kalyana Ramanathan / Business Standard / New Delhi January 20, 2005)

A conscious effort by the company to shed its southern brand image.

In an exercise aimed at leaving its southern brand image for one that is pan-Indian, Chennai-based TVS Motor Company is setting up a plant in the North.

The company is in talks with the Uttaranchal government to set up a plant in the state. This will be TVS Motors' third plant. Its two existing production facilities are located at Mysore and Hosur in Karnataka.

When contacted, Venu Srinivasan, the chairman of TVS Motors, confirmed the development though he added discussions were at an inchoate stage and it was too early to talk of the capacity planned and the investments involved.

But sources in the State Industrial Development Corporation of Uttaranchal (Sidcul) said TVS Motors was likely to zero in on Pantnagar to set up the facility. This is one of the three sites identified by the state government to be developed as industrial clusters, the other two being Hardwar and Sitarganj.

TVS Motors is the third-largest two-wheeler company in the country after Hero Honda and Bajaj Auto. Although it is a strong player in the moped and scooterette segments, the company lags behind Hero Honda and Bajaj Auto in the motorcycles market.

Auto industry experts said this was because the company was being perceived as a southern brand. A production unit in the north India could address this problem.

Apart from the image makeover, TVS Motors could be interested in the tax breaks offered by Uttaranchal.

Under a special scheme notified by the Centre for the development of the northern hill states, new production units in Uttaranchal are exempt from sales tax for a period of ten years. "We offer power in the state for industrial users at Rs 2.05 per unit, while Haryana offers it at Rs 4.25 per unit," Sidcul officials added.

Uttaranchal is hoping to attract investments to the tune of Rs 10,000 by the end of this year. "About 40 per cent of this has been tied up. The land we had earmarked at Haridwar has almost been sold out," top state government officials told *Business Standard*.

It is worth noting that Hero Honda has already announced it will invest Rs 550 crore to set up its third plant at Haridwar.

ANNEX

Tourism award (Hindu, 26.11.04)

NEW DELHI: The Uttaranchal Tourism Development Board was adjudged India's "Best Tourism Board" in the 'Galileo Express Travel and Tourism Award" ceremony held here on Wednesday. The Union Tourism Minister, Renuka Choudhary, gave away the award to the Uttaranchal Tourism Minister, TPS Rawat, and the Board's secretary, NN Prasad. Uttaranchal was selected from the ten state tourism boards including Goa, Tamil Nadu, Kerala, Himachal Pradesh and Rajasthan.

ANNEX

Ravi Foods embarks on Rs 15-cr growth plans

Company setting up chocolate units in Hyderabad & Uttaranchal

Phalguna Jandhyala / Business Standard / Hyderabad November 25, 2004
Hyderabad-based Ravi Foods Private Limited, the makers of Dukes biscuits and wafers, is expanding its operations at a cost of Rs 15 crore. The company is currently in the process of setting up chocolate manufacturing units in Hyderabad and Rudrapur in Uttaranchal.

Speaking to ***Business Standard***, Ramesh Agarwal, director, Ravi Foods Private Limited, said, "The company would be investing Rs five crore in the Hyderabad plant and Rs 10 crore for the plant in Uttaranchal. We would be raising the funds through debt and internal accruals (60:40)."

According to him, the company decided to foray into the chocolate segment as it has alreacy created a market for its biscuits and confectionery items.

"The Uttaranchal plant will help us to serve the markets in the north and east because of its location which is important as we are planning to set up our biscuit manufacturing unit in the future," Agarwal said.

He said that the construction work at Rudrapur will begin next month and the commercial production would begin from August. "The initial production capacity would be around 2,000 tonnes per annum at both our plants and we would be making premium and en-robed chocolates (wafers covered with chocolates) under the brand name Dukes," Agarwal said.

ANNEX

Tiwari to stay as Uttaranchal CM

Business Standard / New Delhi November 24, 2004

In a unexpected twist to the story that Uttaranchal Chief Minister Narayan Dutt Tewari was being sent out of the state on a gubernatorial assignment, the Congress today clarified that nothing of the sort was happening – that Tewari would stay on as the chief minister.

