

**Report of the Task Force
on
Connectivity
and
Promotion
of
Trade & Investment
in
NE States**



**Planning Commission
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Preface

A. Task Force on Development Initiatives for the North Eastern States.

A Task Force on North East has been constituted at the behest of Prime Minister with the following Terms of Reference:

- (a) To identify for urgent implementation, important infrastructure requirements for enhancing investment and trade, especially in areas of Highways, Power (including NE Grid for evacuating power), Airports, Railways, etc.,
- (b) Critically examine the existing policies and facilities for internal and external trade, especially in view of the emerging opportunities for international and inter-regional trade.
- (c) Identify potential entrepreneurs and investment hubs to attract domestic and foreign investment for greater value addition.
- (d) Suggest measures for relevant human resource development, especially for promotion of education and training in high skills and high demand categories.

This report accordingly identifies for urgent implementation various policies, facilities and infrastructure with the primary objective of promoting trade & investment in the region.

B. Natural Resources of NE States

2. The region is bountifully endowed with bio-diversity, hydro-potential, oil and gas, coal, limestone, bamboo and forest wealth. It is ideally suited to produce a whole range of plantation crops, spices, fruit, flowers and herbs, much of which could be processed and exported. However, barring the Imphal Valley and pockets elsewhere, agricultural yields are low while traditional farming, with a shrinking jhum cycle has become ecologically unsustainable. Much land in the hills is owned by the community, not the States, though privatization and 'enclosures' are evident in some places. There is no agricultural surplus and limited capital formation and entrepreneurial skills. Assam had seen some earlier development around tea, oil and timber. The region is, however, basically pre-industrial despite a number of saw mills and plywood factories, a few cement plants and other miscellaneous enterprises.

C. Unique problems of NE States

3. Mainstreaming the north-eastern (NE) States into the economy of the country remains a formidable challenge. The NE States have some unique economic problems arising out of remoteness and poor connectivity, hilly and often inhospitable terrain, a weak resource base, poor infrastructure, sparse population density, shallow markets, inadequate administrative capacity, low skill endowment and finally a law & order situation frequently threatened by insurgency.

D. State Finances & investment

4. As regards the State finances, NE States differ from deterioration in other States in many respects. First the deterioration in NE States was because expenditure expansion outpaced revenue expansion. Second, although the deterioration in the fiscal deficit of other States was much sharper, the NE States started with significantly higher fiscal deficits notwithstanding much higher central transfers on a per capita basis, being Special Category States. Third, the decline in capital expenditure between 1995/96 and 2003/04 in NE States at 2.8 percentage points of GSDP was much steeper than the decline of 1.0 percentage point in other States.

5. The fiscal vulnerability of NE States is a consequence of low economic activity, the virtual absence of the private sector and the consequent disproportionate burden on the public sector of generating and maintaining economic activity. Moreover, the NE States are not able to capture the benefits of higher public spending as the incomes and profits out of this spending are largely transferred outside the region. Continued dependence on central transfers has eroded the incentive for these States to raise their own revenues and improve the efficiency of their public expenditures.

E. Key issues of NE States for trade & investment

6. Though deepening of subsidies & concessions and extension of North East Industrial Policy, 1997 beyond 2007 is required for some time to come, major improvement in connectivity is the key issue. It not only imparts a sense of isolation; but also adds to the transportation cost making trade & investment uncompetitive and

cost of providing services very high. The foremost object of the 11th Plan therefore has to be providing highway, rail & air connection to all State capitals and major economic destinations, all-weather roads to all districts/block headquarters and border trade points, and telecom facilities in all villages.

7. NEDFi, NERAMAC, NEHHC etc., intended to serve the vital needs of the region, have not achieved the objectives. In fact NERAMAC, NEHHC have become defunct. NEDFi has shown some signs of revival.

8. Though, the general literacy is high, inadequacy of quality vocational and technical education particularly in high & market-driven skills, renders unemployment a serious problem, often the cause of unrest & insurgency.

9. Of 50,000 MW hydro power potential identified in the country, North-East alone has about 30,000 MW. Apart from providing cheap power for industrialization, it would be a major source of revenue. Problems however of both generation and evacuation need to be solved.

10. Strengthening communities, enlarging their livelihood opportunities and generating surplus for market through scientific use of vast natural resources is another challenge.

F. Strategy & Action Plan for the 11th Plan

11. Therefore, the relevant strategy of the 11th Plan should be:

- (a) Pooling of funds available under various programmes for taking up connectivity projects on an integrated & large scale and accordingly creation of Infrastructure Development Fund. Correspondingly, creating a SPV to manage such funds and manage projects approved for NE States by various agencies.
- (b) Promoting investment in utilization of huge hydro-power potential, big reserves of oil, gas, coal, lime stone etc. through better crafted North-Eastern industrial policy of Govt. of India, to be supplemented by regional NE Industrial Policy evolved through consensus among NE States.

- (c) Strengthening of National Horticulture Mission for intensive cultivation of selected horticulture crops in various regions with processing & marketing facilities, undertaking an ambitious regional integrated bamboo mission, and accordingly strengthening ICAR institutions.
- (d) Opening border trade points with modern infrastructure in the fulfillment of 'Look East Policy'.
- (e) Major rejuvenation of NEDFi, NERAMAC & NEHHC through infusion of funds & transfer to joint venture mode with majority equity (74%) holding by private owner.
- (f) Promoting tourism by improving connectivity, tourist facilities and removal of RPA/ILP.

12. Action Plan has accordingly been suggested in the main Report.

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Industry

Present industrial scenario

Large and Medium Industry

The growth of industry, large, medium and small scale, has been very slow and also uneven within the Region. The Region has 178 large and medium scale industrial units (table below). Of these, more than 70% are in Assam, and even within the State, half of the units are located only in three districts i.e. Kamrup, Tinsukhia and Dibrugarh. Petroleum and tea industry has dominated the Region's industrial activity and these sectors have been in existence for over a century now.

Other important industrial sectors include plywood, chemicals, petrochemicals and fertilizers, paper and pulp, engineering, textiles and jute. Many of the medium and large units were established as Public Sector Undertakings and investment in such units by private sector is absent, except in tea and plywood industries. Even plywood industry has lost its ground due to the order banning cutting of trees without a definite work plan, resulting in closure of nearly 300 plywood units. Tea industry is severely affected by insurgency, ageing of tea plantation, low value addition etc. Some measures have been taken recently.

Large & medium units

Sl.No	State	No. of units in 1999	Percentage
1.	Arunachal	17	9.55
2.	Assam	129	72.48
3.	Manipur	12	6.74
4.	Meghalaya	10	5.62
5.	Mizoram	1	0.56
6.	Nagaland	7	3.93
7.	Tripura	2	1.12
8.	Sikkim	N.A.	N.A
Total		178	100.00

Source: Basic statistics of NER, 2002 (NEC)

Small Scale Industry

Status of the total SSI sector in the NER vis-à-vis all India is given below.

S.No.	State	Regd. SSI units	unregd. SSI Units	Total SSI Sector	% to Total
1.	Arunachal Pradesh	255	997	1252	0.01
2.	Assam	14453	179926	194379	1.85
3.	Manipur	4599	43400	47999	0.46
4.	Mizoram	2733	8383	11116	0.11
5.	Meghalaya	1939	20581	22520	0.21
6.	Nagaland	568	13293	13861	0.13
7.	Sikkim	174	194	368	0.00
8.	Tripura	959	23393	24352	0.23
	Total NER	25680	290167	315847	3.00
	All India	1374974	9146216	10521190	100.00

Source: Third All India Census of Small Scale Industries 2001-02.

Though NE Region constitutes 3.8 % of India's population, it has only 1.87 % of the registered SSI units in the country. In fact the traditional Handloom industry is in the decline. Even the ambitious sericulture project taken up in Manipur through JBIC assistance is a non-starter.

2. Causes of stagnation in trade/investment :

(a) Some of the causes are: High risk perception of NES, inadequate infrastructure to support trade and investment, low capacity of existing arrangements to promote trade and investment, and institutions not designed to promote public-private or private sector led trade & investments.

(b) Lack of framework for enabling convergence of cross-sector issues in trade promotion – policies, legal, and institutional, barriers to entry (inter-state trade), financing and risk mitigation, marketing and distribution.

3. North East Industrial Policy (NEIP), 1997:

As stated earlier, NER suffers from disadvantages of geographical isolation, transport bottlenecks, small market size, low investment and virtual absence of private sector. Growth rate of GDP in this region was hovering around 2-4.7% as against

National Average of 7% during 1993-2000. Share of Industry in GDP is only 2.16% for this region as against national figure of 27%. In order to address the inherent problems, GOI at the first instance initiated Transport Subsidy Scheme in 1971 and subsequently notified NEIP, 1997. The package includes following concessions/ incentives.

- (i) Increased equity contribution of Rs.15 crore by GOI in Growth Centre
- (ii) Enhanced GOI funding in Integrated Infrastructure Development Centres (IIDC).
- (iii) For new units and capacity expansion of existing units at identified locations and engaged in production of items under thrust area.
 - 100% exemption of Excise Duty and Income Tax for 10 years.
 - Capital investment subsidy @ 15%.
 - Interest subsidy of 3% on working capital loans.
 - Insurance subsidy by way of reimbursement of 100% insurance premium.
 - Transport Subsidy- 50-90% subsidy on transport cost incurred on movement of raw materials and finished goods from designated rail heads/ ports upto industrial units.

4. Impact of NEIP, 1997:

An Impact Evaluation Study was carried out by TATA Economic Consultancy Services (TECS). Its findings are as follows:

- Excise duty exemption/ refund constituted single most significant claims (Tobacco, panmasala etc. are the highest recipient).

(Rs.Crore)

Subsidies				Exemptions		Growth Center	Pending claims	Total
Transport	Capital	Interest	Insurance	Excise	I. Tax			
227.02	26.82	3.05	0.10	1363.02	NIL	22.20	22.55	1664.76

- Against this, impact on various states is reported as under:

State	No. of Units Assisted.	Investment (Rs .Cr)	Employment (No)
Assam	508 (520)	488.19(528.19)	11422 (12422)
Meghalaya	54 (61)	219.01(441.01)	4756 (6056)
Nagaland	46 (46)	19.64(19.64)	465 (439)
Arunachal	9 (11)	14.86 (39.86)	197 (577)
Tripura	33 (34)	11.58 (31.58)	439 (665)
Mizoram	NA (4)	NA (4.00)	NA (300)
Manipur	NA (5)	NA (3.00)	NA (250)
Total	650 (681)	753.28 (1067.28)	17279 (20709)
Figures in Brackets are based on subsequent indication of DIPP.			

- NEIP, 1997 has not shown any significant impact on investment intentions as shown below:

	August 1991 to July 1999		August 1999 to August 2004	
	Nos.	Amt. (Rs. Cr)	Nos.	Amt. (Rs. Cr)
NER	106	4403	392	5672
All India	36684	728905	14739	445893
% of NER	0.3	0.6	2.6	1.3

- Investment Scenario reveals a skewed profile with Assam and Meghalaya accounting for almost 94% of overall investment due to their resource base (tea, limestone, coal etc.) and better power situation in Meghalaya.
- Greenfield units accounted for 72% of investment.
- No large investment has taken place as a result of NEIP. 69% of units fall in the investment range upto Rs.1 crore.
- By considering disbursed incentives and revenue forgone on account of excise duty/ IT exemption so far of Rs. 1664.76 crore as costs and investments of Rs.1067 crore as benefits, would tend to place the same as an inefficient instrument for prompting growth of region.

- Value of Excise duty exemption is high. But its effectiveness, has remained limited in the absence of specific criteria of value addition. Investments are not only of lower order but also in the shape of franchise to a significant extent.
- Transport Subsidy is relevant to NER due to the difficult topography but the disbursement mechanism needs to be streamlined.
- Interest Subsidy and Capital Investment Subsidy have not evoked significant response so far.

5. Recommendations in TECS Study:

On the basis of findings, following recommendations have been made:

(i) On Extension of NEIP:

- NEIP 1997 should be extended for a period of 5 years beyond 10th Plan.

(ii) On Modification of NEIP 1997:

- Units and/ or investment made (Greenfield/ Brownfield) **anywhere** in NE Region should qualify for securing benefits instead of present restrictions of **notified areas**.
- Central Capital Investment Subsidy may be modified to reflect a graded structure to induce higher level of value addition and employment generation.

(iii) On Requirement of Induction of New Elements:

- Ambit and scope of NEIP should be expanded to include segments of services sector like IT Sector, Construction/ Real Estate activities, Health Care and Tourism.
- Investments in the defined services sector should be granted exemption from service tax for cases where capital investments exceed Rs.25 crore and/ or employment generated exceeds 300 persons.

6. Subsidies/ Fiscal Incentives to Other States:

- The Government has announced two packages for J&K and Uttarnachal/Himachal Pradesh on 14.6.2002 and 7.1.2003 respectively. The contents of these packages are similar to that of NEIP 1997 except Income Tax exemption provided by NEIP, 1997.

- States like Uttaranchal and Himachal Pradesh, although industrially backward, are strategically placed in proximity to resources and major markets. Therefore, they enjoy Inherent advantage compared to NER.
- Several major manufacturers like Hindustan Lever, Proctor & Gamble, Godrej etc. who have set up their units in North East, now are in the process of establishing new units in these states to take benefits of excise concessions.
- Summarized picture of impact of packages in these states is as follows:

State	No of Projects	Investment (Rs.Cr)	Employment (No)
J&K	253	1609	18856
Uttaranchal	2897	863	105711
Himachal Pradesh	1303	553	12725

- Uttaranchal has already developed a model of setting up of industrial clusters/ regions in Public Private Partnership (PPP) mode.
- Re-emergence of West Bengal as a major investment destination is another major disincentive for investment in NER.

7. Suggestions for a new NEIP:

Following changes have been suggested in NEIP by various stakeholders:

- continue NEIP for another 10 years beyond 31.3.2007.
- extend concessions to the existing units on addition of employment to the extent of 25% of the existing manpower.
- extend concessions to the new and existing units on their substantial expansion irrespective of the location in the region.
- Give Excise duty exemption both on raw material & finished products.
- extend concessions to service sector like IT/ ITES/ health care/ tourism/ biotechnology and construction industry.
- Exempt MAT, Fringe benefit tax, dividend tax etc. so as to make NER tax free zone.
- continue the Transport Subsidy Scheme for another 10 years beyond 31.3.2007

- enhance capital investment subsidy to 30% subject to maximum of Rs. 1 to 5 crore.
- enhance Central Interest Subsidy from 3% to 5% (Working Capital & term loans)
- do not treat incentives/subsidies as other income for IT purposes.
- specify time frame for disbursement of subsidies. Pay interest @ 12% p.a. in the case of delay.
- uniformly define substantial expansion, modernization, diversification for all incentives/subsidies.
- relax funding pattern under the ongoing IIUS (Industrial Infrastructure Upgradation Scheme) by providing central assistance upto 90% against existing norm of 75%.
- provide financial assistance upto Rs.100 crore per cluster for development of integrated infrastructure in two locations in Assam and one location each in other N.E. States.
- incur an expenditure of at least Rs.300 crore per year for extending benefits under the policy.
- develop capital market by revitalizing Guwahati Stock Exchange by (making it subsidiary of NSE) & relax entry/listing norms for the eligible industries from Rs. 10 cr to Rs. 3 cr.

8. Investment Hubs

Growth Centres & Industrial Infrastructure Development Schemes (IIDS) have been under implementation. However progress is extremely slow as shown below.

