DEMAND BASED INDUSTRIES LIKE COSMETICS, PHARMACEUTICALS, AUTO ANCILLARY, GLAZED TILES, ELECTRONIC COMPONENT AND ELECTRICAL APPLIANCES

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TITLE OF THE STUDY

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Executive Summary

OBJECTIVE OF THE STUDY

1.1 The study broadly assesses the overall scope and viability of setting up a few demand based industries in the NE Region viz., Auto Components, Electronic Components, Electrical Appliances, Pharmaceuticals, Cosmetics and Ceramic Glazed tiles. It provides basic information for each of these sectors to prospective entrepreneurs, investors, Financial Institutions, Government agencies, etc. about the business opportunities in these sectors for identified products in the region.

1.2 The broad terms of reference for the study as stipulated by North Eastern Development Finance Corporation Ltd. (NEDFi) were as follows:

- Analysis of the Demand and Supply position of these demand based sectors
- Identification of demand based products in each of these sectors to be manufactured in the region
- Analysis of the infrastructure and organizational requirements for establishing the units
- Regulatory requirements
- Model project and generation of ancillary activities.

1.3 The study covered all the eight states of the NE region, viz., Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura. It involved in-depth desk research comprising Government publications, Publications of the CMIE, Industry Associations, Trade publications, Annual Reports and Corporate/ Product Literature, internet and AFF's own internal database repository. This was supplemented with an exhaustive primary survey comprising discussions with people from Industry, Associations, C&F agents, distributors, dealers, etc. at the National and Regional level in the North East.

1.4 The subsequent section provides a brief summary of each of the demand based sectors viz., **Auto Components, Electronic Components, Electrical Appliances, Pharmaceuticals, Cosmetics and Ceramic Glazed tiles.**

AUTO COMPONENTS

INTRODUCTION

1.5 India's auto-component industry manufactures the entire range of components for the automotive industry including cars, jeeps, light commercial vehicles (LCVs), trucks, buses, tractors, motorcycles, scooters, mopeds and 3-wheelers. The auto-components industry is broadly classified in 6 product groups, viz. Engine Parts, Electricals, Transmission and Steering Components, Suspension and Braking Parts, Equipments, and others (sheet metal parts, plastic moulded components, rubber moulded parts, pressed die castings, etc.)

1.6 Auto component manufacturers have two kinds of buyers – original equipment manufacturers (OEMs) and the replacement market. OEMs are the automobile manufacturers/ assemblers. The replacement market (also referred to as aftermarket) contributes to 65% of the demand and mainly comprises of mechanics, repair garages, refurbishers, etc. The ratio of OEM v/s replacement demand varies across different components depending upon factors such as life of the components, quality and materials used, average age of vehicles and so on.

1.7 In addition to auto components, there exists a huge auto accessories market in the country. Auto accessories are certain non-standard equipment that is fitted on to automobiles. Some of the commonly fitted auto accessories are seat covers, steering grips, wheel caps, carpets and mats, safety guards and carriers, side boxes, front farryings, audio systems, etc. Auto accessories have a virtually non-existent OEM demand.

OVERVIEW OF THE NORTH-EAST MARKET

1.8 The auto component industry in North-East suffers from lack of substantial automobile manufacturing base in the region. There are around 27 organised sector auto component manufacturers in the Eastern region, mainly concentrated around Jamshedpur and Kolkata. In addition to these, there are an estimated 400 SSI units manufacturing auto components in the Eastern region.

Comment [AFF1]: around 27 organised sector auto component manufacturers. Trust the ancillary base in jamshedpur has been considered

1.9 North-East, with an estimated 10,00,000 vehicles accounts for 1.7% of the total vehicle population in the country. 2 wheelers account for 50%, cars account for 16% and trucks account for 14% of vehicles registered in the North-East.

1.10 Auto component market in North-East is structurally similar to that in other parts of the country. The North-East market for replacement auto components mainly comprises of the following parts: Leaf spring, Shock absorbers, Control cables, Brake shoes, Linings & facings, Pistons, Piston rings, Cylinder liners, Engine Valves, Gaskets, Nozzles and nozzle Holders,

Radiators, Filters, Spark plugs, fuses, electric horns and ignition coils, Clutch plates & discs, Oil seals, Bulbs, Wiper arm and blades, Switches, Lights, Plastic moulded components (mirrors, fan assembly, lamp covers, etc.), Rubber components (mountings, bushes, washers, gaskets, pedals and handle grips, lever covers, channels and beadings, etc.), motorcycle rims, scooter silencers, fan belts, automobile locks, Automotive covers, wheel caps, carpets and mats, safety guards and carriers and side boxes

1.11 On the basis of vehicle population in the region, the overall market size of auto component industry in the North-East is estimated at Rs. 240 Cr. (1.7% of the replacement market of Rs. 14000 Cr.). Assam accounts for Rs. 140 Cr. (59%) and the remaining states together account for Rs. 100 Cr. worth of auto component demand. Exhibit 1 provides detailed demand estimation for auto components in North-East.