Reports had it that the Congress high command was toying with the idea of change of leadership in Uttaranchal in the wake of the party's dismal performance in the Lok Sabha elections. The Congress won only one of the five seats in the state.

ANNEX

Uttaranchal wants to be in Gail 's gas grid

Business Standard / New Delhi November 19, 2004
The government of Uttaranchal has proposed to Gas Authority of India Ltc (Gail) to construct a gas pipeline network in order to develop the industrial and power sectors in the state.

The state government is of the view that a gas-based power generation system is ideal for the state. Besides, the state government feels it should be made part of the national gas grid. It had also asked the Union petroleum ministry to conduct a feasibility study for setting up the gas pipeline infrastructure in the state, a senior state government official said.

As per the proposal, the state government wants the planned gas distribution network be extended from Bareli to Rudrapur and further to Ram Nagar and Haldwani. This, it says, will help the development of the proposed industrial areas near Haridwar and Rudrapur. Besides, this would also give a boost to power generation in Haridwar, Ramnagar, Dehra Dun, and Haldwani.

The second proposed link will be near Dadri and Noida, from where the gas pipeline can go up to Haridwar and then to Dehra Dun. This pipeline is expected to be about 200 kilometres, as per the initial estimates.

Besides, the state government expects the city gas distribution in Rudrapur, Haldwani, Ram Nagar, Haridwar, and Dehra Dun will lead to considerable environment protection. According to a proposal by the state government, the extension of natural gas links to the state will lead to a reduction in cutting trees.

Besides, the proposal also points out that tourist traffic from Delhi to various parts of the state has increased considerably and the tourist taxies and buses use compressed natural gas as the energy source.

"If filling stations are established intermittently, this would help the re-filling of CNG of these taxies, which will help in controlling pollution in towns like Haridwar, Dehra Dun and Haldwani," the state government's proposal point out.

Besides, it is also pointed out that there may be a plastic-processing industry in the proposed industrial clusters in Haridwar and Rudrapur, where pipelines of gas grade can be manufactured for developing the city gas distribution network in various cities of the state.

The state government has proposed that a state-run company like Gail should be given the responsibility to set up the gas pipeline infrastructure in the state.

"There are about 1,000 industrial units in the state. We want to diversify the power generation methods to ensure a smooth generation of power. The state is of the view that gas is the best option for that," a state government official said.

ANNEX

Uttaranchal show kicks off (Hindu, 03.11.04)

NEW DELHI, NOV. 2. The "Spirit of Uttaranchal", a 15-day event showcasing diverse organic products, handloom, handicrafts and eco-tourism destinations of the hill State, began at Dilli Haat here today. The Delhi Chief Minister, Sheila Dikshit, the Uttaranchal Forest Minister, Nav Prabhat, and the Uttaranchal Chief Secretary, RS Tolia, were among those present.

Underlining the need for holding more such events in the Capital, Ms. Dikshit said Uttaranchal was very close to Delhi and lakhs of people from the hill State were now settled in the Capital. Such events not only took the natives of Uttaranchal back to their roots, but also educated and enthralled those who were not aware of the culture, cuisine and social background of the state, she added.

ANNEX

Uttaranchal in talks with ADB, FIs for $750 mn ADB assistance

T R Vivek & Bipin Chandran / New Delhi October 22, 2004 / Business Standard
The Uttraranchal government is in talks with the Asian Development Bank (ADB) and Indian financial institutions like Industrial Development Finance Corporation (IDFC) and IL&FS to get a $750-million assistance package to bolster its energy, roads, and urban infrastructure sectors.

According to M Ramachandran, Additional chief secretary and Infrastructure Development commissioner of Uttaranchal, the move is in keeping with the state's 10-year infrastructure vision.