State	Growth Centre		IIDS	
	Nos. Proposed	Active Progress	Nos. Proposed	Active Progress
Assam	11	2	3	2
Arunachal Pradesh	1	1	8*	-
Meghalaya	1	-	-	-
Manipur	1	-	1	-

Mizoram	1	-	1	-
Nagaland	4	1	-	-
Tripura	1	1	1	-
Total	20	5	11	2

Even Food Parks, having a great promise, have not shown progress. There is, therefore, a need for urgent review of this situation. Transferring these Food Parks & growth centres in joint venture (with 74% ownership by private partner) would be a good idea.

Possible new major industrial hubs to be developed in the 11th Plan could be : (1) Assam - Guwahati, Tinsukhia, Tezpur, Bongaigaon, Silchar, Kokrajhar, (2) Nagaland – Tuli & Dimapur, (3) Manipur – Imphal & Moreh, (4) Sikkim – Gangtok & Nathu La, (5) Mizoram – Aizwal & Demagri, (6) Meghalaya – Byrnihat, Shillong & Dawki, (7) Tripura – Agartala and (8) Arunachal Pradesh – Itanagar, Passighat & Tezu. Guwahati could be developed as an international business hub. Detailed study has, however, to be done to assess their long term viability, precise location, area, type of industries, infrastructure required, market potential for both domestic & international market, etc.

A list of possible investors, who are already present in NER, is given at Annex-I. An intensive follow up with them could be a good beginning.

9. Availability of Skilled Manpower

Vocational, technical and higher education provided by ITIs, Polytechnics and engineering colleges and quality higher education through State universities still lags behind the rest of the country (Annex-II).

For high grade and better paid employment, there is a need for bringing about a quantum change in the skilled manpower profile of the region by upgrading the existing ITIs & setting up more ITI's and Polytechnics (with modern trades & investments), introducing relevant vocational courses at secondary level in schools and upgrading the universities and

professional colleges so as to introduce high-skill employment oriented courses in the colleges/universities.

Private Training Institutes in nursing, para medical, civil aviation, sports, IT, technology & management, tourism should be given incentive to create high skills locally.

10. Credit System:

The Committee on Financial Sector Plan for NE region set up by RBI has already submitted its report outlining the measures to be undertaken for

- o Expanding banking outreach
- o Simplification of banking system and procedures for increasing the depositor base
- o Land collateral substitutes
- o Currency Management
- o Funds transfer and payment facilities
- o Revised human resource incentives

The report needs to be followed up in true spirit.

11. Strengthening of NEDFi, NERAMAC & NEHHDC:

(a) NEDFi

- North Eastern Development Finance Corporation (NEDFi) is the nodal agency for disbursement of subsidies and is considered as a Special Purpose Vehicle (SPV) for development of N.E. Region. It was registered in August 1995 with an authorized share capital of Rs. 500 crore; Paid up capital is Rs. 100 crores and Reserves & Surplus – Rs. 143 crores (as on 31/3/06). State-wise disbursement is given at Annex-III.

<i>Performance Highlights of FY 2006:</i>		
Sanctions	Rs. 131 crores	284 projects: Up 47% (Rs. 89 crores in 2005)
Disbursements	Rs. 104 crores	269 projects: Up 100% (Rs. 52 crores in 2005)
Net Profit	Rs. 14 crores	Up 133% (Rs. 6 crores in 2005)
Net NPAs	7%	Down from 13% as on March 31, 2005

NEDFi Loan Products:

- (1) Rupee Term Loan (RTL) (for larger loans) (2) Working Capital Term Loan, Bridge Loan etc. (3) Women Entrepreneurs Development Scheme (WEDS) (4) Jute

Enterprises Development Scheme (JEDS) (5) Scheme for NE Handloom & Handicrafts (SNEHH) (6) North East Entrepreneurs Development Scheme (NEEDS).

NEDFi's interest rates are among the lowest in the industry.

For WEDS, JEDS & SNEHH the effective interest rate is 7.35% p.a.; For NEEDS it is 8.76% p.a., for RTL from 8.5% to 12%.

NEDFi has proposed following for the 11th Plan :

(i) Rs. 500 crore interest free loan from GOI. (NEDFi received Rs.100 crore as interest free loan from GOI during the 10th Plan) since North-East is poised for high growth in the 11th Plan period in sectors like Power, Roads, Civic amenities in PPP. Growth is also expected in Healthcare, Tourism, Agro-Horticulture and post harvest management, Bamboo processing, Manpower Development and training, Medicinal and Aromatic Plants, Mineral based industries etc.

NEDFi, IL&FS, Punjab National Bank, LIC and GIC have recently created a Project Development Fund of Rs.30 crores, especially for identification, formulation and execution of infrastructure projects in the Region in PPP mode. Preliminary estimates by IL&FS indicate that in Assam & Sikkim, Power Projects with total investment of Rs.2000 crores and with credit requirement of up to Rs.1400 crores are expected to come in the 11th Plan Period.

(ii) Income Tax Exemption for NEDFi:

NEDFi was granted exemption from income tax for a period of ten years, which expired on March 31, 2005. Subsequently partial relief has been granted wherein NEDFi is required to progressively pay income tax from 20% of its taxable income in 2005-06 to 100% in 2009-10. NEDFi has renewed its request for a 100% income tax exemption for a period of another 10 years. Annual tax liability during this period is approximately around Rs. 14 crores, which can be effectively utilized for the development of the region.

(b) NERAMAC & NEHHC – are virtually defunct and need to be reviewed given the criticality of their mandate. Both, however, need to be transferred to private ownership for better management & outcomes.

12. Recommendations : Though required presently (para 7 above), deepening of subsidy & concessions and extension of its time period are unlikely to provide long-term incentive to genuine investors. The following need concerted action (a framework at Annex IV):

- **Implement suggestions at para 7 to the extent feasible.**
- Develop infrastructure and other enabling conditions in N.E. Region, which seem to have prime deterring effect on investment in this region.
- Geographical isolation further demands invigoration of border trade.
- Report of the Committee on Financial Sector Plan for NER set up by RBI may be implemented in true spirit.
- The States of the Region, under the aegis of NEC, should come together for evolving a comprehensive regional industrial policy so as to make NER a single Economic Unit, removal of internal barriers, uniform taxation regime, promoting NE brand equity. The regional policy should complement and supplement GOI NE Industrial Policy. These should include quick and easy access to land and credit, availability of quality power and water, transportation networks, warehousing, telecom connectivity, marketing networks etc. The regional industrial policy should be applicable for 10 to 15 years, in order to allow for longer gestation period for setting up industries in the Region.
- Public sector institutions, such as North Eastern Regional Agricultural Marketing Corporation (NERAMAC), NEHHC and NEDFi may be strengthened and made pro-active and provide professional guidance to entrepreneurs. Similarly, the various commodity boards for Tea, Coffee, Spices etc., should accelerate their activities in the Region.
- To enable NEDFi to play a substantial role in the development of NER, GOI may sanction Rs.400 crores during the 11th Plan Period as Interest Free Loan.

- Growth Centres & IIDCs under implementation be transformed in joint venture with private ownership. More Industrial Centre (hubs) could be set up after doing feasibility study.
- Mission approach may have to be adopted for focused attention on specific areas of industrial growth such as bamboo processing, horticulture produce processing and for use of medicinal aromatic resources and tourism.
- The growth of IT sector should be pursued vigorously and IT parks be developed in the region to utilize the literate and educated manpower. This industry also is not unduly dependent on transportation networks and raw material supply.
- Since handloom industry is traditional to the Region, a special policy is required for development of the handloom sector with linkages with the contemporary markets, design, etc. especially for exports.
- New ITIs be opened and the existing strengthened to provide for market – driven high skills. IIT Guwahati could be mentor & guide for the purpose.
- Promoting NER as an attractive destination for investment through persistent image building & holding of NE Business Summits should be pursued vigorously.
- A major Exhibition and Emporia complex should be established at Guwahati to display the industrial products of the Region. The Trade Centre being set up by ITPO at Guwahati may integrate the above activity. Operation & maintenance of this Centre could be under PPP mode along with the local Industry Association.
- Some medium and large units should be set up in the Region by Govt of India and its CPUs for promoting investor confidence. The Assam Gas Cracker Project should be put up in a time bound manner. The existing ailing PSUs be either revived & closed down.

A. Cement and Cement based:

- (a) Cement Manufacturing Company
- (b) Barak valley Cement
- (c) H. M. Cements
- (d) Vinay cements
- (e) Meghalaya Cements Ltd.
- (f) Virgo Cements

B) Ferro Alloys:

- (a) Brahmaputra steels
- (b) Sree Sanyjee Ispat
- (c) Manthan Smelters
- (d) Meghalaya carbide and chemicals
- (e) Jaiswal Alloys

C) Tourism Services

- (a) Jungle Travels Private Ltd
- (b) Blue Hills travels
- (c) Green Valley Travels
- (d) Mr. Hemen Baruah, on tea and heritage tourism
- (e) Mr. Chiranjit Chaliha on tea tourism

D) Food Processing and Food Based and Medicinal and Aromatics:

- (a) SRD Nutrients
- (b) Repose Foods limited
- (c) North East Pure Drinks
- (d) Anderson Biotech, Meghalaya
- (e) Patkai Herbs, Guwahati
- (f) Nezone Foods

E) *Machineries and Equipments*

- (a) Buildworth Pvt Ltd
- (b) Mech Technik
- (c) R.K. More, Torsa Machines

- (d) Techno Builders
- (e) T& I. Ltd, Tezpur

F) Others:

- (a) Godrej Consumer Products
- (b) Premier Cryogenic
- (c) Emami Limited
- (d) Dharampal Satyapal Group
- (e) Assam Granites
- (f) Assam Carbon Group
- (g) GraceiNET Solutions, IT and ITES
- (h) Third Eye Infosys

Annex-II

State	Prim+UP	Sec+HS	Arts/Sc. Colleges	Engg.	Medical	Univer- sities	Poly- technics	ITIs
Arunachal Pradesh	1697	204	8	1	0	1	1	2
Assam	37749	4736	309	3*	3	5	8	23
Manipur	3346	687	58	1	1	2	1	6
Meghalaya	6890	641	44	0	0	1	1	9
Mizoram	2101	388	27	0	0	1	2	1
Nagaland	1779	279	35	0	0	1	2	3
Sikkim	626	138	2	1	1	1	2	1
Tripura	2489	643	14	1	1	1	1	4
Total NER	56677	7716	497	6	6	13	18	49

* excludes IIT, Guwahati

Annex-III

STATEWISE DISBURSEMENTS (Rs. in lakh)											
State	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05	05-06	Cum
Arunachal	0	9	24	150	206	397	246	341	778	610	2761
Assam	615	227	1062	932	3360	2472	2170	2964	2285	5342	21429
Manipur	0	39	31	153	285	152	68	70	105	50	953
Meghalaya	0	-	4	62	618	1467	2404	1349	1542	3199	10645
Mizoram	0	-	25	30	60	192	87	96	85	70	645
Nagaland	0	80	34	41	323	259	97	175	152	32	1193
Sikkim	0	-	-	-	-	-	-	14	88	128	230
Tripura	0	0	37	95	194	140	38	200	200	1000	1904
Cumulative	615	355	1217	1463	5046	5079	5110	5209	5235	10431	39760

BORDER TRADE

Border Trade has special significance for the economies of the NE States due to their geographic isolation from the mainland and proximity to the markets of neighbouring countries and South East Asia. NE share less than 1% of its border with the mainland. The South Asia Free Trade Agreement (SAFTA) has come into effect from 1st January 2006 and is of special significance since Bangladesh, Nepal and Myanmar are involved. The BIMSTEC – FTA which was expected to be concluded by 1st July 2006 has been delayed. The India – ASEAN FTA is scheduled to come into effect from 1st January 2007. This is a part of the renewed focus of Govt. of India to forge closer commercial and economic links with the markets in the South East Asian economies and a part of its ‘Look East Policy’. The NE States already have a large volume of informal trade (apart from significant formal trade) with Myanmar and Bangladesh.

Free trade, various road & rail projects and good access to ports in Bangladesh and Myanmar would reduce, to a great extent, the problems of the NE being land locked. The proposed North-East Industrial Policy, 2006 could also accelerate investment in NE and consequently international trade.

2. Status of imports & exports from NE

The value of total exports and imports through the region has however hovered around Rs 400 crore for the last few years despite a number of trade agreements (Annexure-I). Incidentally IITF had estimated informal trade at Rs.2000 Crore (1995).

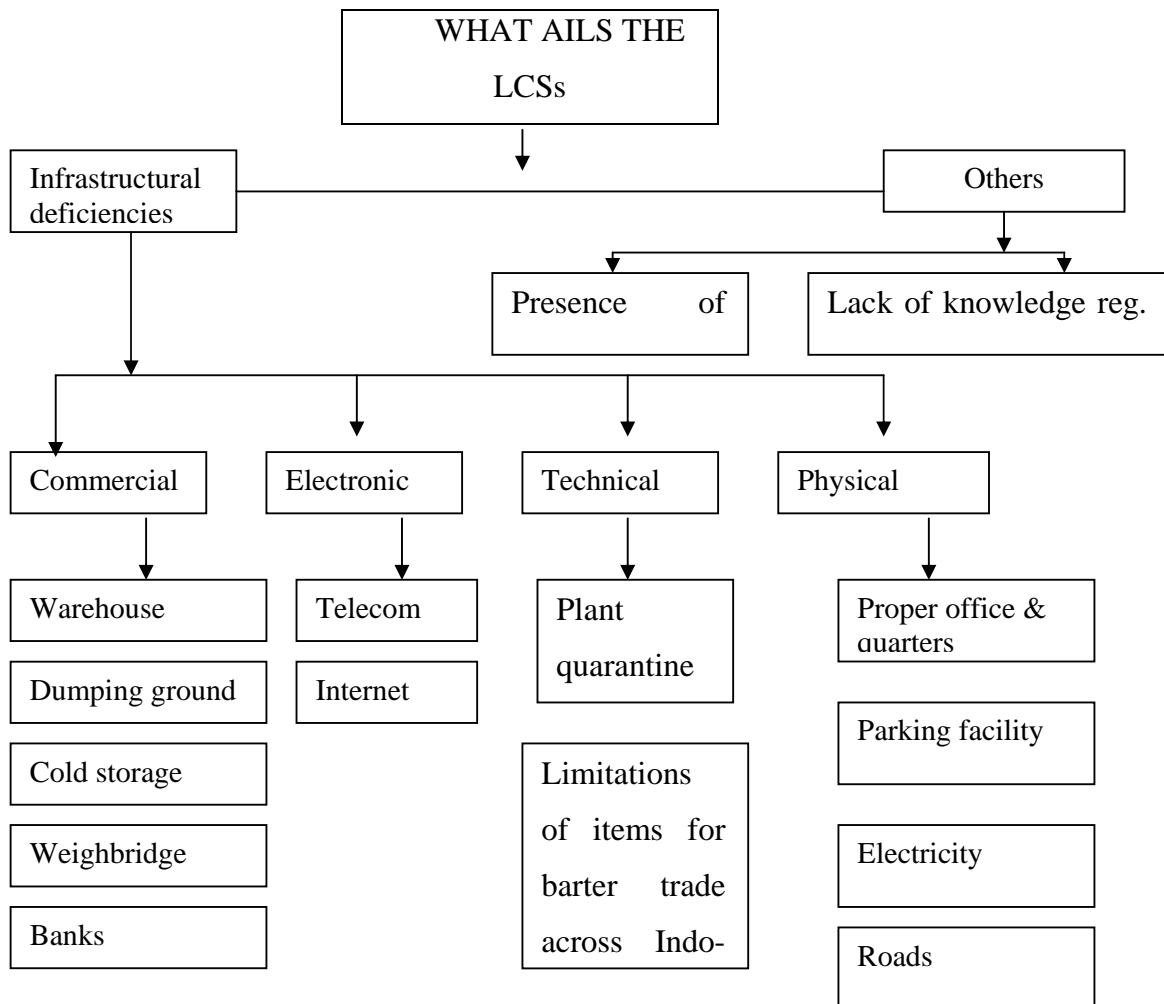
About 94 % of exports come from tea and coal (Annexure-II). The region largely exports primary products like boulder stone, limestone, fruits etc. The contribution of manufactured good to the export basket is negligible.