Exhibit 1

Demand estimate for auto components in North-East

Auto Components	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	CAGR
Suspension and braking parts											
Leaf springs	3.3	4.0	4.9	6.1	7.4	9.1	11.1	13.6	16.7	20.4	20%
Shock absorbers	6.0	7.0	8.2	9.6	11.2	13.0	15.2	17.8	20.8	24.3	15%
Control cables	1.0	1.3	1.6	2.1	2.7	3.5	4.4	5.7	7.3	9.3	25%
Brake shoes	0.3	0.4	0.4	0.6	0.7	0.8	1.0	1.2	1.5	1.9	20%
Linings and facings	1.7	2.2	2.8	3.6	4.6	5.9	7.5	9.6	12.4	15.8	25%
Other suspension and braking parts	18.0	21.0	24.6	28.7	33.5	39.1	45.7	53.4	62.3	72.8	15%
Sub-Total	**30**	**36**	**43**	**51**	**60**	**71**	**85**	**101**	**121**	**145**	17%
Engine parts											
Pistons	3.4	4.0	4.6	5.4	6.3	7.4	8.6	10.1	11.8	13.8	15%
Piston rings	3.4	4.0	4.6	5.4	6.3	7.4	8.6	10.1	11.8	13.8	15%
Cylinder liners	0.9	1.1	1.2	1.4	1.7	2.0	2.3	2.7	3.1	3.6	15%
Engine Valves	0.8	0.9	1.1	1.3	1.5	1.7	2.0	2.4	2.8	3.2	15%
Gaskets	1.3	1.5	1.8	2.1	2.4	2.8	3.3	3.9	4.5	5.3	15%
Nozzles	0.7	0.8	1.0	1.1	1.3	1.5	1.8	2.1	2.4	2.8	15%
Nozzle holders	0.3	0.4	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.2	15%
Filters	2.1	2.5	2.9	3.3	3.9	4.6	5.3	6.2	7.3	8.5	15%
Radiators	1.3	1.5	1.8	2.1	2.4	2.8	3.3	3.9	4.5	5.3	15%
Other engine parts	30.9	36.1	42.2	49.2	57.5	67.2	78.5	91.6	107.0	125.0	15%
Sub-Total	**45**	**53**	**62**	**72**	**84**	**98**	**115**	**134**	**156**	**182**	15%
Electrical parts											
Spark plugs	0.5	0.6	0.8	1.1	1.3	1.7	2.2	2.8	3.6	4.7	25%
Fuses	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.6	0.7	0.9	25%
Ignition coils and electric horns	0.5	0.6	0.7	0.8	0.9	1.1	1.3	1.5	1.7	2.0	15%
Other electrical parts	20.0	23.4	27.3	31.9	37.2	43.5	50.8	59.3	69.3	80.9	15%
Sub-Total	**21**	**25**	**29**	**34**	**40**	**47**	**55**	**64**	**75**	**89**	15%
Drive transmission and Steering parts											
Clutch plates & discs	0.7	0.9	1.0	1.3	1.6	1.9	2.4	2.9	3.5	4.3	20%
'O' rings and oil seals	0.7	0.8	1.0	1.1	1.3	1.5	1.8	2.1	2.4	2.8	15%
Other drive transmission and steering parts	33.7	39.4	46.0	53.7	62.7	73.3	85.6	99.9	116.7	136.3	15%
Sub-Total	**35**	**41**	**48**	**56**	**66**	**77**	**90**	**105**	**123**	**144**	15%
Equipment											
Bulbs	0.3	0.4	0.4	0.6	0.7	0.8	1.0	1.2	1.5	1.9	20%
Wiper arm and blades	0.2	0.2	0.3	0.4	0.4	0.6	0.7	0.8	1.0	1.2	20%
Switches	1.0	1.2	1.5	1.8	2.2	2.8	3.4	4.1	5.1	6.2	20%
Lights	2.4	2.9	3.6	4.4	5.4	6.6	8.1	9.9	12.1	14.9	20%
Cable and Wire harnesses	1.8	2.1	2.5	2.9	3.3	3.9	4.6	5.3	6.2	7.3	15%
Other equipments	16.2	18.9	22.1	25.8	30.1	35.2	41.1	48.0	56.1	65.5	15%

Sub-Total	**22**	**26**	**30**	**36**	**42**	**50**	**59**	**69**	**82**	**97**	**46 %**
Accessories											
Automotive covers	1.4	1.7	2.1	2.6	3.1	3.9	4.7	5.8	7.1	8.7	20 %
Wheel caps	0.7	0.9	1.0	1.3	1.6	1.9	2.4	2.9	3.5	4.3	20 %
Carpets and mats	1.2	1.5	1.8	2.2	2.7	3.3	4.0	5.0	6.1	7.4	20 %
Safety guards and carriers	1.0	1.2	1.5	1.8	2.2	2.8	3.4	4.1	5.1	6.2	20 %
Side boxes	2.2	2.7	3.3	4.0	4.9	6.1	7.4	9.1	11.1	13.6	20 %
Other accessories	5.5	6.7	8.2	10.1	12.4	15.1	18.5	22.7	27.8	34.1	20 %

Auto Components	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	CAGR
Sub-Total	**12**	**15**	**18**	**22**	**27**	**33**	**40**	**50**	**61**	**74**	**20%**
Plastic moulded components	4.5	5.0	5.6	6.2	6.9	7.6	8.5	9.4	10.5	11.7	10%
Rubber components	3.5	3.9	4.3	4.8	5.3	5.9	6.6	7.3	8.2	9.1	10%
Motorcycle rims	1.6	2.0	2.4	2.9	3.6	4.4	5.4	6.6	8.1	9.9	20%
Automobile locks	0.8	0.9	1.0	1.1	1.2	1.4	1.5	1.7	1.9	2.1	10%
Others	**64**	**75**	**87**	**102**	**119**	**139**	**162**	**190**	**222**	**259**	**15%**
Total	**240**	**281**	**330**	**387**	**455**	**534**	**628**	**738**	**868**	**1022**	**16%**

1.12 As seen from the Exhibit, the NE Region demand for auto components is estimated to grow at an overall rate of 16% CAGR to cross Rs. 1000 Cr. by 2011-12.