Uttaranchal currently has a capacity to generate 1,120 Mw of hydel power and a long-term potential to produce about 20,000 Mw. The government has already initiated plans to harness nearly 34 per cent of the estimated capacity.

The vision document envisages doubling Uttaranchal's per capita income to Rs 30,000 per annum from the present level of Rs 14,000, and halving the number of people below the poverty line in 10 years.

The Uttaranchal government had appointed Crisil to carry out detailed sectional studies to identify their growth potential and the amount of investments required in those sectors. The sectors identified as growth leaders are power, tourism, agri-processing, industrial development, information technology, and biotechnology.

According to Crisil's recommendations, the state needs an investment of Rs 700 crore in the next three years to improve its road connectivity.

Crisil said there was a need for 100 per cent all-weather roads from Delhi to the state capital Dehra Dun, which will cover all the rural areas on the route and halve the travel time between the two cities to four hours. Crisil has also asked the Uttaranchal government to improve the state of arterial roads connecting the Garhwal and Kumaon regions.

Work has already started on expanding the Jolly Grant airport in Dehra Dun to make it possible for larger aircraft like Airbus A 320 to land in the city.

Ramachandran said Uttaranchal had made a good beginning in the industrial sector by attracting investments worth Rs 8,300 crore so far.

In the biotech sector, Crisil said the state could have a biotech park spread across 1,000 acres and it could contribute close to Rs 5,000 crore to the economy over the next 10 years.

ANNEX

Uttaranchal plans Rs. 512 cr 'Eco City
Business Standard / Hyderabad August 31, 2004

In a bid to attract more tourists, the Uttaranchal government is planning to set up a Rs 512-crore Eco City at Hempur in Udham Singh Nagar district.

The Uttaranchal tourism board has already signed a memorandum of understanding (MoU) with a consortium called Ramnagar Eco Park Private Limited in this regard.

Addressing a press conference here, A K Ghosh, additional secretary (tourism) of Uttaranchal government, said that the state was planning to encourage public-private partnership for developing the tourism sector in the state.

"At present, tourism contributes around 20 per cent of the state's gross domestic product (GDP), and in the next five years we plan to increase it to around 35 per cent," he said.

"The Taj Group of Hotels is planning to set up 10 budget hotels in the next three to five years. Its officials have already visited the state and the process of identifying suitable land is underway. The first phase of Taj works is expected to start in the next couple of months," Ghosh said.

The Uttaranchal government also proposes to set up a ski resort in Uttarkashi and develop nine rope ways across the state for which expressions of interest (EoIs) have already been signed.

Apart from this, the government also plans to introduce more facilities for the benefit of the tourists visiting the state.

"The state tourism is developing hubs throughout the state, which would focus on the tourism potential and the cultural heritage of the region. The primary hubs are Haridwar, Rishikesh, Govind Ghat, Almora, Pauri and Pithoragarh," Ghosh said.

In addition to these initiatives, the tourism department is also planning to develop Char Dham as a major pilgrimage centre. "A detailed master plan envisaging an investment of Rs 212 crore has already been submitted in this regard," he said.

ANNEX

Uttaranchal rains revive farm hopes

Business Standard / Dehra Dun August 25, 2004

Uttaranchal has recorded normal rainfall this monsoon, according to a meteorological department statement today. This has revived hopes for good agricultural output.

"We have recorded 1,012 mm of rainfall this season, which is 17 per cent more than the normal," Met Director Anand Sharma said.

"There is a general perception these days that Uttaranchal is recording excess rainfall, which is not true," Sharma said. "It is in the normal range," he said, adding the feeling of excess rainfall arose following heavy landslides in some areas of the hills. Also, the distribution of rains had been good, he added.

Sharma, however, said the rainfall recorded this year was better than in any of the last four years. This type of monsoon is good for sugarcane and paddy in the Gangetic plains of Udham Singh Nagar and Hardwar districts.

In the hilly region, traditional crops like millets would get a boost, Sharma said. Similarly, tea would also get a boost in the Bageshwar district, he added.