Export of items produced in other parts of the country through the NE like, motor parts, umbrellas, printed garments etc., are also not very significant. About

50% of imports in to the NER consist of manufactured products and processed food items like fish, dry ginger, yellow peas, cement, multi-wall paper sacks, laminated poly bags, machinery equipment and parts, mustard, soya and palmolein oil etc. NER has large potential for increasing international trade because of its rich mineral deposits, forest resources, fertile stretches of land with high agro- economic potential, perennial inland water system, oil, tea, hydro-carbon and huge hydro-power potential. Main items of trade with the neighbouring countries may be seen at Annex III.

3. Land Custom Stations:

Operational status of various LCS is given at Annexure IV & V. The Ministry of Commerce is responsible for the development and improvement of infrastructure at these Stations. Problems of LCSs could be depicted as below:



The twelve stations that have been prioritized for development of infrastructure are as follows: Agartala, Borsorah, Dawki, Demagiri, Ghasuapara, Karimaganj steamer ghat, Moreh, Old Raghana Bazar, Srimantapur, Sutrakhandi, Zokhaathar, Nathu La. Some new LCSs have been proposed, such as : Bleting & Bumla in Arunachal, Behiang & Kon Kenthana in Manipur, Kuliang & Maheshkhola in Meghalaya, Avangkhu & Pangsha in Nagaland and Sabroon in Tripura.

4. ICD Amingaon.

ICD at Amingaon, Guwahati is the only ICD serving entire NER. ICD helps the major tea producers in directly exporting tea and has the benefit of less handling, less damage, better quality, faster realization of export and trouble free service.

However, lack of imports through this ICD entails major cost disadvantages. Every ISO container has to be brought back empty to the ICD from Kolkata/Haldia. Moreover, every empty container needs to be sanitized and certified as to its fitness for carrying tea, the facility not available at ICD Amingaon. This necessarily involves additional cost.

The transport subsidy was enhanced from Re. 1 per kg to Rs. 1.50 per Kg for the year 2004-05.

5. Incentives for boosting Trade and Commerce in NER

An Empowered Committee functions under the Chairmanship of the Commerce Secretary to monitor implementation of measures aimed at development of trade and exports from the NER. The following measures have been taken so far :-

- (i) Assistance to States for Development of Export Infrastructure and other activities (ASIDE) scheme.
- (ii) Export Development Fund (EDF): Funds from EDF are released to Agricultural & Processed Food Products Export Development Authority (APEDA), which has been nominated as nodal agency for the Scheme So far, Rs 31.57 crore have been released to APEDA.

(iii) The Transport Subsidy Scheme provides transport assistance to exporters for exporting about 15 notified Horticulture products.

(iv) Five Agri Export Zones have been set up: (a) Tripura –for Pineapple. (b) Sikkim – for floriculture(c) Orchids and Cherry Pepper (d) Sikkim -for ginger. (e) Assam- for fresh & processed ginger.

The impact of these schemes has, however, been marginal.

6. Special problems of trade with Mynamar:

(i) Heavy presence of militants & stringent check by security forces hinder movement of goods on NH 39 & 53 leading to Moreh/Zokhawthar.

(ii) Official exchange rate of Rupee & kyat is grossly distorted (1 kyat = Rs. 7 vs kyat 22 = Rs. 1) and the only viable option in border trade.

7. Recommendation for promotion of border trade:

A. Road Network :

1. Improvement and Construction of Double Lane Road, RCC Bridges etc, leading to all the Land Customs Stations (LCSs) of NER.
2. Opening of Stillwell Road at Ledo linking Central Myanmar and China on priority basis.
3. Re-Opening of Karimganj-Sylhet-Dhaka Road for Transportation.
4. Extension of Amguri-Mokochung-Tuensang Road linking Myanmar.
5. Extension of Sibsagar, Sonari-Nemtola Road from Assam-Nagaland border to Lungwa in Myanmar.
6. Up gradation of N.H.39 and 53 connecting Indo-Myanmar Border Via Dimapur & Silchar.
7. Up gradation of N.H.40 and 62 & 62 E connecting Indo-Bangladesh Border Via Dawki & Gasuapara LCSs.
8. Connection with North East to Trans Asian Highways.
9. Construction on priority basis 1300 KM long trilateral Highway connecting Moreh (India) Bagan(Myanmar) & Maesot (Thailand.)

10. Bus service between Guwahati-Imphal-Mandley, Guwahati-Dhaka via Shillong and Guwahati-Tura-Dhaka to facilitate movement of the business community.

B. Railways:

1. Restore Mohisashan (Assam, India)-Shahbazpur (Bangladesh) railway traffic to facilitate export of bulk mineral (coal, limestone), food items and agro-horticulture based products from NER.
2. Double tracking of the Railway line from new Jalpaiguri to Tinsukia via Dimapur.
3. Extend the ICD, facility at Silchar, Moreh and Dimapur.
4. Connection with Trans Asian Railways to North-East is must for faster movement of goods from the region.

C. Airways:

1. Creation of an air travel circuit between North East and Bhutan, Nepal, Bangladesh, Myanmar, China, Thailand, Singapore is a must to increase Export and Tourism from the region.
2. Provide an Air Cargo Complex at LGB Airport, Guwahati to cater to Export and Import of goods,

D. Water-Ways: -

1. Opening up and improvement of Inland water-ways with Bangladesh and Myanmar through a number of river port existing in North East.
2. Declaration of Jogighopa, Moreh, Dawki and karimganj as ports of call.
3. Government of Bangladesh/ Myanmar may provide access to Chittagong/ Mandalay Port for exports/import from and to the NER to the outside world. This would help neighbour earn substantial revenue by charging a fee for use of Roads/ River.

Infrastructure at LCSs

1. Construction of Integrated Export Complex including Customs Office, Immigration, Banking, Clearing and Forwarding Agents buildings, Truck

parking bay, Warehouses, Cold Storage Facilities, Post Offices, Telephone Exchange, Shopping Centers, BSF Complex, Police Outpost, Electronic Weigh Bridges, Electricity, Portable Drinking Water, Health Facility etc at all the notified LCSs.

2. Development of Border Town and Trade Centre at major LCSs of NER,
3. Opening of more border trading points with adequate infrastructural facilities and upgrading the infra- structure at non-functional LCS of the region.

F. Quality Control Facility :-

- Inspection house, Testing facility for Phyto-Sanitary certificate , Radio-active Free Certification and Plant Quarantine etc need to be established at the major LCSs of North East to boost export of agricultural/horticultural products from North East .

G. Banking:

1. Create adequate Banking Infrastructure for International Trade and Border
2. Trade in the North East, the banks functioning in the North East should have correspondent arrangements with banks in neighboring countries. At present this correspondent relationship are restricted to the banks functioning in Kolkata.
3. A high value currency chest may be installed at major towns near LCSs.
4. Letter of credit (L/C) arrangement between the banks of India and Myanmar need to be further regularized and institutionalized for smooth and enhanced border trade through Moreh & Zokhawthar.
5. Letter of Credit advising charge may be reduced considering LoC value less than US \$ 20,000. Nationalised Bank may charge Rs 200/- for LoC advising instead of existing Rs.5,00/-

H. Policy & Miscellaneous:

- North East exports to Bangladesh suffer High Tariff Barriers since the Customs duty structure in Bangladesh includes Value Added Tax, Advance Income Tax and Infrastructure Development Charge in addition to Basic Customs Duty. Govt. of India may pursue Bangladesh to reduce the Tariff.
- **Transport Subsidy :** Transport

Freight Subsidy @90% should be considered for all items of export through L.C.S / Airport or nearest port of call located in the region since the exporters of the region have to pay double freight charge, as there is no or little import through various L.C.S. Subsidy eligibility could be verified against transport bills & custom documents.

- **Consulate Office** : Govt. of India may pursue neighbouring countries to open their visa office in the North East
- There should be more exchange of trade delegations and Buyer –seller meets, Exhibition of goods at regular intervals with neighbouring countries.
- For the development of professional manpower and creation of entrepreneurship in the field of Foreign Trade, Government may set up a branch of Indian Institute of Foreign Trade in North East.
- **North East Council (NEC)**: should play a major role in the creation of infrastructure for development of export from the region and co-ordinate export promotion efforts in this region with various ministries of the Government of India.
- NE states should bring exports in their development agenda and improve in law & order at LCS & enroute.
- **The Ministry of Commerce** may take immediate steps to formulate North East Exim Policy to provide incentive for export .
- A separate Zonal Joint Director General of Foreign Trade- cum- Development commissioner office may be set up in Guwahati with the jurisdiction over entire northeastern states including Sikkim.
- NE Import/Export policy and Schemes for export promotion (ASIDE, EDF, MDI/MAI, EPIP, STP, AEZ, SEZ) may be reviewed and made effective.
- Govt. of India may create & constantly update interactive website for NER to facilitate border trade and set up a branch of IIFT at Guwahati.

- I. Measures to reduce informal trade**
- (a) A special package of incentives like DEPB entitlement at enhanced rate of additional 1%
 - (b) A special scheme in the line of duty free licensing scheme at 5 % of F.O.B value of exports
 - (c) Expand the list of tradable goods and commodities under barter mechanism.

Annexure –I

North East India's Export / Import to Neighbouring Countries

(Rs. in crores)

Year	Total Export	NE-B-Desh Trade	NE-Myanmar Trade	Other Countries	Total Import	NE-B-Desh Trade	NE-Myanmar Trade	Other Countries
1997-98	389.69	NA	22.45	NA	49.25	NA	35.9	NA
1998-99	406.54	NA	5.6	NA	22.1	NA	3.75	NA
1999-00	393.55	169.81	3.31	220.43	18.75	9.44	6.68	NA
2000-01	404.23	151.27	5.52	251.44	19.57	7.19	12.36	NA
2001-02	384.47	186.13	1.23	197.11	15.94	5.5	7.59	NA
2002-03	409.36	201.99	4.96	202.41	41.57	6.1	11.83	23.64
2003-04	434.96	NA	9.41	NA	60.95	11.51	8.85	40.59
2004-05	392.03	190.43	6.48	195.12	30.64	19.59	5.38	5.67
2005-06	437.81	215.93	3.86	218.02	65.56	45.64	5.21	14.71

Annexure-II

Major Export Items from North Eastern Region

(Rs. Crores)

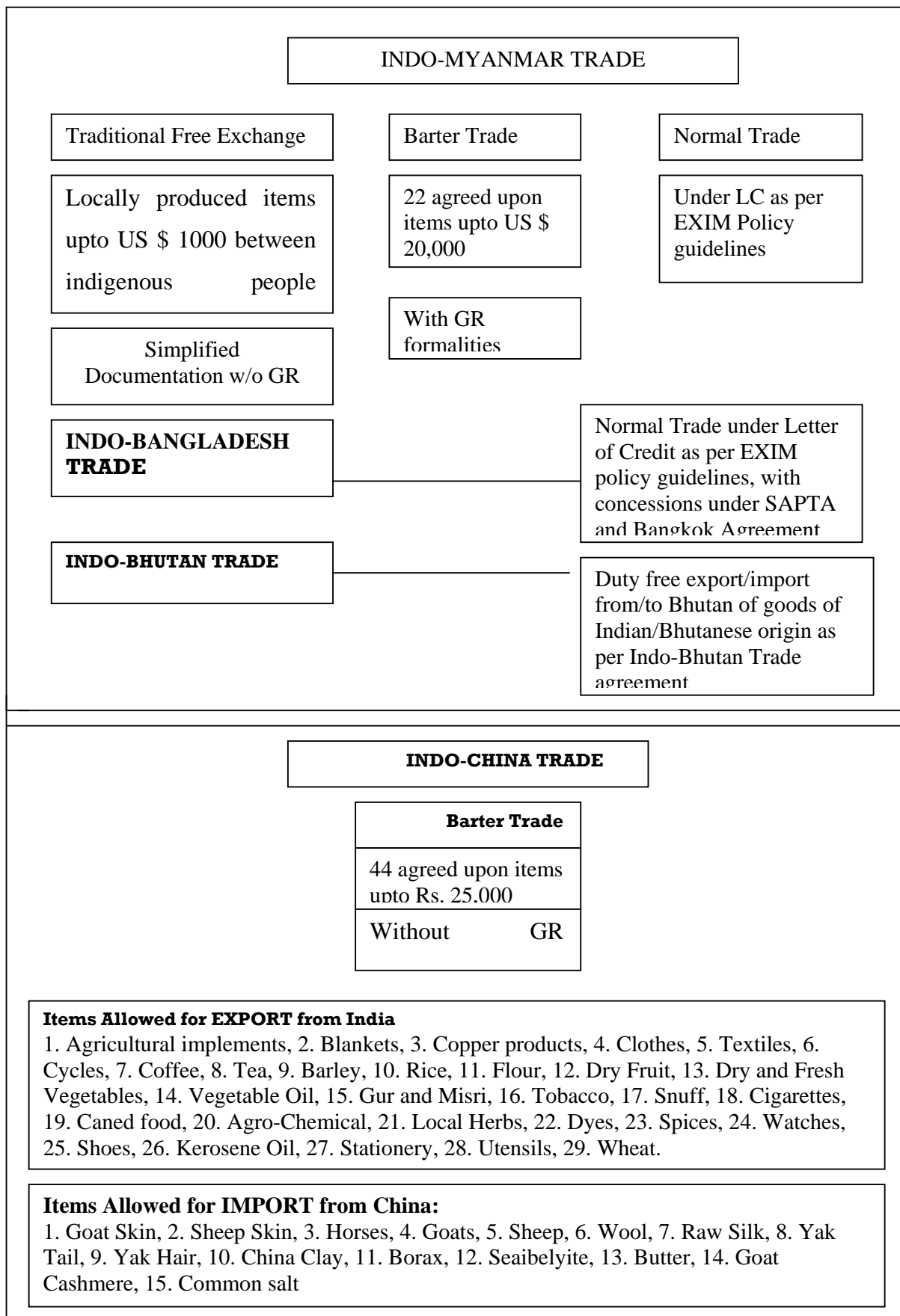
Years		1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Items	Exported from							
Tea	ICD Amingaoan	219.59	250.32	195.64	200.73	184.86	188.65	199.68
Coal	LCSs of Bangladesh border	105.62	135.87	150.67	188.61	227.14	175.08	199.14
Limestone	-Do-	29.20	4.34	13.75	4.46	7.46	9.24	12.05
Boulder	-Do-	3.99	3.62	2.18	1.99	0.99	0.65	0.52
Ginger	-Do-	2.27	0.26	2.75	3.04	1.16	3.63	2.90
Fruits	-Do-	0.56	0.95	1.36	1.12	1.31	1.25	1.65
Vegetables	-Do-	0.05	0	0.05	0.02	0.11	0.16	0.006
Perfumery	LGBI	0.03	0.24	0.39	0.72	0.42	0.87	0.64
Soyabari	Moreh	2.24	4.43	0.97	1.28	1.44	1.53	2.08
Cumin	Moreh	0.13	0.47	0.12	1.91	0.46	1.04	1.07
Flour	Moreh	0.77	0.35	NA	NA	3.17	1.70	NA
Others		31.45	3.22	11.27	6.23	6.48	8.24	18.08
Total		395.90	400.85	379.15	410.12	435	392.04	437.81