1.13 It is estimated that there are around 155 automobile dealers, 500 auto component retailers and 800 repair workshops / garages in the North-East region concentrated in cities such as Guwahati, Jorhat, Silchar, Tinsukhia, Tezpur, Shillong, Dimapur, Kohima, Imphal, Aizawl, Itanagar, Agartala and Gangtok. Apart from these main towns, a large number of repair workshops/ garages are situated along the national highways in the region.

1.14 Poor rail connectivity in the North-East has resulted into roads being the prime mode of transportation for passengers and goods in the region. The North-East region has one of the highest density of commercial vehicles (trucks, buses, jeeps) in the country (60 commercial vehicles per 1000 persons against a national average of 50).

1.15 The replacement demand for some auto components is higher because of the wear and tear undergone due to hilly terrain, heavy rainfall and poor roads in the remote areas. Such components are brake and clutch parts, pistons, valves, oil seals, tyres, shock absorbers, leaf springs, wiper arm and blades, etc.

MANUFACTURING POTENTIAL IN THE NORTH-EAST

1.16 The underlying rationale for the analysis for shortlisting has been the following:

The potential manufacturer in the North-East Region should have a strategic or cost advantage vis a vis its competitors in the market. However, Just in Time (JIT) manufacturing demands auto component suppliers to set up their manufacturing unit/ warehouse close to automotive manufacturing facilities. Given the above trend, the possibility of auto component manufacturers located in North-East supplying to the existing OEMs located in North, West and South looks very low. Replacement market demand should therefore form among the key drivers for shortlisting products for manufacturing in the North-East

- The existence of support engineering infrastructure (in terms of skilled

manpower, tool rooms, ancilliaries etc.) is currently fairly low in the region. While analysing the feasibility of manufacturing those auto components, having significant dependence on the above support engineering infrastructure, the existing status in the region was duly considered. Therefore items such as plastic moulded components, lights, switches etc. were found to have low feasibility for their manufacturing in the region

- The products should offer manufacturing advantages in terms of locally available raw material
- The proposed units should offer scope for employment of the available semi-skilled and unskilled labour in the region.

1.17 The component categories that have thus been shortlisted based on the current demand, level of

manufacturing technology, availability of local raw material and the existing competitive scenario arepresented below in Exhibit 2.

Exhibit 2

Shortlisted product categories

Rubber Moulded and Extruded components	Auto Control Cables	Motorcycle wheel rims
Brake pedals	Accelerator Cable	Front wheel rim
Clutch covers	Clutch Cable	Rear wheel rim
Dust covers / Bellows	Brake Cable	
Wiper blades	Bonnet Cable	
Rubber mats / Splash Guards	Choke Cable	
Washers / Gaskets	Door Cable	
Mounting / Bushes	Throttle cable	
Hoses	Starting cable	
Wind screen beadings	Gear shifting cable	
Co-extruded profiles with metal insert (Door Glass channels)	Window regulator cable	
Sponge Door rubbers	Mirror cable	
Glazing Rubbers	Seat recliner cables	
Boot seals	Speedometer Cable	
Grips		

1.18 The proposed units would mainly cater to the regional replacement market. As the production stabilises and after they capture a substantial share of the regional market, they could try and achieve growth by looking beyond their area of influence, i.e. North-East. Alternatively, they could achieve the desired growth through supplying to the OEMs. However, given the present state of automobile industryin the North-East, it could take huge efforts on part of these units to supply to automobile manufacturing companies based in North, West and South India.

ELECTRONIC PRODUCTS

INTRODUCTION

1.19 In 2001-02, India produced electronic items worth Rs. 32,750 Cr. and exported electronic products worth Rs. 5,800 Cr. At the same time, electronics goods worth Rs.18,000 Cr were imported in 2001-02. The Electronic industry in India has grown at a compounded annual growth rate (CAGR) of 10%

during the last five years.

1.20 The Electronics industry in India is broadly classified in 6 product groups viz.: Consumer Electronics, Industrial Electronics, Computers, Communication & Broadcasting Equipment, Strategic Electronics and Electronic Components.

OVERVIEW OF NORTH EAST MARKET

1.21 The North East market for electronics mainly comprises of the following products:

- **Consumer Electronics:** TVs, Music systems, Voltage stabilisers, Emergency lights, Electronic watches and clocks, UPS, etc.
- **Industrial Electronics:** Battery charger, Solar panels, Electronic energy meters, Electronic weighing scales, etc.
- **Computers:** Computer hardware and peripherals
- Communication & Broadcasting equipment: Telephone instruments

1.22 The North East market for electronic products is estimated at Rs. 1000 Cr, about 75% of which is accounted for by Consumer Electronics. NE Region demand for Electronic products is estimated to grow at an overall rate of 12% CAGR to cross Rs. 3000 Cr. by 2011-12. The break-up and growth of the electronic products market in the North East region is provided in Exhibit 3 below.