However, he said if the trend of rainfall continued, the rainfall might cross the normal limit for the first time in many years. Good rainfall in the hills also meant a better flow of waters from the main rivers like Ganga and Yamuna, which originate in the high altitudes of the Himalayas in Uttaranchal, experts say. These rivers are considered to be the lifeline of northern India, in general, and Uttar Pradesh, in particular.

Although a few areas remained dry in Uttaranchal in June and July, the situation changed in August, with Chamoli, Dehra Dun and Uttarkashi recording excess rainfall in the past week.

Similarly, Hardwar, which had experienced scanty rainfall in the past two months, received normal rainfall in the first 15 days of August. From August 1 to 24, Dehra Dun recorded 472 mm of rainfall, while Pantnagar experienced 350 mm, Mukteshwar 172 mm, and Tehri 197 mm, Sharma said.

ANNEX

Minimal impact in Uttaranchal

Business Standard / Dehra Dun August 23, 2004
The truckers' strike had so far failed to make a strong impact in Uttaranchal, top government officials said today.

Nevertheless, the Uttaranchal government has chalked out contingency plans to meet the challenge arising out of the strike, according to Chief Secretary R S Tolia.

He said the state government was constantly reviewing the situation. Although the effect of the strike was not much visible, officials maintained it might create scarcities in the remote areas in a day or two.

Tolia said the state government would ensure that truckers who were not taking part in the strike did not face any transportation hurdles.

Top district officials including district magistrates and superintendents of police had been asked to keep adequate supplies of essential commodities including petroleum procucts in their areas, Information Secretary N N Prasad said.

Prasad said oil companies like Indian Oil Corporation and others had assured the government of adequate stocks of petroleum products in the state.

A control room had been set up in the office of the transport commissioner in Dehra Dun to assess the situation Prasad said.

ANNEX

Buoyant BJP ready for Uttaranchal Budget session (Hindu, Jul 17, 2004)

DEHRA DUN, JULY 16. Inspired by its good show of bagging three out of five Lok Sabha seats from Uttaranchal in the recent elections, the Opposition Bharatiya Janata Party plans to turn the heat on the ruling Congress in the budget session of the Assembly scheduled to begin this coming Monday.

"We want to keep the heat on so that it creates more goodwill for the party by the time the next Vidhan Sabha elections take place two-and-a-half years from now," observed several senior BJP leaders here today.

The party leaders, including its State unit president and former Chief Minister, Bhagat Singh Koshiary, Leader of the Opposition, Matwar Singh Kandari, and former Finance Minister, Ramesh Pokhriyal Nishank, are holding meetings in different parts of Uttaranchal demanding a White Paper on the economy of the State.

Mr. Kandari has questioned the inordinate de ays in starting treatment of the Varunawat hill which had spelt disaster over half of Uttarkashi city last year.

Mr Koshiary sought an explanation over delays in creating job opportunities for the local youth. The few big industries planning to come here would be having automated systems with little scope of employing local manpower.

Mr. Nishank wondered how the downsizing of the Uttaranchal Cabinet would help when the Chief Minister had distributed over 70 posts enjoying the status of a Minister to party workers close to him. Even if these persons don't take a salary, the high costs of maintaining them at State expense is something a poor State like Uttaranchal can hardly afford.

The BJP has also expressed grave concern over increasing corruption at all levels. The government has much to answer about the recruitment scams, poor quality of roads and government buildings including the transit hostel for MLAs and failure to create any basic infrastructure to promote tourism that could be the mainstay of the hill economy, said the Bharatiya Janata Yuva Morcha president, Pushkar Singh Dhami.

ANNEX

Killing the Ganga (Hindu, 31.08.03)

FOR the first time since the construction of the Ganga Canal in 1847, water has stopped flowing in Har-ki-Pauri at Haridwar and through the Ganga canal that nourishes the entire western U.P. region of the Doab. Even the British colonisers did not stop the flow of Ganga at Har-ki-Pauri. Why has the Ganga disappeared at the peak of summer?