Source: Custom Commissioner of Shillong

Annexure-IV

STATUS OF LAND CUSTOM STATIONS IN NORTH EASTERN REGIONS

Sl. No.	State	Name of The LCS/ Other export point	Functional/ Non-functional	Counterpart LCS of Neighbouring Country
1	Meghalaya	Dawki	Functional	Tamabil, Bangladesh
2	Meghalaya	Bholaganj	Functional	Chattak, do
3	Meghalaya	Borsora	Functional	Borsora, do
4	Meghalaya	Shella Bazaar	Functional	Chatak, do
5	Meghalaya	Rynku	Non-functional	
6	Meghalaya	Baghmara	Functional	Bijoypur, do
7	Meghalaya	Dalu	Functional	Nakugoan, do
8	Meghalaya	Ghasuapara	Functional	Karaituli, Gobraakura, do
9	Meghalaya	Mahendraganj	Functional	Dhanua Kamalpur, Do
10	Tripura	Agartala	Functional	Akhaura, do
11	Tripura	Sabroom	Denotified	
12	Tripura	Srimantapur	Functional	Bibirbazar, do
13	Tripura	Mhurighat	Non-functional	
14	Tripura	Khowaighat	Non-functional	
15	Tripura	Dholaighat	Non-functional	
16	Tripura	Old Raghna Bazar	Functional	Juri-Batuli do
17	Tripura	Manu	Non-functional	
18	Assam	Karimaganj ferry & S.G.	Functional	Zakiganj, do
19	Assam	Sutarkandi	Functional	Sheola, do
20	Assam	Mahisasan R. STN.	Non-functional	
21	Assam	Silchar RMS Office	Non-functional	
22	Assam	Dhubri Steamer ghat	Non-functional	
23	Assam	Golakganj	Non-functional	
24	Assam	Guwahati Steamerghat	Functional	
25	Assam	Mankachar	Functional	
26	Assam	Hattisar	Functional	Bhutan
27	Assam	Darranga	Functional	Samdrup, Jongkhar, Bhutan
28	Assam	Ultapani	Non-functional	
29	Assam	ICD Amingaoan	Functional	
30	Assam	IGBI Airport.	Functional	
31	Arunachal	Nampong	Non-functional	
32	Mizoram	Demagiri	Non-functional	
33	Mizoram	Champhai	Non-functional	
34	Manipur	Moreh	Functional	Tamu, Myanmar
35	Sikkim	Nathu La	Functional	Renqinggang, China



Highways

Road Density:

The average density of roads in the NER is 66.08 kms per 100 sq. km, as against 75 kms at all India level. Five states (Arunachal Pradesh, Meghalaya, Mizoram, Sikkim and Manipur) have however very low road density in relation to area, than the national average. State-wise road density is as follows:

State	NH	SH	Other PWD roads	Others*	Urban roads	Project roads	Total(kms)	Road Length	
								Per 100 sq.km	Per 1 lakh population
Arunachal	392	-	12196	4630	36	1111	18365	21.93	1669.55
Assam	2836	1811	26416	47408	3904	7111	89486	114.09	328.99
Manipur	954	1118	6638	2172	135	417	11434	51.21	476.42
Meghalaya	717	831	6013	604	106	1294	9565	42.65	398.54
Mizoram	927	169	3730	-	10	239	5075	24.07	563.89
Nagaland	369	398	6273	13160	96	725	21021	126.79	1051.05
Tripura	400	136	5569	8635	228	1328	16296	155.41	509.25
Sikkim	62	186	1670	-	36	65	2019	28.45	336.5
Total NER	6657	4649	68505	76609	4551	12290	173261	66.08	444.26
All India							2456647	74.73	233.86

* Zila Parishad, Village Panchayat, CD/Panchayat Samiti Roads

2. NEC Perspective Plan:

North Eastern Council (NEC) has prepared a twenty year (2001-2021) Transport Perspective Plan for development of NER (excluding Sikkim). The study has recommended a four-phase programme for improving/widening of existing road network in the NER as follows:

Phase	Length (km)	Category of road	Period	Cost (Rs.million)
Phase-I	582.8	NH	Up to 2007	62,640
Phase-II	519.7	NH, MDR, SH	2007 to 2012	92,873
Phase-III	848.35	SH, MDR, NH	2012 to 2017	26,232
Phase-IV	1009.6	NH, SH, MDR	2017 to 2021	13,540
Total	2960.45	NH, SH, MDR	20 Years	195,285

3. Special Accelerated Road Development Programme for North East (SARDP-NE):

(i) SARDP-NE covering improvements /upgradation of 7616 km of roads has been initiated with the following objectives:

- To connect all state capitals with improved/upgraded National Highways

- To provide connectivity to all the 85 District Headquarters (DH). Since 49 DH are already connected and two are included in NEC plan, the remaining 34 DH to be connected to 2-lane NH through improved state roads.
- To improve connectivity to neighbouring countries
- To provide road connectivity to backward and remote area of NE region.
- To improve some of the important roads of strategic importance.

(ii) The programme is to be implemented in two phases. Phase 'A' comprising of 1310 km, approved on 22.09.2205 for implementation at an investment of Rs.4618 crore, is to be completed by 2008-09(Details at Annexure-I). Arunachal Pradesh, having 1/3rd of geographical area of NER and the lowest density of roads, seems to have been neglected in Phase A and intended to be compensated in Phase B.

(iii) Phase 'B' comprising of 6306 km roads have been approved for DPR preparation (Details at Annexure-II). The DPRs are under preparation by BRO, State PWDs and NHAI. The time frame, sources of funding for the programme are yet to be approved. The entire programme may cost about Rs.20, 000 crore at 2005 price level.

4. Other roads of urgent importance:

(a) Arunachal Pradesh has the lowest density of roads even among the NE states. It shares over 1000 km of sensitive border with China and Myanmar and has vast potential for hydro power generation. Considering this, trans Arunachal Highway (about 900 km) network needs to be developed starting from Kalaktang/Tawang to pass through Bomdila-Seppa-Sagali-Ziro-Daporijo-Along-Pasighat-Roing-Tezu-Changlang-Khonsa, Kanubari and connect to NH 37 at Sibsagar, this road exists but needs to be urgently upgraded/strengthened through BRO.

(b) Manipur: Complete NH 150 between Churachampur to Tipaimukhl. BRO has completed 40 km stretch and taken up another 20 kms. The rest should also be taken up by BRO(202 km).Link NH-53 and NH-50 by connecting Thaitu on NH-50 to Jiribam on NH-53.

5. PPP in National Highways:

National Highways stretches aggregating to 1849 km have been identified for 4-laning on BOT basis. As per GOI policy, viability gap grant up to 40 % of the project cost is permissible for PPP. Since in NER, the construction cost is high due to hilly terrain and low traffic levels, the results of feasibility studies in several cases have revealed that projects would not be viable with

40% grant. It is, therefore, proposed to permit more than 40% of the project cost to fund viability gap, on case-to-case basis.

6. Bridges:

There has been consistent demand to provide increased connectivity between the North and South of Assam by constructing bridges on river Brahmaputra at various locations such as between (a) North and south Guwahati, (b) Jorhat and north Lakhimpur via Majuli, (c) Dhola & sadia, (d) Dhubri to Phulbari in Meghalaya. Construction of bridges across river Brahmaputra requires huge investment. Moreover, (b) to (d) are not on the NH and need to be taken up outside NH programme. The absence of bridges over the river Brahmaputra is the major bottleneck for delay in implementation of ongoing & further development of HE projects.

NHAI has however already prepared DPR for construction of an additional 3-lane road bridge at about 40m down stream side of the existing rail-cum-road bridge at Saraighat, Guwahati on NH-31 as part of the East West corridor. The corridor is targeted to be completed by 2008.

7. Proposed ADB funded Roads Project:

The North Eastern State Road Projects (NESRP) of ADB proposes to finance the upgradation and reconstruction of approximately 1190.6 km of state road in eight NE states (Details at Annexure-III). The estimated cost of the project is US\$ 430 million. ADB will contribute 70 % amounting to US\$ 300 million (Details at Annexure-IV). Incidentally, the average funding level for state roads excluding NH (US\$3,400-10,900/km) in NER is stated to be at par with that for 4 lane roads in Australia or Canada, which indicates inappropriate way of spending money.

The proposed works will also include (a) reconstruction/construction of 4550 meters of bridging (b) construction of 4700 meters of causeway/Irish crossings and (c) construction of a number of drainage structures (floodways, etc). The selection criteria for prioritization includes level of traffic, road network connectivity, possibility of future diversion of traffic, connectivity to major traffic generator & other arterial roads.

The institutional development initiative will include reforming the PWDs through expansion of PWD responsibilities to include full road management and planning, modernizing their processes & procedures, developing a training and skills development programme, making road safety a key consideration.

8. Recommendations:

- Complete Phase A of SARDP-NE as planned.
- Complete Phase B selectively (based on resources) in the 11th plan.
- Take up the trans Arunachal Highway (about 900 km) as mentioned in para 4 urgently and complete on a top priority basis through BRO.
- Take up and complete the road links in Manipur as mentioned in para 4 on top priority.
- Construct a bridge (4 km) at Sadia/Dholaghat point to connect NH52& NH 37 to enhance accessibility to upper Assam & foothills of Arunachal and support strategic border areas in Walong & Anini sector of Arunachal.
- Encourage PPP for road development with increased viability gap grant.
- The bridges over Brahmaputra need to be constructed in a PPP mode considering its importance (mentioned in para 6) and cost implication.
- A policy decision that MORTH will take up only Highways, NEC take up MDR roads and NLCPR only ODR roads, so as to avoid duplication of funding.
- Build capacity of PWD's staff in road management, planning for development and proper maintenance of road network.
- Strengthen road management & maintenance cell in each state.
- Introduction of new and modern technology in road construction work.
- Road construction and management practices in NE are different from rest of the country due to the unique climate, geographical area and geology. A separate unit for road research at IIT, Guwahati or a branch of Central Road Research Institute (CRRI) should be established in the NER to provide technological support to road and bridge construction activities.

Annexure-I

List of roads under Phase 'A' of SARDP-NE

S.No	State	Items	Category of road	Road Length (in kms.)	Significance
1	Assam	Improvement of existing 2-lane NH-37 from Nagaon-Dibrugarh to 4-lane.	NH	315	
2	Meghalaya	Construction of new Shillong By-pass connecting NH-40 & NH-44 (4-lane)	NH	50	
3	Meghalaya	Four laning of existing 2-lane road stretch from Jorabat to Barapani on NH 40.	NH	62	
4	Nagaland	Four laning of Dimapur to Kohima Road including Dimapur/Kohima Bypass on NH-39.	NH	81	
5	Sikkim	Conversion of existing 2-lane NH-31A road stretch from Sevoke to Gangtok to 4-lane.	NH	95	
6	Assam	Improvement of existing single lane road stretches on NH-36, 51, 52, 53, 54, 61, 152, 153 & 154 to double lane with paved shoulders.	NH	507	
7	Manipur	Two laning of State road from Maram to Paren to provide connectivity of Manipur State with Nagaland State.	State road	108	
8	Arunachal Pradesh	Improvement of road from Lumlato Tashigong via Dudunghar (Indo-Bhutan road)	State road	36	
9	Sikkim	Double laning of existing single lane Border Road from Gangtok to Nathula	GS road	56	
		Total		1310	

Annexure-II

List of roads covered under Phase 'B' of SARDP-NE

Sl.No	Category of road	Scope/ Section of road	State	Tentative Length (km)	Significance
1	NH-52	2 laning of Jonai- Sitapani section of NH-52	Arunachal Pradesh	335	
2	NH-52	Early completion of Siang Bridge at Pasighat which has been delayed by 15 years.	Arunachal Pradesh		
3	ODR	Improvement of Seppa-Nechipu road	Arunachal Pradesh	96	
4	ODR	Improvement of Yupia- Pappu road	Arunachal Pradesh	10	
5	ODR	Improvement of Koloriang- Joram road	Arunachal Pradesh	158	
6	ODR	Improvement of Yingkiong- Pasighat road	Arunachal Pradesh	167	
7	ODR	Improvement of Anini- Meka road	Arunachal Pradesh	235	
8	ODR	Improvement of Hawai- Hawa Camp road	Arunachal Pradesh	126	
9	ODR	Improvement of Along- Bame road	Arunachal Pradesh	31	
10	MDR	Improvement of Tawang- Balipara road	Arunachal Pradesh/ Assam	315	
11	ODR	Improvement of Ziro- Pahumara road	Arunachal Pradesh/ Assam	124	
12	ODR	Improvement of Lekabali- Daporizo road	Arunachal Pradesh/ Assam	222	
13	State Road	Improvement of Yingkiong to Bishing(Porgo via Gette-Pugging-Likor-Paling-Jido)	Arunachal Pradesh	160	
14	State Road	Improvement of Zido-Singha	Arunachal Pradesh	94	
15	State Road	Improvement of Pango-Jorging	Arunachal Pradesh	90	
16	State Road	Improvement of Sarkam point-Singa via Eko-Demnia	Arunachal Pradesh	125	
17	Inter-Basin	Improvement of Taliha-Tato	Arunachal Pradesh	100	
18	Inter-Basin	Improvement of Migging -Bile	Arunachal Pradesh	76	
19	Indo-Myanmar State Road	Improvement of Vijaynagar-Miao	Arunachal Pradesh	157	
20		Improvement of Miao-Jairampur	Arunachal Pradesh	32	
21		Improvement of Jairampur(NH-153) - Lalpul Bridge	Arunachal Pradesh	9	
22		Improvement of Lalpul Bridge-Manmao	Arunachal Pradesh	32	
23		Improvement of Manmao-Changlang	Arunachal Pradesh	44	
24		Improvement of Changlang to Khimiyang	Arunachal Pradesh	35	
25		Improvement of Khimiyang - Sangkuhavi	Arunachal Pradesh	33	
26		Improvement of Sangkuhavi-Lazu	Arunachal Pradesh	40	
27		Improvement of Lazu-Wakka	Arunachal Pradesh	75	
28		Improvement of Wakka- Khanu	Arunachal Pradesh	21	
29		Improvement of Khanu - Konsa	Arunachal Pradesh	30	
30		Improvement of Konsa-Panchao	Arunachal Pradesh	29	
31		Improvement of Panchao - Nagaland Border	Arunachal Pradesh	25	