Exhibit 3

Electronic Market in North East

Item	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	*CAGR*
Consumer Electronics	750	851	965	1,094	1,241	1,408	1,597	1,811	2,054	2,330	*12%*
Industrial Electronics	140	152	166	181	197	215	234	255	277	300	*8%*
Computers	80	91	103	117	132	150	170	193	219	250	*12%*
Comm. & Broad. Eqpt.	30	35	41	48	56	65	76	89	104	120	*15%*
Strategic Electronics	0	0	0	0	0	0	0	0	0	0	
Electronic Components	0	0	0	0	0	0	0	0	0	0	
Total	**1,000**	**1,129**	**1,275**	**1,440**	**1,626**	**1,838**	**2,077**	**2,348**	**2,654**	**3,000**	*12%*

1.23 The entire North East region is underdeveloped insofar as production of electronic items is concerned. Geographical isolation, limited local market, lack of adequate skilled and trained manpower, competition from foreign electronic goods have been deterring factors for the growth of electronic industry in the region.

1.24 There are only 15 electronics units in the entire North Eastern region. The 4 relatively large electronics manufacturing units are state-owned PSUs (AMTRON, SITCO, MEDC and MANITRON). The smaller units are mostly engaged in assembly for computers and repair work for consumer electronics.

1.25 State Government undertakings like AMTRON (Guwahati), SITCO (Gangtok), MEDC (Shillong) are the only functional electronics units in the region. AMTRON assembles TV sets for Onida and Sansui, SITCO

manufactures transistors and power devices for BEL and speakers for BPL and MEDC manufactures tantalum capacitors.

1.26 In absence of any significant local manufacturing, current demand for electronic products in the North East is mainly catered to by manufacturers located elsewhere. Almost all major consumer electronics manufacturers have a presence in the region, either through a branch office or through their distributors/ direct dealers in the North East. Overall, the consumer electronics companies have 10 to 15 distributors and about 50 dealers in the North East, concentrated in cities of Guwahati, Jorhat, Silchar,

Tinsukhia, Tezpur, Shillong, Dimapur, Kohima, Imphal, Aizawl, Itanagar, Agartala and Gangtok.

CHARACTERISTICS OF NORTH EAST MARKET FOR ELECTRONICS

1.27 An important aspect of the electronics products market in the North East region is that the share of this market as a percentage of the national market is in the range of 1 to 2%. The North East region is characterised by issues such as:

- **Infiltration of cheap electronic imports from neighbouring countries** - The electronic products that are illegally imported are low value products like music systems, battery chargers, emergency lights, radios, voltage stabilisers, electronic watches and clocks, magnetic tapes, etc. It is important to note that the quality of these products is poor. The estimated illegal trade is about Rs. 50 Cr. (5% of the total North East market)
- **Poor quality electrical power supply in few states of the North East** – Some remote pockets of the North East still do not have proper access to electricity due to inadequate distribution infrastructure.

MANUFACTURING POTENTIAL IN THE NORTH EAST FOR THE SECTOR

1.28 The present situation in the North East is that there exists a market of about Rs. 1000 Cr. for electronic products, which is met by manufacturers located in other parts of the country. However, there is wide variation across various electronic products in terms of associated technology requirements, investment levels, manpower skills requirements, marketing distribution and product branding requirements etc.

1.29 The underlying rationale for the analysis for shortlisting has been the following:

- Significant product demand within the North East and also at National level
- Manufacturing vis-à-vis outsourcing/ imports trends for the product
- Technology and investment level - Typically projects that are not too technology intensive and hence require relatively less investment have been identified. This has been done from the point of view of attracting investment from local entrepreneurs
- Scope for employment of semi-skilled and unskilled labour in the region.
- Export opportunities for the product
- The existence of support engineering infrastructure (in terms of skilled manpower, tool rooms, ancilliaries, CAD CAM, prototyping and testing faclilties etc.) is currently fairly low in the region. While analysing the feasibility of manufacturing those electronic products having requiring significant **design and engineering changes** were duly considered.
- Quality requirements and certification requirements such as ISI marking,

applicable standards conformance, test approvals, etc.

1.30 Based on the above rationale, the electronic products that could be manufactured in the North Eastern region would mainly be consumer and industrial electronics. The final shortlist of selected product categories is as presented below in Exhibit 4.

Exhibit 4

Shortlisted Product Categories

Electronic Energy Meters	Electronic Weighing Scales
Satellite television Set-top Boxes (STB)	

1.31 Although the circuit design, the type of components and their specifications differ from one product to another, the basic process of manufacturing any electronic product essentially remains the same. Manufacturing of any electronic product goes to the following stages;

Component assembly → Mechanical assembly → Final testing and callibration

ELECTRICAL APPLIANCES

INTRODUCTION

1.32 The term Electrical Appliances per se covers broad range of electrically operated equipment (consumer durables) primarily for household usage.

1.33 However, as far as industry terms are concerned the Electrical Appliances industry classifies these products as:

- **Small Electrical Appliances:** Juicer-Mixer-Grinders, Food Processors, Coffee Makers/ Electrical Kettles, Toasters, Ovens/ Oven–Toaster-Grillers (OTGs), Electrical Water Purifiers, Electric Irons, Room Air Heaters, Room Air Coolers, Water Heaters and Personal Care Appliances like Hair Dryers and Epilators, etc.
- **Major Electrical Appliances:** Microwave Ovens, Dish Washers, Washing Machines, Refrigerators, Vacuum Cleaners, Room Air Conditioners, etc.