The argument that a bridge needs to be built for Ardh Kumbh in 2004 does not wash. Hundreds of bridges have been built since 1847; the flow of water in the Canal system was never stopped. And there is no imperative for beginning construction in the peak of summer when water requirement is greatest in agriculture and for domestic use.

The real reason seems to be engineer a water crisis -- not a bridge -- and use that to promote the idea of selling Ganga to private corporations like Suez. It also seems to be an experiment to test the social resistance of people to disappearing rivers – an inevitability if rivers have to be dammed and diverted for the grandiose $200 billion River Linking Project.

The privatisation of the Ganga by Suez is, in fact, an example of river linking -- of bringing the Ganga waters to the Yamuna. The Yamuna has already been killed by pollution and, in spite of millions spent on cleaning, it continues to be unfit for drinking. Now, the powers that be want to make the poor rural communities of Uttaranchal and U.P. give up their water rights so that Ganga water can be commodified and sold to those with money – Delhi's elite. The Sonia Vihar plant of Suez was inaugurated on June 21, 2002. It is designed to treat 635 million litres of Ganga water a day. The contract is between Delhi Jal Board (the Water Supply Department of Delhi Government) and the French Company Ondeo Degremont (a subsidiary of Suez Lyonnaise des Eaux -- the world's biggest water giant).

The water for the Suez-Degremont plant in Delhi will come from Tehri Dam through the Upper Ganga Canal upto Muradnagar in Western Uttar Pradesh and then through the giant pipeline to Delhi. The Upper Ganga Canal, which starts at Haridwar and carries the holy water of Ganga upto Kanpur via Muradnagar, is the main source of irrigation for this region.

The plant at Sonia Vihar is being built at a cost of Rs. 1.8 billion. However, the Tehri Dam – of which Suez will be a primary beneficiary – has already cost Rs. 100 billion, and the construction is far from complete. Further, the pipe to be laid over 30 km to bring water from the Ganga Canal at Muradnagar to Sonia Vihar is being built at public cost. Suez is not bringing in private foreign investment. It is appropriating public financial investment. Public-private partnerships are in effect private appropriation of public investment. But the financial costs are not the highest costs. The real costs are social and ecological.

The people of Tehri can never be compensated for the uprooting of their lives. The women are still on a *dharna*, refusing to move, even though the contractors to break down the homes to force people to move. All water schemes in the dam catchment have been cancelled, both on grounds that the government has no money and on grounds that every drop of Ganga water must flow into the dam, not to sustain lives of local communities.

Privatisation of water denies local communities their water rights and access to water in two ways. Firstly, the scarce and limited water resources are diverted, from the

poor to the rich, from the countryside to towns, from agriculture to industry leaving water famines where people have no purchasing power, and providing water to those who have destroyed their own water resources through waste and pollution. Secondly, the state itself shifts from its functions in providing welfare to the needy and most marginalised communities to the new function of providing public subsidies for private profits. Small, decentralised rural schemes are starved of both water resources and financial resources.

It is not just women of Uttaranchal who are bearing the social costs for bringing the Ganga waters to Delhi. Farmers from U.P. will also lose their livelihoods and irrigation. The Upper Ganga Canal is one of the oldest canals in Western U.P and irrigates about 9,24,000 hectares of land.

What does diverting water to Delhi mean for national food security? The annual water diverted to Delhi from the Upper Ganga Canal at the rate of 635 million litres per day will result in critical reduction in the production of food crops in the region, and thus possible destruction of national food security.

In addition, the ecological and cultural costs are high. The damming of the Ganga at Tehri has already converted it into a cesspool of stagnant water. The Gangetic plain is one of the most fertile regions of the world. In Bihar, farmers, before planting their seeds, put Ganga water in a pot and set it aside in a special place in the field to ensure a good harvest. It is this treatment of the organic as sacred that inspired Diana Eck the Harvard geographer to call the Ganges an "organic symbol".