SL.NO.13 to 31:Originally Phase C road, added to Phase B

32	NH-44	2 laning of intermediate section from Karimganj-Churaibari	Assam	29
33	SH	Improvement of Udalgiri- Rowta road	Assam	13
34	MDR	Improvement of Golaghat- Rangajan	Assam	7
35	MDR	Improvement of Diphu- Manja	Assam	16
36	MDR	Improvement of Haflong- Jatinga	Assam	8
37	SH	Improvement of Morigaon- Jagi road	Assam	23
38	SH	Improvement of Barpeta- Howly	Assam	12
39	MDR	Improvement of Dhubri- Gauripur	Assam	8.5
40	SH	Improvement of Goalpara- Solmari	Assam	6.5
41	SH	Improvement of Kokrajhar- Karigaon	Assam	18
42	RR	Improvement of Baska- Bamara	Assam	25
43	150	2 laning of Ukhrul to Yaingangpokpi section of NH-150	Manipur	92
44	SH	Improvement of Tamenglong- Khonsang road	Manipur	40
45	NHs	Provision of medians on NH-39 and NH-150 in urban areas of State for enhancing safety.	Manipur	
46	SH	Improvement of Pallel Chandel road	Manipur	18
47	NH-62	2 laning of NH-62 from Assam/Meghalaya border to approx. km 91 under the charge of	Meghalaya	48
48	NH-44E	2 laning of Nongstoin- Nongpoh section of NH-44E	Meghalaya	83
49	NH-62	Approx. km 91 to Baghmara under the charge of	Meghalaya	48
50	SH	Improvement of Nongstoin- Rongjeng-Tura road	Meghalaya	201
51	ODR	Improvement of William nagar to Nengkhra road & other road (2 side connectivity with respective length of 14 & 8 km)	Meghalaya	22
52	NH-44	Construction of new 200 meter tunnel at Sonapur Slide Zone in Meghalaya on NH-44 to avoid frequent periodic road blocks.	Meghalaya	
53	NH- 44A	Realignment of NH-44A from Km 51 to 111 km point (2 lane)	Mizoram	45
54	NH- 44A	2 laning of Aizawl- Mamit	Mizoram	41
55	NH-54	2 laning of intermediate section from Assam Border-Aizawl	Mizoram	67
56	NH-54	2 laning of NH-54 from Aizawal to Tuipang	Mizoram	348
57	NH- 54B	2 laning of NH-54B from Zero point to Saiha	Mizoram	27
58	NH- 54A	2 laning of NH-54A fromLunglei- Theriat	Mizoram	9
59	SH	Improvement of Lunglei- Demagiri road	Mizoram	92
60	MDR	Improvement of Champai- Seling - Thau road	Mizoram	180
61	NH-150	2 laning of NH 150 from Kohima to Nagaland/Manipur border	Nagaland	132
62	MDR	Improvement of Zunheboto- Chakabama road	Nagaland	128
63	MDR	Improvement of Mon-Tamlu road	Nagaland	50
64	NH-61	2 laning of Assam/ Nagaland border to Kohima	Nagaland	234
65	NH-155	2 laning of Mokokchung to Jessami	Nagaland	125
66	MDR	Improvement of Pfutsero- Zhamai road	Nagaland	18

67	MDR	Improvement/ construction of road from Athibung- Khelma	Nagaland	55	
68	MDR	Improvement of Phek- Pfutzero	Nagaland	79	
69	MDR	Improvement of Longleng- Changtongya	Nagaland	35	
70	ODR	Improvement of Peren- Kohima road	Nagaland	96	
71	MDR	Improvement of Tamlu- Merangkong road	Nagaland	50	
72	SH	Improvement of Gangtok- Mangam road	Sikkim	68	
73	Alternative Highway	New alternative Highway from Melli to Rongpo on Sikkim side.	Sikkim	17	
74	SH	Improvement of Gyalshing- Singtam road	Sikkim	80	
75	SH	Improvement of Tarku- Namchi road	Sikkim	32	
76	SH	Improvement of Namchi- Jorethang road	Sikkim	20	
77	SH	Improvement of Legship- Jorethang road	Sikkim	26	
78	SH	Improvement of Jorethang- Melli road	Sikkim	27	
79	NH-44	4 laning of NH 44 from Churaibari- Agartala to Sabroom	Tripura	330	
80	NH-44	Four laning of NH-44 from Agartala City to Tripura University.	Tripura	15	
81	NH- 44A	Improvement of NH-44A to double lane specification from Manu to Tripura/Mizoram	Tripura	110	
82	NH-44	New two lane steel bridge on junction of Agartala Bypass with NH-44.	Tripura		
83	MDR	Improvement of Kailasahar- Kumarghat road	Tripura	26	
		Total		6306	

SL.No. 79: Added on account of PM announcement

Note: The following road projects originally under Phase B has been deleted

- 2 laning of intermediate section from NH-44 from Assam/ Tripura Border- Agartala aggregating to 128 km in the State of Tripura
- 2 laning of existing intermediate lane NH-44 from Agartala to Sabroom, totalling to 130 km in the State of Tripura
- 2 laning of intermediate section of NH-31A from Sevoke in West Bengal to Gangtok in Sikkim totalling to 95 km

Improvement of State roads mentioned above is in terms of widening to 2 lanes/ strengthening/ Improvement of riding quality depending upon the traffic requirements and the existing crust thickness

Annexure-III

List of Roads Proposed under NESRP
(ADB)

State	Section of Road	Length (kms)
Arunachal Pradesh	Pasighat (NH52) - Pangin	81 km
Assam	Barama (NH31) -Tamulpur-Paneri-Udalguri	91.1 km
	Tinsukia (NH38) - Jaipur	44.6 km
	Kokrajhar (Rlwy Station) – Bilasipara (NH31)	28.6 km
	Dudhnoi (NH37) – Goalpara (NH31B) – Tikrikilla	97.9 km
	Neelam Bazar (NH44) – Fakirbazar (border with Bangladesh)	20.6 km
	Bongaigaon (NH31) – North Salmara (NH 31B) – Barpeta	54.5 km
Manipur	Tupul (NH53) – Bishnupur (NH150) – Thoubal (NH39)- Kasom Khullen	123.3 km
Meghalaya	Mawngap (NH40E) – Umpung	77 km
	Mawshynrut (Riangdo) – Hahim	37.3 km
	Garobadha – Barengapara (NH51)	98.5 km
Mizoram	Serchhip (NH54) – Thenzawl - Buarpui	64 km
	Champhai – Khawbung	72 km
Nagaland	Champang – Tizit	(180 km)*
Sikkim	Melli (NH31A) – Nayabazar	26.5 km
	Nayabazar – Namchi	19 km
	Rumtek area (NH31A) – Sang	12 Km
Tripura	Khowai (border with Bangladesh) – Teliamura (NH44)	35.6 km
	Udaipur (NH44) – Melaghar	27.1 km
	Total (19 roads)	1190.6 km

* Study yet to be done

Annexure-IV

Preliminary Project Cost Estimate and Finance Plan

Item	Total	ADB	Government
Base Costs			
I. Investment Component			
1. Right of Way (Resettlement & Rehabilitation)	1.5	0	1.5
2. Civil Works (roads and bridges)	289.6	220.8	68.8
3. Equipment	1.6	1.6	0
4. Contract Supervision Consultant (Inc. Design)	13.9	13.9	0
II. Institutional Development and Capacity Building Component	17.8	14	3.8
Physical Contingency	26	20	5.9
Price Contingency	38.5	29.7	8.8
Interest and Commitment Charges	39.9	0	39.9
Total	428.7	300 (70%)	128.7 (30%)

Railways

Existing Railway Network:

The updated (as on 31.03.2006) position of Railway network is as under (Refer Map):

State	BG	MG	Total kms	Under Construction	
				NL	GC
Arunachal	-	1.26	1.26	26	-
Assam	1227.70	1078.12	2505.82	179	1058
Tripura	-	64.42	64.42	88	-
Nagaland	11.13	1.72	12.85	-	-
Manipur	-	1.35	1.35	98	10
Mizoram	-	1.50	1.50	-	-
Meghalaya	-	-	-	9.5	-
Sikkim	-	-	-	-	-
Total	1238.83	1148.37	2587.2	400.5	1068

2. Since 1992-93, 1079 kms of gauge conversion (GC) and 163 kms of New Lines (NL) have been completed in NE region as under:

New Line:

- Guwahati-Jogighopa new line (142 kms)
- Kumarghat-Manu (21kms) of Kumarghat-Agartala new line

Gauge Conversion:

- Guwahati- Lumding (GC) including Chaparmukh-Haibargaon (202kms)
- Lumding-Dibrugarh and linked fingers GC (620kms)
- New Jalpaiguri/Siliguri- New Bongaigaon (280kms)

3. Details of projects under progress:

Following six new lines and five gauge conversion works are under various stages of progress (details at Annexure I):

Name of the Project (km)	Cost(Rs.Crore)
New Line	
1.Kumarghat- Agartala (109 kms)	879.99
2. Hamutim(Bedati)-Itanagar (33 kms)	489.94
3.Jiribam-Imphal Road (Tupul) (97.9 kms)	727.56
4.Bogibeel bridge with linking lines between Dibrugarh & North Bank (46kms)	1767.36
5.New Maynaguri-Jogighopa (257 kms)	894.38
6.Dudhoni-Depa (15.5 kms)	22.33

Name of the Project (km)	Cost(Rs.Crore)
Gauge Conversion	
1.New Jalpaiguri/Siliguri-New Bongaigaon (12 kms)	890.83
2.Lumding-Silchar-Jiribam& Badarpur-Baraigram (292 kms)	1496.42
3.Katakhal-Bairabhi (84 kms)	88.70
4.Rangia-Murkongselek (510.3 kms)	915.70
5.Haibargaon-Mairabari & Senchoa Jn.-Silghat Town (419.5 kms)	100.60

4. Fund requirement in the 11th Plan:

Throwforward of ongoing projects in the NER is over Rs.6000 crore. About Rs. 500 crore per year are being spent for such projects in NER through Railway budgetary support. In order to complete all works in 11th plan, Rs.4,500 crore would be additionally required.

(Rs.in crores)

	2002-03	2003-04	2004-05	2005-06	2006-07(BE)
Net capital available	4040	4044	4098	3256	4807
10% for NE region	404	404	410	326	481
Actual/likely Exp.	441	571	509.59	377.77	570
Percentage	10.92	14.13	12.43	11.6	11.85

5. Surveys for following new rail lines have been taken up:

Name of project	Remarks	Status
Agartala-Sabroom (110kms)	Will provide link with Bangaladesh	Survey completed and cost assessed at Rs.557 crore with ROR of (-) 28.7 %.
Agartala-Akhaura (Bangladesh) (5.4 kms)	Will connect Bangaladesh railway network with NE region	Indian portion completed. Bangladesh portion remaining.
Dimapur-Kohima	Will link capital of Nagaland	Planning Commission has given approval.
Bhairabi-Aizwal (54 kms)	Will connect capital of Mizoram	Survey is completed and report under examination.
Digaru-Byrnihat (19.8 kms)	Will bring Meghalaya on railway map	Memorandum submitted by Railway for appraisal.
Murkongselek-Pasight (30 kms)	Will link Pasighat in Arunachal Pradesh	Updated survey completed.
Sivok-Giellikhola (25 kms)	Will bring Sikkim on railway map	Survey of 2004-05, assessed cost at Rs.105 crores with (-) ROR.

6. National Projects Development:

(i) **Rangia –Murkongselek** gauge conversion along with linked fingers (Rs.900 crore) and a **rail-cum road bridge at Bogibeel** near Dibrugarh (Rs.1800 crore) were posed to

the CCEA for declaration as National Project so as to provide funds over and above the normal budgetary support for completing the project by 2010-11. However, it has been directed that projects should be implemented through a SPV for which funds be located in consultation with Ministry of Finance and Planning Commission. These projects, being capital intensive and with negative ROR, do not seem to be amenable for funding through an SPV mechanism.

(ii) Arunachal Pradesh, Mizoram, Meghalaya, Sikkim are without rail network and therefore Hamuti(Bedati)-Itangar, Dudhoni-Depa, Bhairabi-Aizwal & Sivok-Giellikhola projects should be declared as National Projects.

7. Freight Terminals Utilisation and Improvement:

Existing goods sheds and sidings are idle over fifty percent of the time and Trade & Industry refuse to use them round the clock due to security & labour problems. Free time for a 40 covered wagon rake is 9 hours. Detention at New Guwahati is over 24 hours which hits rolling stock asset utilisation. Following districts need to augment their warehousing, so that a BG full trainload of 2400 tonnes can be unloaded in free time of 9 hours & put back in to the cycle of transportation. Now rakes are detained for 24-48 hours due to inadequate centralised storage capacity. Centralised warehouses are required.

State	Districts
Assam	Kokrajhar, Dhubri, Nagong, Silchar, Hailakandi, Karimganj
Tripura	North Tripura
Mizoram	Sairang
Manipur	Senapati
Meghalaya	East Khasi Hills

The following siding owners should plan for railway facility remodelling and extend part rake sidings to provide full length loading/unloading handling on single line.

Priority	Sidings
1	Hindustan Paper Corporation/Jagiroad, Assam
2	Food Corporation of India/Hojai, Assam
3	Defence siding/New Guwahati, Assam
4	M/S Coal India siding at Ledo, Margherita, Assam

8. Other issues:

The Region is having adverse law and order conditions. Necessary protection to the field sites have been given in Tripura and Manipur. However, the militant extortion and

threat activities have increased on Lumding-Silchar section recently. Assam also needs to provide adequate security to the staff and workers.

9. Recommendation:

- a) Complete ongoing projects in the 11th plan (para 3 above).
 - b) Declare following projects as National Projects
 - (i) Rangia-Murkongselek gauge conversion along with linked fingers
 - (ii) Bogibeel rail-cum-road bridge project
 - (iii) Hamuti(Bedati)-Itanagar
 - (iv) Dudhoni-Depa
 - (v)Sivok-Giellikhola
 - (vi) Bhairabi-Aizwal
- Other rail links/gauge conversion could be taken up out of Railway's own funds (10% obligation for NER).
- c) Guwahati Bye Pass railway line needs to be taken up urgently for movement of passenger and freight to upper & lower Assam and to Manipur, Mizoram, Tripura.
 - d) Warehouse Infrastructure Improvement:
 - (i) State Govt.,Trade and FCI / CWC etc. to develop modern rail-side warehouse complexes with mechanized handling facilities.
 - (ii) Cement industry in Meghalay should arrange to develop centralized warehouse facility for full rake handling in N.C Hills/Silchar for cement dispatches.
 - (iii) M/S SAIL also have a stock yard in the out skirts of Guwahati and Rangiya (Assam).

Annexure-I

Project/State	Remarks/Status	Target
Projects which will provide connectivity to capital cities		
1.Kumarghat-Agartala (Tripura) New Line	This has been declared as National Project. Kumarghat-Manu (20 Kms) completed. On Manu-Agartala (89 Kms) section, forest clearance and land acquisition completed. 226 out of 228 lac cum earthwork, 162 out of 170 minor bridges, 13 out of 15 major bridges, 24 out of 25 ROB/RUB and 0.37 out of 2 lac cum ballast collection completed. 2361 m out of 5100 m tunnelling completed. Tunnelling progress is lagging behind on tunnel no. 2.	28.02.07
2.Hamuti(Bedati)-Itanagar (Assam,Arunachal Pradesh) New Line	This will bring Arunachal Pradesh capital on the railway network. Government of Arunachal Pradesh informed on 09-08-2000 to abandon the alignment from Harmuti to Itanagar and requested on 06-12-2000 to change the alignment to Bedati-Itanagar (45 km). Survey for alternative alignment from Bedeti to Itanagar has been completed and report is under examination.	
3. Jiribam-Imphal Road (Tupul) (Manipur) New Line	This has been declared as National Project. Final Location Survey (FLS) for 26 kms completed and the detailed estimate for same is under preparation by RITES .FLS for balance section is likely to be completed by March, 2007.	March, 2010
Megabridge project connecting North and South bank		
4. Bogibeel bridge with linking lines between Dibrugarh and North Bank line Assam New Line	This will provide connectivity to North and South Bank. It is proposed to put up for reconsideration of CCEA for declaration as National Project. 85 out of 146 lac cum earthwork, 6 out of 17 major bridge, 47 out of 90 minor bridge and 2 out of 10ROB/RUB completed. 12 out of 17.5 lac cum boulders collected and tenders for 14 km track linking has been finalized. Detail design by RITES for main bridge is in progress. Price bid from pre qualified contractors for the construction of sub structure of the bridge has been opened.	March, 2011
Other Works		
5. Gauge Conversion of New Jalpaiguri/Siliguri-New Bongaigaon (Assam)	The GC from New Jalpaiguri-New Bongaigaon (279kms) of main line completed and commissioned. On branch line from Alipurduar to Bamanhat (73.32 kms), 4.03 out of 4.98 lac cum of earthwork, 5 out of 10 major & 44 out of 53 minor bridge and total ballast procurement (1.3 lac cum) completed. Track linking from New Coochbehar-Alipurdaur (23 kms) is in progress. On Fakiragram-Dhubri (66 kms) including Golakganj-Gauripur section (15 kms)-1.31 lac cum out of 3.79 lac cum earthwork, 2 out of 13 major bridges and 4 out of 27 minor bridges completed. Ballast collection has started in Golakganj-Gauripur section.	New Coochbehar-Alipurdaur (23kms) by September, 2006 Balance during 2007-08

Annexure-I (Contd.)