OVERVIEW OF THE NORTH- EAST MARKET

1.34 The Electrical Appliances Industry in the North-East is represented mainly by the distributors, dealers of the Electrical Appliances companies and in some cases by their local branch/ sales offices. On an overall basis the market leaders for Electrical Appliances (mainly small electrical appliance) in the North-East are Bajaj Electricals and Usha International. For most small Electrical Appliances there is no manufacturing or contract manufacturing activity in the North-East. However, there is contract manufacturing activity in case of specific Major Appliances like Window and Split Room Air Conditioners.

1.35 These units basically assemble the products from the parts sent by the vendors of LG, Samsung and Fedders Lloyd in the North India (in and around Delhi) and sell the production back to the parent company. These Air

Conditioners are then distributed as per the requirement of the parent company. Apart from meeting the North-East Market demand the additional production is sold in the other states. For the 6,000 units p.a. market in the North-East, for Room Air Conditioners, LG and Samsung are the Market Leaders followed by Fedders Lloyd (which has recently started contract manufacturing activity).

MARKET ESTIMATES FOR ELECTRICAL APPLIANCES IN THE NORTH-EAST

1.36 The market for select electrical appliances in the North-East is estimated at Rs. 27.14 Crores in 2002-03, for relevant Electrical Appliances listed in Exhibit 5. Volume-wise highest demand is for the

Electric Irons and the Room Heaters (mainly rod type room heaters). In value terms the highest demand is for the Window/ Split Room Air Conditioners and the Water Heaters. It is also important to note that the North-Eastern Market Demand is around 0.3% to 2% of the total national market for Electrical Appliances for the relevant categories listed.

Exhibit 5

Estimated Market for Select Electrical Appliances in the North-East

Sr. No.	Product / Category	Total North-East Market 2002-03			% of National Mkt.
		Volume Nos.	Value Rs. Lakhs	% of the total value for listed products	
1	Electric Dry Iron	101,000	353.5	13.0%	1.5%
2	Electric Steam Iron	3,550	35.5	1.3%	0.7%
	Sub-total: Electrical Irons	104,550	389	14.3%	1.5%
3	Mixer-Grinders/ Juicer-Mixer-Grinders	53,550	862.9	31.8%	1.4%
4	Food Processors	2,025	60.8	2.2%	0.6%
5	Storage Water Heater	20,000	600	22.1%	2.2%
6	Instant Water Heater	850	8.5	0.3%	0.2%
7	Immersion Water Heater	20,200	40.4	1.5%	0.7%
	Sub-total: Water Heaters	41,050	648.9	23.9%	0.9%
8	Room Heater - Rod Type	250,000	500	18.4%	2%
9	Room Heater – Blower Type	8,200	61.5	2.3%	0.51%
	Sub-total: Room Heaters	258,200	561.5	20.7%	1.8%
10	Window Room Air Conditioners	5,500	990	36.5%	0.7%
11	Split Type Room Air Conditioners	500	125	4.6%	0.3%
12	Sub-total: Window Room/ Split Air Conditioners	6,000	1115	41.1%	0.6%
	Total for above Products	**409,800**	**2,714**	**100.0%**	**1.2%**

Source: AFF Estimates

NORTH-EASTERN MARKET GROWTH

1.37 As observed during the Primary Survey, the market for these electrical Appliances in the North- East has grown at a rate of about 10 to 11% p.a. over the past 5 years. While, demand for products such as Storage Water Heaters and Rod Type Room Air Heaters has witnessed higher growth rates of 15% p.a., for other products such as Immersion Water Heaters and Instant Water Heaters the demand has grown at a lower rate of 8% and 7% respectively over the same period. For the Window Air Conditioners and the Split-type Room

Air Conditioners the demand has grown at 11% p.a. and 7% p.a. respectively, over the past 5 years. The eating habits of the people in the North-East also have influence on the lowering of demand for certain other electrical appliances like Oven-Toaster-Grillers (OTGs), Toasters, Electric Tea/ Coffee Makers, etc.

STATE-WISE DEMAND ESTIMATES

1.38 The demand for Electrical Appliances in the North-East is based on the typical drivers like the population, income levels, climatic conditions, lifestyle, housing construction activity, availability of electricity, etc. As an example, demand for Electric Appliances is consequently highest in Assam owing to these factors. As an example demand for Dry Electric Irons is highest in Assam at almost 73%(72,720

numbers). Similarly almost 80% of the demand for Juicer-Mixer-Grinders is in Assam followed by Tripura and Manipur.

1.39 Demand for Storage Water Heaters and Instant Water Heaters is higher in Assam with increased housing construction activity. Also states like Meghalaya and Sikkim show a relatively higher demand for Water Heaters (in relation to population). Also the demand for lower priced Immersion Water Heaters is relatively more in Meghalaya where the per capita income levels are low. The Room Heaters are in demand in the winters and in the rainy months and the demand is mainly in Assam and the hilly states like Meghalaya and Sikkim and to a smaller extent in Arunachal Pradesh.

1.40 The Demand for Room Air Conditioners (RACs) is again mainly in Assam and to a relatively smaller extent in Tripura and Manipur. The demand for RACs is least in the Hilly states like Arunachal Pradesh, Meghalaya and Sikkim and in other states like Nagaland.