For the Ganga's significance as a symbol is not just as a narrative. First, she is a river that flows with waters of life in a vibrant universe. Narrative myths come and go in history. They may shape the cosmos and convey meaning for many generations, and then they may gradually lose their hold upon the imagination and may finally be forgotten. But the river remains, even when the stories are no longer repeated. And it is this river that is disappearing as the market commodifies our most sacred symbols, our most vital needs.

But the Ganga is also being transformed from a river of life to a river of death both by the ecological consequences of damming as illustrated by the ecological risks of Tehri dam, and of diversion, as the disappeared Ganga in Haridwar and Western U.P. is showing.

The Tehri dam project is located in the outer Himalaya in the Tehri-Garhwal district of Uttaranchal. The dam will submerge 4,200 hectares of the most fertile flat land in the Bhagirathi and Bhilangana valleys. Moreover, the dam is located in a seismic fault zone. Between 1816 and 1991, the Garhwal region had witnessed 17 earthquakes, the most recent ones being at Uttarkashi in October 1991 and Chamoli in 1998.

In case the dam collapses due to an earthquake or any other fault, the devastation will be unimaginable. The huge reservoir built at such a height will be emptied in 22 minutes. Within 60 minutes Rishikesh will be under 260 meters of water. Soon after Haridwar will be totally submerged under 232 meters with next 23 minutes. Bijnor, Meerut, Hapur and Bulandshahar will be under water within 12 hours, says environmentalist Sunderlal Bahuguna. Thus the dam is potentially dangerous for large parts of north-western India, and large areas in the Gangetic plains could be devastated in the event of a mishap. The life of the dam is estimated to be not more than 30 years because of heavy sedimentation. Already, islands of silt are rising faster than the impounded water, confirming that Tehri dam will hold silt, not water and hence create floods, not prevent them.

The disappearance of the Ganga in the peak of the summer of 2003 is an experiment, a vivisection of our living rivers, our living cultures. It is an experiment to test how much violence as a society we can accept as mute dead witnesses of our own destruction. The people of Uttaranchal, U.P and Delhi can turn around this violent, abusive experiment to convert the lifeblood of our rivers into corporate commodities, and transform it into an experience for ensuring water justice and sustainability, and defence of our living waters.

Alternatives exist for Delhi. Delhi does not have to cannibalise the countryside of the Himalaya and Doab. At present Delhi has allocation of waters from the Yamuna, the Ganga and the Beas (Bhakra project), in addition to ground water resources. Delhi has sufficient water to meet its increased requirements of the next century and obviating the need to bring Tehri dam waters to Delhi.

Organisations are working to create awareness of and participation in sustainable water solutions to Delhi's water crisis and also with communities in Tehri and the Ganga Canal areas to sustain the Ganga.

On August 9, 2002, on the anniversary of the Quit India Day, more than 5,000 farmers of Muradnagar and adjoining areas of western Uttar Pradesh gathered at village Bhanera to protest the laying of a giant pipeline to supply the water from the Ganga to the Sonia Vihar water plant. The rally was launched from Haridwar – one of the oldest and holiest cities of India built on the banks of Ganga – where hundreds of farmers, together with priests, citizens and worshippers of Ganga announced that "Ganga is not for Sale", and vowed to defend the freedom of this holy river. Farmers and others in villages along the route joined the rally to declare that they would never allow Suez to take over Ganga water.

In March 2003, another Ganga Yatra took place, this time with Magsasay awardee Rajender Singh and Oscar Olivera, a leader of the Coalition in Bolivia which stopped water privatisation and drove out Bechtel. The Bolivian movement had the slogans "Water is God's gift and not a merchandise" and "Water is life". In India, our slogan is "The Ganga is not for sale".

ANNEX

Project Shiksha: Microsoft widens presence (Hindu, May 14, 2003)

NEW DELHI MAY 13. World software major Microsoft is acquiring a more visible presence in India in areas outside the pale of its everyday business. Six months after Bill Gates' sanctioned a Rs. 2,000 crore investment over three years in social and software development sectors, senior company officials today asserted that the plans were firmly on track.