Project/State	Remarks/Status	Target
Other Works		
6. Lumding-Silchar-Jiribam & Badarpur-Baraigram Gauge Conversion (Assam, Manipur)	This has been declared as National Project. Progress is affected due to non removal of encroachment of railway land for which matter is being pursued with State Govt. On Lumding-Badarpur (171 Kms)-land acquisition completed, 291 out 391 lac cum earthwork, 11 out 67 major bridges, 210 out of 284 minor bridges, 718m out of 17134m of tunnel and 15400 out of 366504 cum ballast completed. On Badarpur-Jiribam-6.31 out of 12.79 hect. of land have been acquired and proposal for balance section submitted to State Authorities. 10.93 out of 27.8 lac cum earthwork, 10 out of 28 major bridges, 22 out of 105 minor bridge, nil out of 3 ROBs and 7550 out of 1.25 lac cum ballast collection completed. The work involves diverted alignment of 44.62 kms.	March, 2009
7. New Maynaguri-Jogighopa (Assam, W.B.) New Line	354.64 hect. land of 36 villages out of 981.76 hect. of 126 villages has been acquired. Land acquisition proceedings of 16.77 Kms for 3.57 hect. land are not yet finalized by Distt. Administration. On New Maynaguri-New Cooch Behar (93 Kms) section, 8.5 lac cum out of 29 lac cum earthwork. 2 out of 20 major bridges, 40 out of 84 minor bridges completed. On New Cooch Behar-Jogighopa (Abhayapuri) (149 Kms) section, earthwork & minor bridges between New Cooch Behar - Golakganj are in progress. One important bridge over river Gangadhar (13 x 45.7 m) is in progress.	
8. Dudhnoi-Depa (Assam, Meghalaya) New Line	Govt. of Meghalaya has proposed alternative route from Depa to Mendhipathar. Railway has been advised to do Final Location Survey (FLS) for this alignment. Survey work has been taken up.	
9. Katakhal-Bairabhi GC (Assam,Mizoram)	This work will be taken up once Lumding-Silchar is in advance stage of completion.	
10. Rangia-Murkongselek GC (Assam)	The project on completion will connect the region without the need of transshipment from MG to BG and vice-versa. It is proposed to put up for reconsideration of CCEA for declaration as National Project.	
11. Gauge Conversion of Haibargaon-Mairabari & Senchoa Jn.-Silghat Town (Assam)	Lumding-Dibrugarh with linked fingers completed and commissioned. Ministry of Defence has agreed to share the cost of conversion of Senchoa-Silghat town. In this section 3.24 out of 7.75 lac cum earthwork, 3 out of 7 major bridges, 24 out of 84 minor bridges, 21000 out 75000 cum of balast collection completed. 46100 PSC line sleeper transported to site and 40 track KM of second hand rail has been collected.	Senchoa Jn.-Silghat town (62kms) by 31.12.06

Air connectivity

Air connectivity in NE involves three aspects; (a) construction of airports in three State capitals of Sikkim, Nagaland & Arunachal Pradesh and revival of some, (b) maintenance of such airports and (c) regular airlines operation. Status of various airports /airfield in NE is at Annex-I.

2. New Airports

Airports in State capitals of Sikkim, Arunachal & Nagaland are not justified on the criterion of commercial viability but are needed for strategic reasons and mainstreaming of NE in general. Moreover, poor road/rail connectivity, immense unexploited potential of tourism and providing emergency services, justify these airports. Ministry of Civil Aviation and Airports Authority of India has informed that the estimated cost of these green field airports is Rs. 689 crores. As per the existing policy, such green field airports should be 100 % centrally funded and AAI is not in a position to incur expenditure out of its internal resources. Moreover, private participation (PPP) would not work. AAI is reported to be already spending more than 10% mandated for North East Region. A list of major works under execution by them is at Annex-II. Some airports have been built by AAI with the joint funding of NEC & Ministry of Civil Aviation on 60:40 basis.

As regards the Sikkim airport, State Government have signed MoU with AAI in March 2002 for constructing airport as deposit work and Rs. 1 crore was released to AAI for preparation of DPR. The DPR prepared through M/s E&Y establishes the technical feasibility of airfield capable of taking ATR type aircraft with 50 to 60 passengers under good weather conditions (available 7-8 months a year). The financial feasibility is very low. The cost is Rs. 340 crore (excluding land, being provided by the State Govt.). Rs. 100 crores is already available for the purpose under the 12th Finance Commission award and balance Rs. 240 crores is expected from the Planning Commission. Incidentally, Sikkim Govt. had invited offers from private forms. But the offers were not found favourable.

As regards Nagaland and Arunachal Capital airports, detailed proposals are yet to be made. Nagaland already has an airport at Dimapur (80 kms from Kohima) and is well

connected with Calcutta & Guwahati. DPR is, however, being prepared for Kohima at Chiethu (20 kms from Kohima). But Arunachal Pradesh, having a vast geographical area, has not even one operational airport and needs it urgently. Apart from its capital at Itanagar (Western part of Arunachal), Airports could be considered for Passighat (Central part) & Tezu (Eastern part) in course of time.

3. Air connectivity in Arunachal & Sikkim

Pawan Hans has leased a Dauphin helicopter to Arunachal since Dec, 95, being used for passenger service connecting Itanagar with Guwahati, Tezu, Ziro, Roing etc. 75% of fare is subsidized by MHA, 25% paid for by passenger and deficit, if any, provided by the State Govt. Another MI-172 helicopter provided by Pawan Hans to connect high altitude places (Tanang, Rupa, Bomdila etc.) is under overhaul at Kazan, Russia.

Similarly, Pawan Hans has leased 5 seater Bell helicopter to Sikkim since 1998. Passenger/tourist flights are run on Gangtok to Bagdogra route 6 days a week. Payment is on the same terms. Details of Pawan Hans operations are at Annex-III.

4. O&M of airports:

AAI has informed that only 11 airports are profit-making and the remaining 116 (including all NE Airports) are loss making and are being cross-subsidized. AAI is spending about Rs. 60 crore annually on O&M of NE Airports. AAI for example expects from Govt. of Sikkim Rs. 3-4 crore annually for O&M for Gangtok airport alone.

5. Airlines operations:

NEC provides Rs. 35 crores annually (out of plan funds) to Indian Airlines / Alliance Air for operations of 4 ATRs in North East. Air Deccan is operating 12 ATR-42 aircraft, Jet Airways 8 ATR-72 and so on. But since the hub of operations of IA remains at Kolkata (AI Staff are reportedly reluctant to stay at Guwahati) rather than Guwahati against the terms of the agreement, flights are highly uncertain and therefore not very popular. One view is that if the same subsidy is provided to private operator based on competitive bid, with a condition to operate from Guwahati, would ensure more and reliable service.

Moreover, the condition of 10% passenger traffic of any airlines to be for category II States (North East, J&K, Lakshwadip and Andmans) would be effective for air connectivity within the North East, only when services to Guwahati from Delhi (it has enough traffic) are not counted towards this obligation.

6. Upgradation of Guwahati as a truly international airport:

Upgradation of Guwahati airport is required for exports of farm produce and tourism.

7. In conclusion, the following are recommended:

- (a) Construct Airports at Pakyong (Gangtok) & Itanagar (Arunachal) on top priority.
- (b) Renovate Passighat airport for ATR's
- (c) Upgrade Guwahati as a truly international airport with better night landing facility, modern repair & maintenance workshop, cold storage etc.
- (d) Do not count flights to Guwahati from Delhi towards 10% obligation of Airlines for Category II States.
- (e) Rs. 35 crore provided by NEC to IA be borne by MoCA and provided to an Airline based on competitive bidding subject to operating from NER. In the meantime, the hub of IA services to NE be shifted to Guwahati from Calcutta as per the agreement with NEC.
- (f) Incentivise Tourists/airlines operators to run package tours to smaller places (Annex-I) having landing facilities.

Annexure-I

Sl.No	State	Airport	Largest aircraft operating	Night landing facility	Air cargo complex	Domestic / International	Availability of custom/ Immigration staff	
1.	Assam	Guwahati	AB-310/ A-300	Yes	Yes	International. No international operations presently	Yes	
		Dibrugarh	AB-320	No *	No	Domestic	No	
		Lilabari	AB-320	No *	No	Domestic	No	
		Silchar(CE)	B-737	No *	No	Domestic	No	
		Jorhat(CE)	B-737	No *	No	Domestic	No	
		Tezpur(CE)	B0737	No *	No	Domestic	No	
		Rupsi	No operations					
		Shella	Unfit for operations					
2.	Manipur	Imphal	AB-320	No *	No	Domestic	No	
3.	Tripura	Agartala	AB-320	Yes	No	Domestic	No	
		Kailasahar	H-copter operations only	No	No	Domestic	No	
		Kamalpur	No operations					
		Khowai	Unfit for operations					
4.	Meghalaya	Barapani	ATR-42	No	No	Domestic	No	
		Tura	H-copter operations only	No	No	Domestic	No	
5.	Mizoram	Lengpui	B-737	No *	No	Domestic	No	
6.	Nagaland	Dimapur	B-737	No *	No	Domestic	No	
7.	Arunachal	Along (CE)	D 228 – no operation	No	No	Domestic	No	
		Daparizo(CE)	D 228 – no operation	No	No	Domestic	No	
		Passighat (CE)	D 228 – no operation	No	No	Domestic	No	
		Tezu (CE)	F-27 – H-copeter operation only	No	No	Domestic	No	
		Zero (CE)	D 228 – no operation	No	No	Domestic	No	
8.	Sikkim	Pekyong (Planning stage)						

* Ground lighting facilities available.

Inland Water Transport

Inland Water Transport (IWT) is an all weather and reliable mode of transport throughout the year and is best suited for movement of low value, high volume commodities such as coal, fly-ash, cement, jute, foodgrains etc. In the North-East, river Brahmaputra (Dhubri - Sadiya stretch 891 km), which has been declared as National Waterway No. 2 in 1988, provides a sort of trunk route connectivity to the region from Haldia and Kolkata Ports through Bangladesh waterways. At the same time, the feeder routes (tributaries) leading to NW-2 render it a fish-bone structure and provide the hinterland connectivity to the trunk route.

Under an IWT Protocol between India and Bangladesh for transit and trade, through IWT mode, Indian vessels can transit through Bangladesh from Brahmaputra to Kolkata/Haldia ports. The protocol route also connects Karimganj on Barak river (proposed National Waterway No. 6 stretches from Karimganj to Lakhimpur) to Kolkata.

2. Current Status of NW-2:

Infrastructure

IWT related infrastructure namely navigational channel, terminals and navigational aids are being provided by the Inland Waterways Authority of India. The current status is as under:

- Floating terminals have been provided at Dhubri, Jogighopa, Pandu and Silghat.
- Navigational channel with least available depth of 2 m is maintained between Dhubri and Dibrugarh (768 km).
- Day navigational marks are maintained on the entire waterway while night navigational facilities have also been provided between Dhubri and Pandu (255 km).
- A fixed concrete permanent terminal capable of handling containers is being constructed at Pandu.

Cargo movement

The cargo currently being moved on the waterway are POL of Numaligarh Refinery from Silghat to Kolkata, Coal from Jogighopa to Kolkata, bitumen from Haldia to Pandu, jute and paraffin bags from Dhubri to Kolkata etc. Further, tea has been transported from Pandu to Kolkata and cement from Kolkata to Pandu.

Cargo movement on NW-2 has been showing an increasing trend in last 3 years as shown below:

2003-04	0.029 bn tonne km
2004-05	0.038 bn tonne km
2005-06	0.043 bn tonne km

There are possibilities of new types of cargo transportation on NW-2 such as clinker, fly ash and lime stone from Farakka/Kolkata to Pandu, cement from Pandu to Haldia/Kolkata and movement of over dimensional cargo and project/construction material for hydro-electric dam projects coming up on Subansiri river which is an important tributary of NW-2. It is estimated that about 5 bn tonne km of cargo transportation is possible by 2025.

As per the Report of Consulting Engineering Services (CES), Potential IWT traffic in NER is estimated to be approx. 13.74 lakh tons.

3. Time taken by IWT vessels:

Presently, the IWT cargo vessel move with an average speed of about 10 km/hour and due to the absence of night navigational aids and mechanized cargo handling facilities at both the ends, voyage time of a cargo vessel between Kolkata and Pandu (1535 km) is of the order of about 60 days which, with well developed IWT infrastructure can come down to about 20 to 25 days making IWT operations more viable.

4. Ongoing Efforts to Improve IWT System:

Investment made so far

Though river “Brahmaputra” from Dhubri to Sadiya (891 km) was declared as a National Waterway in 1988, cumulative investment made for its development up to the end of 8th Plan (1996-97) was just Rs. 7.50 cr. Investment picked up in 9th Plan (1997-98 to 2001-02) and in this period about Rs. 25 cr was spent.

In the first four years of 10th Plan about Rs. 96 cr have been invested in providing this infrastructure and during current year(2006-07) there is a provision of Rs. 74.08 cr for development of IWT in the North-Eastern region. The Investment/Expenditure pattern over the years is summed up in the following table.

<u>Year/Period</u>	<u>Investment/Expenditure</u>
1988-99 to 1996-97 (upto 8 th Plan)	Rs. 7.50 cr
1997-98 to 2001-02 (9 th Plan)	Rs. 25.69 cr
2002-03 to 2005-06 (10 th Plan- so far)	Rs. 95.79 cr

Action Plan

An Action Plan for making NW-2 fully functional (by March 2008) by providing assured depth in navigational channel, night navigational aids and fixed/floating terminals at important places has been prepared. The Action Plan has been approved by the Authority for implementation during 2006-08. The Action Plan envisages investment of Rs. 203 cr over during 2006-2008. With this investment the cargo throughput is estimated to reach 1.2 billion tonne km (btkm) by 2010 which may further go up to 4.8 btkm by 2020.

5. River Barak – Proposed National Waterway No.6:

The Govt. is considering declaration of river Barak from Lakhipur to Bangladesh border near Karimganj (152 km) as a National Waterway. For this techno economic feasibility study has been completed and the proposal is being processed. Salient features of proposed NW-6 are enclosed in Annexure- 1.

6. Alternate route linking North-Eastern and Eastern India:

IWT link between India (Mizoram) and Myanmar can be established through Kolodyne river for which techno-economic feasibility study has been conducted by MEA/Govt. of Mizoram through RITES. Presently, MEA is exploring an alternate route for providing connectivity to North-East (Mizoram) from Kolkata. The proposed route in Kolkata to Sitwe (coastal route), Sitwe to Kaletwa (IWT) and Kaletwa to Mizoram (road).As regards implementation of the project, a suggestion has been made to the MEA to to the effect that IWAI could be the project implementing agency for IWT part. Planning

Commission may consider supporting this initiative on the part of Department of Shipping/ IWAI (Annex-II).