FUTURE MARKET GROWTH IN THE NORTH-EAST

1.41 The future demand for Electrical Appliances in the North-East is estimated to be near to the expected future national growth rate in the Electrical Appliances, averaging to around 12% p.a. for the next 10 years. At this growth rate, the total estimated demand volume for listed products is expected to grow from 0.4 Mn. Units to about 1.3 Mn. units over the next 10 years (upto year 2012-13). Prominent volumes among these by the 10^{th} year include; Rod Type Room Heaters (848,640 units), Electric Dry Irons (261,967 units), Juicer-Mixer-Grinders (138,897 units), Storage Water Heaters (80,912 units), Immersion Water Heaters (39,736 units), Blower Type Room Heaters (33,175 units).

PRODUCTS IDENTIFIED FOR MANUFACTURING IN NORTH EAST

1.42 The products that are identified for manufacturing in the North-East are listed in the Tablebelow.

Sr. No.	Product	Market Focus
1	Window/ Split Room Air Conditioners	National and North-East
2	Storage Water Heaters	National and North-East
3	Immersion Water Heaters	North-East
4	Juicer-Mixer-Grinder	National and North-East
5	Dry electric Irons	National and North-East
6	Room Air Heaters (Rod Type, Blower Type)	North-East

1.43 The Electrical Appliances that are shortlisted from relative

manufacturing viability point of viewin the immediate future and for which Project Profiles are provided are as follows:

- Juicer-Mixer-Grinder
- Storage Water Heaters
- Electric Dry Irons.

PHARMACEUTICAL SECTOR

OVERVIEW OF INDIAN PHARMACEUTICAL INDUSTRY

1.44 The Indian pharmaceutical industry has considerably evolved since independence – from being predominantly MNC controlled (70% of market share in 1970) to the current dominance of the Indian pharmaceutical companies (around 65%) – a fallout of the intense competition over the years. Today, the Indian Pharmaceutical Industry is one of the fastest growing sectors in the economy with estimated sales of Rs. 30,000 crore in the year 2001-02, growing at the compounded annual growth rate of 7.6% over the period 1997-98 to 2001-02. Exhibit 6 details the trend in the consumption pattern of pharmaceutical products in India.

Exhibit 6

Trend in Consumption of Pharmaceutical Products in India

(Unit: Rs. crore)

Particulars	1997-98	1998-99	1999-00	2000-01	2001-02	CAGR
Domestic Consumption	18,418	21,359	22,086	22,454	22,250	4.8%
Export	5,419	6,256	7,230	8,758	9,751	15.8%
Total Market	**23,837**	**27,615**	**29,316**	**31,212**	**32,001**	**7.6%**
Local Production	22,390	26,000	27,700	29,500	30,000	7.6%
Import Value	1,447	1,615	1,616	1,712	2,001	8.4%

Source: CMIE

1.45 The overall market has been growing at a CAGR of 7.6%, it is primarily exports which is the major contributor to this growth with a market share of 30% (year 2001-02) up from 23%, 5 years ago. Currently, the exports are growing at the CAGR of about 15.8%, but the rate of growth would reduce in the next 10 years as the base increases further. The domestic market size for pharmaceutical products in year 2011-12 is estimated to be Rs. 36,000 crore and the CAGR over the next 10 years is estimated to be 4.1%.

OVERVIEW OF NORTH EAST MARKET

1.46 The pharmaceutical market size in North East is valued at Rs. 785 crore in year 2001-02. The North East market accounts for about 4% of the total domestic pharmaceutical market in India. Out of total North East pharmaceutical sales, Assam accounted for about 58% in the year 2001-02.

1.47 Top-10 categories in North East account for about 51% of the total pharmaceutical sales in the North East Region. Other major pharmaceutical consuming states namely- Tripura, Manipur and Meghalaya accounted for 13%, 9% and 7% of the NER pharmaceutical sales respectively.

1.48 The NER pharmaceutical market is estimated at Rs. 2,884 crores in 2011-12 and 10-year CAGR estimated at about 14%. Antibiotics will remain the market leader in the next 10 years. Cough and cold preparations and Antidiabetic therapy are the fastest growing categories with estimated 10-year CAGR of 24% and 22% respectively.

TRENDS IN MANUFACTURING OF PHARMACEUTICAL PRODUCTS IN NER

1.49 Currently, most of the activity in pharmaceutical products is concentrated in Assam and mostly located in the Industrial Infrastructure Development Centre (IIDCs) in Guwahati. Additionally, manufacturing units are present in other NE states like Arunachal Pradesh, Manipur and Sikkim. Most of the pharmaceutical units in the NER are privately owned units with small scale of operations.

1.50 Currently, the consumption of the pharmaceutical products manufactured in the NER is very low and accounts for less than one percent of the total demand for pharmaceutical products. This is primarily attributed to the following reasons; 1) Negligible Contract Manufacturing Activity, 2) Lack of brand-

equity of the smaller pharmaceutical players in NER and 3) Lack of marketing and distribution capability.

MANUFACTURING POTENTIAL IN NORTH EAST REGION

1.51 In India, per capita consumption of pharmaceutical products is estimated at Rs. 213, while the same for NER is estimated at Rs. 201.