Kerala and Uttaranchal, they said, would be the first two beneficiary States of project Shiksha – its plan to accelerate computer literacy by inculcating IT skills to over 80,000 teachers and 35 lakh students. Kerala for its obvious high literacy rate and Uttaranchal for the pleasant experience of `Teach the future' programme conducted jointly with Intel.

The number of States will gradually be brought to ten over a three-year period. The States will be selected on the basis of commitment (bureaucratic and political), basic infrastructure and previous experience. Asked to name the next two States, the Microsoft India Managing Director, Rajiv Kaul, said for the moment the focus would be on Kerala and Uttaranchal and the next lot "will depend on which ones we wrap up first".

The company will also be roping in more partners to get the training centres up and running and to put in place an appropriate curriculum. The latter, he said, was the toughest bit. Teachers will be initially trained in small lots and higher training will be imparted at an IT academy. Kochi or Thiruvanthapuram will host the Kerala academy and Dehradoon for the Uttaranchal centre.

Hyderabad will remain the focus for its development efforts – for products as well as the considerable internal applications development work. The India Development Centre in Hyderabad, set up in 1997 and the catalyst for more such centres by other companies, has added 75 more personnel to its 125 since Mr. Gates' announcement. "We are on target to grow the IDC to 500 by the end of calendar year 2005". The internal IT applications development team will be hiring 150 internal application professionals who will focus on building, managing, testing and supporting leading edge strategic internal business applications.

Support professionals will also be hired in Bangalore for a sort of high-end back office pilot programme. If successful, the company could be expanding its presence significantly. While India is a major market for Microsoft, the projects taken up after Mr. Gates' third visit to the country would ensure that it becomes a strategic base as well, noted Mr. Kaul. Microsoft at present has 250 employees at seven locations, which, according to Mr. Kaul, is a `large footprint' for a software company.

ANNEX

Dehra Dun will continue to be Uttaranchal capital (Hindu, July 7, 2002)

HARDWAR JULY 6. Dehra Dun will continue to be the Capital of Uttaranchal till the State and Central Governments identify a place for a permanent Capital, the Minister for Information and PWD, Indira Hirdeyesh, has said. Speaking at a 'Meet the Press' programme organised by the Hardwar Press Club, the Minister said the Government was, at present, emphasising on developing a permanent infrastructure for the Kumbh at Hardwar and Rishikesh. "No more of temporary constructions as done earlier. Now, every construction will be of a permanent nature," she said. Asked whether these constructions will be a repetition of what was done during the Capital formation days, the Minister said the Government was keen on good constructions and the persons responsible for substandard constructions and other activities would not be spared. The Government would soon make public the names of the persons who had amassed huge wealth at the cost of safety of the Vidhan Sabha building and other works, she said.

The Government's intention to establish an Upper House in the State seems to have run into rough weather. The people are already questioning the wisdom of the Government in creating a seat in the Assembly for a representative of the Anglo-Indians. "There are hardly 1,000 Anglo-Indians in the State. It would have been better if the nominated seat were given to minorities like the Bhoxas or the Sikhs", Inderjit Singh Ahluwalia and Lilawati, a Bhoxa and former gram pradhan of the district, said. Munna Singh Rana, a former MLA and firebrand youth leader, advocated reservation of a seat for minorities by rotation.

The HUDCO officials and Secretary, Tourism, N.N. Prasad, have made joint moves to develop Hardwar and Rishikesh into model towns. The results of this would be visible within a year, it was told. The Minister reiterated the Government's stand on journalists' welfare in the State. The HUDCO had been asked to give soft term loans for housing for the scribes. Similarly, a scheme for group insurance of journalists was in the pipeline, she said.

ANNEX

Uttaranchal to ban construction above 2 storeys (Hindu, Feb 3, 2001)

DEHRA DUN, FEB.2. The Uttaranchal Government will soon ban construction of more than two-storey buildings as the State lies in a highly seismic zone, according to the Chief Minister, Mr Nityanand Swami. Instructions for this have already been issued in Dehra Dun while similar orders will be sent out to other districts soon.