7. Steps required to be taken:

a) Renewal of Indo-Bangladesh IWT Protocol on long term basis:

The connectivity to NER through IWT system is governed by Indo-Bangladesh IWT Protocol signed on 28.10.99 for a period of 2 years, with a provision for further renewal through mutual consent. However, since 3rd Oct. 2001, the Protocol is being renewed in a piecemeal manner. For smooth connectivity, it is important to keep the protocol valid on a long terms basis say 5 years at a time.

b) Package of Incentives for modal shift in favour of IWT

IWT is ideal for movement of bulk cargo. However, due to its gradual decline, neither Shippers nor Policy Planners currently have enough confidence in this mode. A package of incentives for effecting modal shifts is desirable.

c) Policy dispensation for movement of bulk cargo through IWT

Reduction of congestion/accidents on roads and reduction of pollution are national objectives. Bulk movement of goods through already congested transport modes defeat this objective. Since IWAI is committed to full-fledged development of NW2 by 2008 March, it is suggested that after 2008, movement of certain types of cargo (e.g. Coal, Cement, POL, Fly ash, steel, project materials etc) between O-D pairs on NW2-Protocol Route-NW1 having well developed IWT infrastructure (say between Pandu/ Numaligarh and Kolkata) should take place by IWT. Transport policy/Planning implications of this suggestion could be examined by an expert group.

d) Making National Waterway No.2 (Dhubri-Sadiya 891 km) fully functional

As indicated above, a detailed action plan has been chalked out by IWAI to make NW-2 fully functional by March 2008. Requisite budgetary allocation of Rs. 203 crore is necessary.

e) Barak River – Proposed National Waterway No. 6

The proposal to declare Barak river as a National Waterway is under consideration. The stretch involved is Lakhipur to Bangladesh border near Karimganj (152 km). IWT connectivity within NER will get a boost with NW-6 coming into being.

f) Development of feeder routes by the State Govts.

Ideally this should be done by the States utilizing their own Scheme and the Centrally Sponsored Schemes. However, since their technical capacity/expertise is limited, IWAI can take up Project preparation/Management/Implementation/Monitoring etc on behalf of the States, provided there is consensus on this issue. North-East Council(NEC) could be the appropriate forum for evolving this consensus.

g) Stronger IWT set up in Assam

The efficiency of IWT Directorate, Assam holds the key to IWT prospects in the NER. Its Institutional strengthening is necessary for efficient management of IWT affairs in Assam.

Salient Features of Proposed National Waterway No. 6 (Barak River)

Techno-Economic Feasibility conducted by RITES Ltd.

Length of Waterway	152 km
Stretch	Between Karimganj (Lafasill BSF Camp) and Lakhipur
State covered	Assam

Waterway dimension proposed:

Bed width	40 m
Depth	1.6 m*
Side slope	1:5

* Depth would be improved to 2 m during Phase – II when depth in the Bangladesh Waterways also improves.

Major works:

Procurement of 2 Cutter Suction Dredger, 1 Hydraulic Surface Dredger and 2 Survey launches.

Terminal:

4 nos. (Karimganj, Badarpur, Silchar and Lakhipur)

Cost of development:

	(Rs in cr)
Fairway development	23.00
Construction of terminals	22.00
Setting up of offices	<u>1.00</u>
TOTAL	46.00

Cargo identified:

Coal, tea, food grains, bamboo, paper and paper products, timber, parcel goods, sugar, salt, cement, edible oils, pulses, POL etc.

Cargo projection:

<u>Year</u>	<u>Projection(in lakh tones)</u>
1 st year after development	6.34
5 th year after development	8.62
10 th year after development	10.53

Connectivity with Haldia and Kolkata Ports:

River Barak is connected with Haldia and Kolkata ports through waterways in Bangladesh. An IWT transit and trade protocol already exists between India and Bangladesh under which Indian vessels can transit from Karimganj to Haldia/Kolkata through specified Bangladesh waterways.

Annexure-2

Salient features of the proposed alternate route linking NER and Eastern Region

➤ Detailed Project Report was prepared by RITES during April 2003

➤ The most viable and feasible route identified is as under:

Kolkata to Sittwe(Myanmar)	Sea leg(coastal shipping)	539 km
Sittwe to Kaletwa (Myanmar)	IWT on River Kaladan	225 Km
Kaletwa to Indian border (Mizoram)	Highway	180

➤ **Specifications of Waterway(IWT):**

Bed width	37.5M
Depth below CD (LWL)	2.0 M
Side Slope	1:5

➤ **Specifications of Vessels :**

Coastal Shipping : 6000DWT of 124 m X 16.9 M X 9.5 M with a loaded draft of 7.2 M

IWT : 260 Tonne capacity of 40M X 8.5 M X 2.3 M with a loaded draft of 1.5 M

➤ **Loading Pattern in IWT vessel:**

- May to October; 260 Tonne
- November to April: 120 Tonne

➤ **Fleet Requirement:** 10 vessels of 260 Tonne capacity

➤ **Locations of Terminals:**

- IWT terminal at Sittwe: 54 M X 15.2 M Berth with approach jetty of 104 M X 9.8 M
- IWT terminal at Kaletwa : 54 M X 15.0 M Berth with approach jetty of 192 M X 9.6 M
- Port jetty at Sittwe: 219 M X 15.2 m with approach of 104 M X 9.5 M

➤ IWT Cargo throughput: 75000 Tonnes per year – Day time navigation only

➤ Total project cost: 49.24 US Million Dollar as on 2003 (as per the details below)

Waterway: 19.31 US Million Dollars
Terminal: 24.75 US Million Dollars
Vessels: 5.18 US Million Dollars

➤ Annual Operation and Maintenance Cost: 5.18 US Million Dollars

Power

Power Supply Position:

The Installed Capacity of NER as on 31.3.2006 is 2520.3 MW comprising 1153.1 MW hydro and 1311.2 MW thermal (including gas and diesel) and 56 MW from Renewable Energy Sources. The NER had a power supply deficit of 8.6% (all India average- 8.4%) for the period 2005-06 and Peak Deficit of 13.9% (all India average- 12.3%). The State-wise details of Installed Capacity as on 31.3.2006 are given in Annexure-I.

2. Target for 10th Plan:

The Planning Commission has set a generation capacity addition target of 1527.92 MW in NER during Tenth Plan (41,110 MW in the whole country). The State-wise details of capacity addition target and achievement is given at Annexure – II. Project-wise status is given at Annexure –III.

Important incomplete projects (including not started) are as follows: Tuirial HEP-60MW (NEEPCO), Loktak D/S- 90MW (NHPC), Bairabi HEP-80MW, Monarchak-280MW (NEEPCO), Dimapur-22.92MW (HFO based), Lakwa WHRU-37.2MW, Tipaimukh-1500MW (NEEPCO). Two Diesel based schemes in Meghalaya viz. Byrnihat (24 MW) and Mendipathar (24 MW) have been dropped by the State Govt.

3. AT & C Losses:

AT&C losses of NER during 2004-05 were very high at about 51% as compared to the all India average of about 31%. AT&C losses in Manipur, Mizoram and Tripura were extremely high and need urgent measures.

Assam	51.76	Tripura	59.54
Manipur	70.61	Arunachal	42.96
Meghalaya	28.35	Mizoram	66.14
Nagaland	48.26	Sikkim	50.49

4. Hydro Power Initiative:

A 50,000 MW Hydro Electric Initiative was launched by Govt. of India in May, 2003. Preliminary Feasibility Reports (PFRs) have been prepared for 162 Hydro Electric Projects in the country as a whole (47,930 MW). Of these, 72 are in NER (31,885 MW).

Of 77 low tariff schemes (first Year tariff upto Rs 2.50/Kwh) with 34,020 MW taken up for preparation of DPR/implementation, 29 schemes (23,217 MW) are located in NER (Annexure –IV).

Major problems in the development of HEP in NER:

(a) Non-availability/delay in environment and/or forest clearance, identification of non-forest land, its acquisition, preparation and implementation of afforestation plans delays forest clearance.

(b) Arunachal Pradesh has decided that the hydro power projects in the State would generally be developed as run-of-the-river projects. Whereas Government of Assam want flood moderation (huge flood related losses every year) and irrigation components in such projects. National Water Policy 2002 has identified flood mitigation as one of the prime objectives of river valley management. Accordingly, Brahmaputra Board had planned originally a single high dam as a storage project. On objection from Arunachal Pradesh, the proposal was later modified to three stage cascade development to avoid large submergence and minimize the environmental implications.

(c) The Projects like Etalin (4000MW), Siyom (1000MW) and Attunli (500MW), Naba (1000 MW), Niare (800 MW), Naying (1000 MW), Hirong (500 MW) & Tato-II (700 MW) were allotted earlier to NHPC for preparation of DPR /implementation. Subsequently, Arunachal Pradesh has withdrawn these schemes from NHPC. Some of the projects (Hirong HEP, Tato-II HEP, Siyom HEP, Naying HEP) have been given to private companies.

(d) One solution could be that Joint Venture is formed between the State and Central /Private Utilities for execution of large projects. The equity participation of the State could be through grant/loan from project executing agency/ Central Government and be adjusted against sale of free power in a phased manner once the project is commissioned. With equity participation of 11% with private developers, fund requirement of Arunachal would be approximately Rs.1820 crore. With increased equity participation of 26%, Rs.4300 crore would be required. For equity participation of 49% with NHPC, fund requirement would be RS.6543.58 crore (Details at Annexure-VII).

(e) Implementation of Tipaimukh Dam Project (1500 MW) and Loktak downstream HE Project (90 MW) in Manipur could not be started due to insurgency, additional cost on account of security, construction of diversion roads, high NPV of forest under submergence etc.

(f) Hydro schemes in NE Region face geological surprises. Ongoing Kameng HE Project (600 MW) is such a project.

(g) Problems encountered in some projects were due to inadequate Survey & Investigation. To initiate even the project investigation work, approach roads, railways, telecommunication, air services, electricity supply, communication facilities (fax, internet etc) are required.

(h) Presently only Meghalaya and Assam have electricity boards while other states in NER have only Govt. departments associated with power.

5. Generating Capacity Addition Programme in 11th Plan:

Tentative capacity addition programme of 5,443 MW has been envisaged in NER for the 11th Plan. The state-wise/project-wise details are given at Annexure-V.

6. Power Evacuation from North East:

(a) Even with the accelerated growth in local demand, major portion of hydro power generation need to be evacuated to power deficit regions in the North/West.

Keeping in view the requirements of evacuation of power, the right of way constraints in the “chicken neck” area and the cost implications, a long-term transmission system Master Plan for evacuation of power from NER has been developed by CEA. The main approach is to develop hydro projects and pooling points for individual basins and then further pooled to major pooling points for onward dispersal/onward transmission through high capacity HVDC/AC corridors. The major basins are Lohit Basin, Dibang Valley, Siang Basin, Subansiri Basin, Kameng Valley etc. Vishwanath Chariyali and Siliguri have been identified as the major pooling points.

(b) The regional transmission systems in each region of the country are built by PGCIL under the Central Sector. Per unit cost of regional transmission in NER is much higher due to (i) uneven terrain (ii) law & order problem, and (iii) inherently low PLF of hydro stations. CERC has capped the regional transmission charges in NER at 35 paise/kwh and as a result, while the NER pay the highest regional transmission charges, PGCIL is still not recovering its full transmission charges and suffering financial losses. PGCIL has therefore not been making further investment in the NER transmission system and strengthening requirements in the regional/inter-state transmission system has been suffering. It is, therefore, necessary to evolve a mechanism for appropriate recovery on investment within reasonable transmission tariff.

(c) Urgent strengthening requirements in the regional system have been identified and two schemes namely, NER System Strengthening Scheme – I and II have been evolved as follows:

NER System Strengthening Schemes – I

- (i) 132 kV Kopili HEP – Khandong HEP 2nd circuit
- (ii) Extension of Kopili S/S by 1x160 MVA, 220/132 kV transformer (3x53.3 MVA single phase units).
- (iii) LILO of Dimapur (Nagaland) – Kohima 132 kV S/C at Dimapur (PG)
- (iv) Augmentation of Dimapur (PG) S/S by 1x100 MVA, 220/132 kV transformer.

NER System Strengthening Schemes – II

- (i) Second 315 MVA 400/220kV transformer at Misa 400kV substation of PGCIL.

- (ii) Additional 100 MVA 220/132kV transformer at Mariani 220kV substation of Assam.
- (iii) 132kV Itanagar-Gohpur S/C line.
- (iv) 132kV Agia-Nanglabibra S/C line on D/C towers.

In view of the urgency, PGCIL has decided to go ahead with implementation of Scheme-I within existing transmission tariff ceiling of 35 paise/kWh.

(d) Problematic incomplete projects in the State Sector transmission are in Assam and Manipur as given below:

ASSAM

- (i) 132 kV Umiam Stg-IV – Sarusajai D/C is an inter-state line between Assam and Meghalaya. Meghalaya portion of this line has been completed, but ASEB (now AEGCL – Assam Electric Grid Corporation Limited) has been delaying completion of the portion of the line (8.9 kms) in Assam.
- (ii) 132 kV Mariani-Dimapur S/C line is an inter-state line between Assam and Nagaland. This line is not available since 27.03.1999 due to tower failures and defective breakers. AEGCL has been non-responsive in expediting restoration of this line. They are yet to prepare DPR and seek fund tie-up.

MANIPUR

(i) 132 kV Loktak – Jiribam -I line is out of service since 1999 due to stolen conductor and affected states are Manipur, Mizoram, Meghalaya, Nagaland, Tripura and south part of Assam. Manipur Electricity Department should expedite.

7. Power Sector Reforms:

In NER, Assam, Tripura and Meghalaya have constituted their State Electricity Regulatory Commission (SERC). Manipur and Mizoram have constituted a Joint ERC (JERC) while Nagaland and Arunachal Pradesh are yet to take initiative in setting up their SERCs. So far Assam SERC is functional. As regard unbundling, Assam and Tripura have unbundled and formed separate entities for Generation, Transmission & Distribution.

8. Accelerated Power Development and Reform Programme (APDRP) Status:

State wise details of project outlays, funds utilized and physical performance under APDRP as on 31-03-2006 is given below:

State	Project Outlays (Rs crores)	Amount released (Rs crores)	Total Utilisation (Rs crores)	11kv feeder metering (%)	Consumer Metering (%)
Arunachal Pradesh	82.69	36.68	12.49	0	46
Assam	650.73	278.51	174.01	100	90
Manipur	141.62	2.67	2.67	21	82
Meghalaya	227.44	58.38	41.46	100	50
Mizoram	108.74	78.01	28.96	72	99
Nagaland	122.27	68.58	42.84	85	61
Tripura	146.74	37.64	24.58	100	81
Sikkim	164.19	154.73	134.83	100	92

9. Rural Electrification in NER:

72% of total inhabited villages (29141) have been electrified (2001 census) as against national average of 74.3%. Similarly, 24% of rural households (1.45 million) have electricity as against national average of 43.52%. 7252 pump sets have been energized in the NE States up to 31.3.2006. State-wise details are given at Annexure- VI. RGGVY would enable the North Eastern States to complete the rural household electrification programme in an accelerated & time bound manner.