1.52 Even though, per capita consumption of the pharmaceutical products in NER is slightly lower than the national average, there is inherent demand in the NER for pharmaceutical products and opportunity for manufacturing the pharmaceutical products in NER as- ***most of the pharmaceutical products consumed in NER are manufactured out-side NER*** *and* ***no reputed pharmaceutical unit exists in the region.***

1.53 Keeping the above factors in mind, there is opportunity for manufacturing of pharmaceutical products in NER, with primary focus on catering to the regional demand considering the long term perspective and sustained cost competitiveness. The possible option in this regard would be in terms of new vs. an established pharmaceutical player and captive manufacturing vs. contract manufacturing.

RATIONALE FOR SELECTING PRODUCTS

1.54 The criteria for selection of the pharmaceutical products, having potential for manufacturing in NER, is based on following- Demand-Supply gap for product dosage forms - for NER and India, Health profile and commonly occurring diseases in NER, Structure of existing pharmaceutical industry in NER, Economies of scale for manufacturing pharmaceutical products and Technology, infrastructure involved and capital investment required for manufacturing set-up

1.55 Based on the above rationale, the following products have been identified, which have potential for manufacturing in the NER. Exhibit 8 provides the identified products.

Exhibit 8

List of Identified Products having Manufacturing Potential for NER

Tablets	Capsules	Oral Liquids
1. Paracetamol	1. Tetracycline and Doxycycline (Antibiotic/ Antibacterial)	1. Cough Preparations
2. Antacid	2. Antacid	2. Cold Preparations
3. Vitamin	3. Multi-vitamins with minerals	3. Vitamins
4. Ibuprofen (Antiinflammation,	4. Vitamin B Complex	4. Antacids

Antirheumatic)		
5. Anti-Malarials	5. Antianaemics with Iron combination	
6. Metronidazole (Anti-bacteria Drug)	6. Antiinflammation, Antirheumatic	

COSMETICS SECTOR

OVERVIEW OF INDIAN COSMETICS INDUSTRY

1.56 Cosmetics industry in India is valued at about Rs. 4,100 crore in year 2001-02 and it is one of the fast growing sectors of the economy, albeit accounts for less than 1% of the Net Domestic Product of the country. Currently, cosmetics industry depends heavily on the domestic consumption, which accounts

for about 95% of the total market in India in year 2001-02 while the rest is contributed by exports of thecosmetics. Exhibit 9 details the trend in the consumption pattern of cosmetics in India.

Exhibit 9

Trend in Consumption of Cosmetics in India

(Unit: Rs. Crore)

Particulars	1997-98	1998-99	1999-00	2000-01	2001-02	CAGR
Domestic Consumption	2,562	2,788	3,257	3,498	3,877	11%
Export	33	80	46	138	207	59%
Total Market	2,595	2,868	3,303	3,636	4,084	12%
Local Production	2,592	2,859	3,282	3,605	4,009	12%
Import Value	3	9	21	31	75	132%

Source: AFF Research
Note: Figures indicated above are rounded-off

1.57 Exports accounted for about 5% (Rs. 207 crore) of the total cosmetics market in year 2001-02, which has exhibited compounded annual growth rate of about 59% during the period 1997-98 to 2001-02.

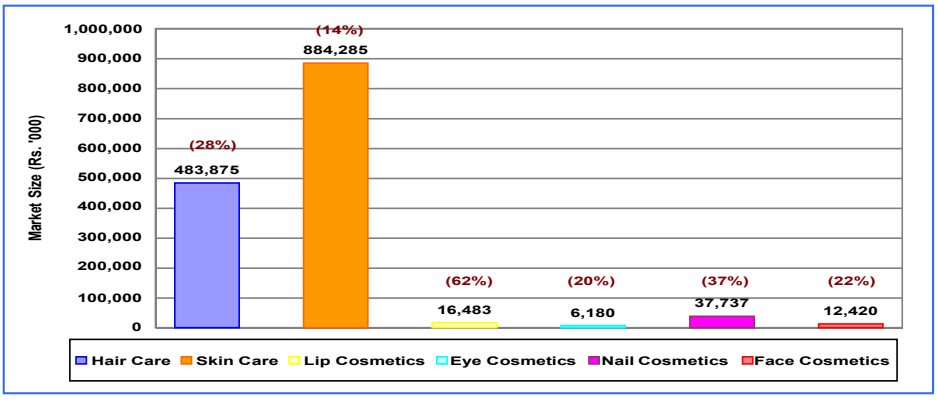
1.58 The domestic market size for cosmetics in year 2011-12 is estimated to be Rs. 11,300 crore and the CAGR over the next 10 years is likely to remain more or less same at about 11.3%.

OVERVIEW OF NORTH EAST MARKET

1.59 The North East cosmetics market is detailed in Exhibit 11. The cosmetics market in North East is valued at about Rs. 144 crore in year 2001-02. The NER accounts for about 3.7% of the total domestic cosmetics market in India. The North East market has growth at a compounded annual growth rate of about 19% over 1997-98 to 2001-02

Exhibit 11

North East Market Size and Growth Trends (2001-02)



Source: AFF Research
Note: Figures indicated above are rounded-off

1.60 The NER cosmetics market is estimated at Rs. 677 crore in 2011-12 and 10-year CAGR estimated at about 17%. Skin Care and Hair Care are likely to remain the key segments in the next 10

years. Also, it is estimated that, Lipsticks as a category is likely to be the fastest growing category in next 10 years in the North East region with estimated compounded annual growth rate of about 35% during period 2002-03 to 2011-12. Although, the market size would be relatively small.