The decision, taken in the wake of the earthquake that rocked Gujarat recently, has come as a jolt to builders who are rapidly putting up multistorey plazas in Dehra Dun. Foundations for at least half a dozen multi-storey buildings are being laid on the stretch between the Dilaram Bazar and the SSP's residence on the main Rajpur Road. Although construction of more than two storeys was banned in Dehra Dun earlier, the provision became ineffective over the past three decades and a large number of multi-storeyed structures came up. The number of these buildings, mostly commercial, swelled in the last three years after it became clear that Uttaranchal would soon become a separate State with Dehra Dun as ``temporary'' capital.

Although none of the high rise buildings in Dehra Dun city collapsed or developed serious damages during the two major earthquakes that rocked Garhwal region over the past decade, experts do not rule out the possibility of such buildings collapsing during any major earthquake in future.

ANNEX

Uttaranchal's financial position precarious (Hindu, Nov 28, 2000)

NEW DELHI, NOV. 27. The newly-created State of Uttaranchal seems to have got a raw deal from its parent State of Uttar Pradesh. Against the five per cent of the original population of U.P. that has fallen in Uttaranchal's share, the new State is to get around 13 per cent of the staff strength of the erstwhile U.P.

However, sources in the Government indicate that U.P. has transferred more than 20,000 employees of the Irrigation Department to the new State, who are virtually non-functional in Uttaranchal where the irrigation potential is much lower than in U.P. The sources said that U.P. is under obligation to reduce its staff in specified sectors of the economy as per an agreement signed with the World Bank as part of the conditionalities of a loan it secured from the Bank. U.P. is said to have utilised this opportunity to transfer the Irrigation Department staff and comply with the Bank conditionalities.

As it is, Uttaranchal's financial position is precarious and the new State will start with a huge deficit on its balance sheet. According to preliminary estimates, receipts of the State are estimated to be around Rs. 1,250 crores a year whereas its total non-Plan expenditure alone is expected to be Rs. 2,300 crores. In this, the wage bill alone of the Government will be Rs. 1,200 crores. The State also has an interest burden of Rs. 400 crores annually and has a Rs. 60 crore expenditure on committed liabilities. On the other hand, with the plains of Uttaranchal reporting high per capita income, the State's share in devolution of Plan funds, share in Central taxes and even the limit on ways and means advance from the Reserve Bank of India would be proportionately less than what the barren hills of Uttaranchal would have otherwise received.

Uttaranchal is also not likely to get any share out of the earlier World Bank loan which was advanced to the undivided U.P. since that loan has already been exhausted. Also, the earlier sub-Plan for the areas which now comprise Uttaranchal used to be Rs. 900 crores annually and now stands reduced to Rs. 700 crores. There are also some 23 projects in the State sector in Uttaranchal which at present are closed and require funds for revival.

ANNEX

Dividing to rule (Hindu, Sep 17, 2000)

The influence of political parties varies from region to region in the country's largest State. Hence, sectarian leaders have taken to pressing for smaller entities in the name of `economic development', reports J. P. SHUKLA.

The situation following carving out of Uttarancha. has given the impression that such agitations could help in rehabilitation of spent political forces. Whether the decision to create Uttaranchal was taken on sound administrative principles has become a debating point among scholars.

The hill people in general had supported the agitation for creation of Uttaranchal. But now that it is a reality, many in the vanguard of the agitation are hesitant to take up a role in building Uttaranchal into a prosperous State. Few among the eminent citizens hailing from the hills who have settled in the plains are willing to return to Uttaranchal, though they continue to have their roots there.

The current development have so far been limited to organising seminars and symposia to discuss regional imbalances in economic development. The unweildy size of Uttar Pradesh has been cited as the singlemost important factor responsible for this. The common man has been watching the developments with a sense of aloofness. Whether this situation will continue is difficult to say.