10.Recommendation:

A. Generation:

(i) Completion of ongoing Projects:

The important incomplete projects of 10th plan (Annexure-III) needs to be completed in 11th plan along with the tentative capacity addition programme for 11th plan (Annexure-V). Cost of security, diversion of roads etc should not be counted towards the project cost and funded through Govt. Budgetary Support.

(ii) DPR preparation of promising power projects could be funded by GOI for CPSUs.

(iii) The recent norms for adoption of Net Present Value for assessing the cost of Forest Diversion has added huge burden on the storage hydro schemes and would make them unviable. This calls for a review.

(iv) Hydel Power in Arunachal:

Arunachal has taken a decision not to encourage any HE Project involving large storage. As there are very few suitable sites for construction of multipurpose storage projects, Arunachal should allow it for providing attendant benefits like full generation of power round the year, irrigation, drinking water, flood control, etc. to the other constituents of NE States also. Arunachal could be compensated with a package such as mentioned at para 4(d).

(v) Survey & Investigation of HE Projects need to be carried out by experienced hydro-power developers to minimize the geological uncertainties during construction. Electronically operated Theodolite Survey Machines (EDM) along with lightweight drilling machines need to be used for geological surveys. Global Positioning System (GPS) are also to be provided.

(vi) Conversion of identified Meter gauge to Broad Gauge rail links & extension of rail network, development of adequate road network & strengthening of existing roads along with construction of bridges, air services, effective telecommunication links are required for early implementation of identified HE projects (Annexure-IV).

B. Transmission and distribution:

(i) For evacuation of power from various HEPs planned in the NER, high capacity lines are to be built. For this to materialize, modalities for commitment to pay transmission charges are to be devised. It would be desirable to adopt the national approach in which beneficiaries outside NER share the transmission charges of identified transmission system in NER based on power allocation from NER generation projects to the states in power deficit Northern/Western regions.

(ii) Transmission and distribution system needs to be strengthened to provide uninterrupted power supply to industrial Areas. New Sub-transmission and adequate Distribution infrastructure through APDRP schemes would be of great help.

C. AT&C Losses:

The AT&C losses of NER are quite high in comparison with all India averages and measures need to be taken urgently . Suggestions are at Annexure-VIII.

D. User charges & Reforms:

User charges should be rational. Presently, it is quite low. Moreover, power utilities should be created in all states (only Meghalaya and Assam have done) to develop expertise in various areas of power sector.

Annexure-I

State-wise details of installed capacity of NER (as on 31.3.2006)

(All figures in MW)

State	Hydro	Thermal	Renewable Energy Sources	Total
Assam	333.0	797.7	0.2	1130.9
Arunachal Pradesh	116.5	36.9	26.0	179.4
Meghalaya	258.6	28.1	1.5	288.2
Tripura	78.0	165.3	1.1	244.5
Manipur	82.5	71.4	4.0	157.9
Nagaland	78.5	21.0	3.2	102.7
Mizoram	38.0	67.9	10.9	116.8
Central Unallocated	128.0	55.9	0.0	183.9
Sikkim	40.0	67.0	9.1	116.1
Total	1153.1	1311.2	56.0	2520.3

Annexure-II

State-wise details of capacity addition target and achievement during 10th plan

S. No.	State/Central Sector	Generation Capacity Addition (MW)			
		Target	Achievement		Total
			From 2002-03 to 2005-06	Expected (2006-07)	
1	Assam	138.00	-	100.00	100.00
2	Manipur	18.00	18.00	-	18.00
3	Meghalaya	132.00	-	-	-
4	Mizoram	102.92	22.92	-	22.92
5	Tripura	42.00	63.00	-	63.00
6	Arunachal Pradesh	-	-	-	-
7	Nagaland *	-	-	-	-
A	State Sector	432.92	103.92	100.00	203.92
B	Central Sector	585.00	25.00	-	25.00
	Sikkim	510.00	0.00	510.00	510.00
	Total	1527.92	128.92	610.00	738.92

- Capacity addition of Likhim Ro (8 MW) not included

Annexure-III

Status of state and project-wise capacity addition programme during the 10th Plan

S. No	Project	MW	State	Commissioning schedule
1.	NEEPCO Kopili II	25MW	Assam	Commissioned
2.	Tuirial HEP	60MW	Mizoram	Work held up – high cost/ law & order problem
3.	Tripura GT (Monarchak)	280MW	Tripura	ONGC (in JV with IL&FS & State Govt. of Tripura) is now taking up a project with capacity of 1100 MW. The work on original project is yet to commence.
4.	NHPC Teesta - V	510MW	Sikkim	Scheduled for commissioning in Feb. 2007
5.	State Sector Karbi Langpi	100MW	Assam	Works restarted in Oct. 04. NEC has sanctioned Rs.100 Cr, and Assam agreed to give guarantee for PFC loan of Rs. 125 Cr. Scheduled for commissioning in 2006-07.
6.	Lakwa WHRU	37.2MW	Assam	Govt. of Assam has kept a provision of Rs.100 cr, Balance funds to be arranged through PFC. LOI for execution of the project placed on BHEL. Project Slipping to 11 th Plan.
7.	Leimakhong DG	18MW	Manipur	Commissioned
8.	Bairabi Dam	80MW	Mizoram	Works not yet started. Posed for ADB funding
9.	Myntdu St.I	84MW	Meghalaya	Scheduled for commissioning in 2008-09
10.	Rokhia Gt Ext	21MW	Tripura	Commissioned on 31.3.2006
11.	Rokhia GT	21MW	Tripura	Commissioned
12.	Baramura GT	21MW	Tripura	Commissioned
13.	Dimapur (HFO based)	22.92MW	Nagaland	Rs.32 crore released under NLCPR and spent on civil work. Due to non-availability of balance fund, project work short closed and handover to Nagaland on “as is where is basis” in May 2006.
14.	Bairabi DGPP	22.92MW	Mizoram	Commissioned
15.	NHPC Loktak D/S	90MW	Manipur	Project has become unviable due to costs of NPV, road, security etc.
16.	NEEPCO Tipaimukh	1500MW	Manipur	Project has become unviable due to costs of NPV, road, security etc.

Annexure-IV

Low Tariff Hydro Projects proposed for preparation of DPR/Implementation

SNo	Scheme	State	IC (MW)	First Year Tariff (Rs./ Kwh)	Work of Preparation of DPR/Implementati on
DPR WORK ALREADY ENTRUSTED					
1	Etalin	Ar. Pradesh	4000	2.17	NHPC**
2	Attunli	Ar. Pradesh	500	2.35	NHPC**
3	Naying	Ar. Pradesh	1000	1.18	IPP
4	Tato-fl	Ar. Pradesh	700	1.48	IPP
5	Hirong	Ar. Pradesh	500	1.62	IPP
6	Demwe	Ar. Pradesh	3000	1.97	NEEPCO
7	Oju-II	Ar.Pradesh	1000	1.46	NEEPCO
8	Oju-I	Ar. Pradesh	700	2.08	NEEPCO
9	Naba	Ar.Pradesh	1000	2.14	NHPC
10	Niare	Ar.Pradesh	800	2.02	NHPC
11	Kameng Dam	Ar.Pradesh	600	2.29	NEEPCO
12	Talong*	Ar.Pradesh	300	2.24	NEEPCO
13	Bhareli-II	Ar.Pradesh	600	1.67	NEEPCO
14	Bhareli-I	Ar.Pradesh	1120	1.85	NEEPCO
15	Kapak leyak	Ar.Pradesh	160	1.74	NEEPCO
16	Hutong	Ar.Pradesh	3000	1.28	NTPC
17	Kalai	Ar.Pradesh	2600	1.01	NTPC
18	Badao*	Ar.Pradesh	120	2.32	NEEPCO
19	Dibbin	Ar.Pradesh	100	2.23	NEEPCO
20	Umduna	Meghalaya	57	1.68	CWC
21	Selim	Meghalaya	170	2.02	CWC
22	Mawhu	Meghalaya	120	1.4	NEEPCO
23	Nongkolait	Meghalaya	120	1.97	MeSEB
24	Nongnaw	Meghalaya	50	2.44	MeSEB
25	Rangmaw	Meghalaya	65	2.32	MeSEB
	TOTAL	(NER)	22382		
1	Lachen	Sikkim	210	2.35	NHPC
2	Dikchu	Sikkim	105	2.15	IPP
3	Panan	Sikkim	200	2.15	IPP
4	Teesta-I	Sikkim	320	1.82	IPP
	TOTAL	(Sikkim)	835		

* DPR Receive ** consent withdrawn

Annexure-V

List of projects for likely benefits during 11th plan (Tentative)

Sl. No.	PLANT NAME	STATE	AGENCY	SECTOR	ULTIMATE CAPACITY (MW)	TYPE	BENEFITS	LIKELY YEAR OF BENEFIT	ESTIMATED COST (RS. in Crore)
HYDRO									
1	TEESTA III	SIKKIM	IPP	P	1200	ROR	600	2011-12	5705.
2	TEESTA VI	SIKKIM	IPP	P	500	ROR	500	2011-12	2996.
3	SADAMANDER	SIKKIM	IPP	P	71	ROR	71	2008-09	NA
4	CHUJACHEN	SIKKIM	IPP	P	99	ROR	99	2008-09	448.7
5	BHASMEY	SIKKIM	IPP	P	32	ROR	51	2008-09	NA
6	KAMENG	AR.PR.	NEEPCO	C	600	STO	600	2009-10	2496.
8	DIKRONG (PARE)	AR.PR.	NEEPCO	C	110	STO	110	2010-11	566.2
10	SUBANSIRI	AR.PR.	NHPC	C	2000	STO	2000	2010-11	5793.
11	MYNTDU St-I	MEGHALAYA	MeSEB	S	84	STO	84	2008-09	358.0
12	NEW UMTRU	MEGHALAYA	MeSEB	S	40	ROR	40	2009-10	NA
SUB TOTAL							4155		
THERMAL									
1	BONGAIGAON	ASSAM	NTPC	C	500		500	2011-12	NA
2	TRIPURA GAS	TRIPURA	ONGC	c	750		750	2010-11	NA
3	LAKWA WH	ASSAM	ASGENCO	s	37.2	GAS	38	2010-11	173.2
SUB TOTAL (THERMAL)							1288.0		
TOTAL							5443.0		

Annexure-VI

State-wise details of Rural Electrification in NER

States	Total Inhabited villages (as per 2001 census)	Villages electrified (as on 31.3.2006) %	No. of households (rural) (Census 2001)	Households having electricity (rural) (2001 Census)(%)	Pump sets energized (as on 31.3.2006)
Assam	25124	19587(78%)	4220173	697842(16.54%)	3675
Arunachal Pradesh	3863	1873(48.5%)	164501	73250(44.53%)	-
Manipur	2315	1912(82.6%)	296354	155679(52.53%)	45
Meghalaya	5782	3428(59.3%)	329678	99762(30.26%)	65
Mizoram	707	570(80.6%)	79362	35028(44.14%)	-
Nagaland	1278	855(66.9%)	265334	150929(56.67%)	194
Sikkim	450	425(94.4%)	91723	68808(75.02%)	-
Tripura	858	491(57.2%)	539680	171357(31.75%)	3273
NER	40377	29141(72.2%)	5986805	1452655(24.26%)	7252

Annexure-VII

FUND REQUIREMENT FOR EQUITY PARTICIPATION BY THE STATE GOVT. FOR MEGA HEP

(Rs.in crore)

Sl.No	Name of project (Allotted to Private Developers)	Estimated Cost	Equity Participation	Phasing of fund during the 11th Five Year plan					Total	
				2007-08	2008-09	2009-10	2010-2011	2011-12		
1	Naying HEP(1000MW)	3016.96	292.00	1.50	2.00	2.00	90.00	196.50	292.00	Allotted to M/S 11% equity.Dis equity to 26%.L
2	Tato-IIHEP(700MW)	2608.60	252.48	1.50	2.00	2.00	90.00	156.98	252.48	Allotted to M/S 11% equity.Dis equity to 26%.
3	Hirong HEP(500MW)	2072.78	200.62	1.50	2.00	2.00	70.00	125.12	200.62	Allotted to M/S Ltd.at 11% equ increasing equi
4	SiyomHEP(1000MW)	4699.81	454.94	45.00	90.00	90.00	100.00	129.94	454.94	Allotted to M/S 11% equity.Dis equity to 26%.
5	Siang Lower HEP(1600MW)	6400.00	619.52	60.00	100.00	120.00	150.00	189.52	619.52	Allotted to M/S Ltd.at 11% equ increasing equi stage.
Total		18798.15	1819.56	109.50	196.00	216.00	500.00	798.06	1819.56	

(Rupees in Crore)

Sl.No	Name of project (Allotted to NHPC)	Estimated Cost	Equity Participation	Phasing of fund during the 11th Five Year plan					Total	
				2007-08	2008-09	2009-10	2010-2011	2011-12		
1	Dibang Multipurpose Project(3000 MW)	14530.48	6543.58	500.00	800.00	1000.00	1500.00	2743.58	6543.58	Allotted to with State participatic ready.
Total		14530.48	6543.58	500.00	800.00	1000.00	1500.00	2743.58	6543.58	
Grand Total		33328.63	8363.14	609.50	996.00	1216.00	2000.00	3541.64	8363.14	

Annexure-VII (Contd.)

FUND REQUIREMENT FOR EQUITY PARTICIPATION BY THE STATE GOVT. FOR MEGA HEP IN THE EVENT OF 26%

(Rupees in Crore)

Sl.No	Name of project (Alloted to Private Developers)	Estimated Cost	Equity Participation	Phasing of fund during the 11th Plan					T
				2007-08	2008-09	2009-10	2010-2011	2011-12	
1	Naying HEP(1000MW)	3016.96	690.19	1.50	2.00	2.00	270.00	414.69	
2	Tato-IIHEP(700MW)	2608.6	596.77	1.50	2.00	2.00	230.00	361.27	
3	Hirong HEP(500MW)	2072.78	474.18	1.50	2.00	2.00	190.00	278.68	
4	Siyom HEP(1000MW)	4699.81	1075.31	100.00	150.00	150.00	200.00	475.31	10
5	Siang Lower HEP(1600MW)	6400	1464.32	150.00	250.00	300.00	300.00	464.32	10
	Total	18798.15	4300.77	254.50	406.00	456.00	1190.00	1994.27	40

Annexure-VIII

Measures required to be taken to reduce AT&C Losses

a) Technical Measures

- Installation of Efficient meters
- Up gradation and strengthening of the weak distribution system
- Increase in HT:LT Ratio
- Relocation of distribution sub-stations and /or provision of additional distribution sub-stations
- Installation of lower capacity distribution transformers to serve a smaller number/cluster of consumers and substitution of distribution transformers with those having lower no-load losses
- Installations of shunt capacitors
- Adoption of High Voltage Distribution System (HVDS)
- Regular maintenance of distribution network
- GIS mapping of sub transmission and distribution network including compilation of data

b) Commercial Measures

- Improvement in metering and billing
- Improvement in revenue collection
- Energy accounting and auditing

c) Management Measures

- Adoption of energy accounting and auditing
- Proper network planning for future expansion
- Preparation of long-term plans on regular basis for phased strengthening and improvement of the distribution systems along with associated transmission system
- Training of employees

d) Policy Measures

- Strengthening the provisions relating to theft of electricity in the Electricity Act, 2003.
- Setting up of vigilance and legal measures in accordance with the Electricity Act 2003, setting up of special courts, police stations, etc.
- Implementation of the Accelerated Power Development and Reforms Programme (APDRP) for upgradation and strengthening of sub-transmission and distribution system and providing incentive for reducing cash losses by SEB's/ Utilities.