TRENDS IN MANUFACTURING OF COSMETICS IN NER

1.61 Currently, few nationally renowned brands are being manufactured in North East region. By and large, most of the existing cosmetics manufacturing activity are concentrated in Assam. Currently, there are various cosmetics products like Skin Creams, Colour Cosmetics, Shampoos being manufactured outof different manufacturing facilities.

1.62 It is important to note that the existing units involved in manufacturing cosmetics are not manufacturing exclusively to meet demands of the North East region. These units cater to the demand of other regions beyond North East as the case may be. About 34% of the local demand is met by the locally manufactured cosmetics

MANUFACTURING POTENTIAL IN NORTH EAST REGION

1.63 The cosmetics sector offers good opportunity for manufacturing for the following reasons-

- Currently, North East market is growing rapidly (19% CAGR during period 1997-98 to 2001-02),
- National level companies have shown keen interest in NER region, which is evident from the presence of dominant players like Hindustan Lever, Modi-Revlon, etc. Companies like L'Oreal India, etc. are evaluating options of expansion of existing facility or setting up new manufacturing facility in NE region
- Development of local cluster for ancillary industry E.g. Hindustan Lever has recently developed vendors for packing materials.
- Opportunity for manufacturing of Herbal based cosmetics

1.64 Keeping the above factors in mind, there is opportunity for manufacturing of cosmetics products in NER, with primary focus on catering to the regional demand considering the long term perspective and sustained cost competitiveness. The possible option in this regard would be in terms of a new vs an established cosmetics player and captive manufacturing vs contract manufacturing.

RATIONALE FOR SELECTING PRODUCTS

1.65 The criteria for selection of the cosmetics, having potential for manufacturing in NER are; 1) Demand-Supply gap for cosmetics - for NER and India, 2) Consumer profile and consumption of cosmetics, 3) Structure of existing cosmetic industry in NER – manufacturing and distribution network,

4) Economies of scale for manufacturing cosmetics and 5) Technology, infrastructure involved and capital investment required for manufacturing set-up

1.66 Based on the above rationale, the following products have been identified, which have potential for manufacturing in the NER. Exhibit 12 provides the identified products.

Exhibit 12

List of Identified Products having Manufacturing Potential for NER

Hair Care	Skin Care
1. Shampoo (various variants)	1. Fairness cream
	2. Moisturising cream/ lotion
	3. Vanishing cream/ lotion
	4. Antiseptic ream
	5. Cold cream

CERAMIC GLAZED TILES

INTRODUCTION

1.67 The Ceramic tile industry comprises the entire range of Glazed, Unglazed and Vitrified Wall and Floor tiles. Ceramic glazed tiles are mixtures of clay, quartz, feldspar and other natural materials that are shaped into slabs and fired at a high temperature nearing 1200^{o} C. It finds application in areas with high sanitary conditions such as hospitals, public rest rooms, swimming pools, hotels, etc and in residential constructions (especially bathrooms and kitchens). In addition, it also finds usage especially where higher emphasis is laid on aesthetics and ambience.

1.68 The Ceramic Glazed tiles provide various desirable features. These include ease in installation and maintainability (easy to clean), availability in varied designs and dimensions, impermeability and stain resistance, greater resistance to acid and alkali, bacteria and decay, fire and scratch, greater heat energy retaining, etc. However, the tiles have few disadvantages especially, lesser resilience, leading to higher susceptibility to surface chipping and hence require adequate care to avoid dropping heavy/ sharp objects on the surface.

1.69 The Ceramic Glazed tile is broadly classified, based on the end use application, into following:

- **Wall Tiles**: The wall tiles have a soft glaze and are usually more decorative and thinner vis-à-vis floor tiles. The most common sizes currently prevailing in market include 200 x 200 mm, 200 x 300 mm, 300 x 300 mm, etc. The thickness of these tiles varies from 6.7 – 8.0 mm depending on the dimensions.
- **Floor Tiles:** The floor tiles are thicker, denser and heavier than the wall tiles and therefore have a higher impact and abrasion resistance and strength to withstand weight and foot traffic. The common sizes prevalent in the existing market include 200 x 200 mm, 300 x 300 mm, 400 x 400 mm and 500 x 500 mm and have thickness varying from 7 – 10 mm,

depending on the dimensions of the tile.

OVERVIEW OF NORTH-EAST MARKET

1.70 The market size of the Ceramic glazed tiles in the North-East is estimated at 19000 MT valued at Rs. 35 - 40 Cr which accounts for nearly 2.5 % of the total market size of the Ceramic glazed tile in India. The market has been growing at a healthy growth rate of 15 - 20 % per annum. Moreover, promising growth trends (ranging from 15 - 25% p.a.) in Construction activities/ per capita income levels, in most of the states in the North-East region augurs well for the Ceramic glazed tile industry. Within the Ceramic Glazed tiles, the wall tile segment has a dominant share (over 70%) in the tiles market although the consumption of floor tile has shown promising growth trends in the last few years.

1.71 The organised sector has an estimated 60% market share of the ceramic glazed tile market. Within the organised segment, Somany Pilkington Ltd (SPL), H&R Johnson, Orient Ceramics, Nitco Tiles and Kajaria Ceramics are the main players. SPL is the dominant player in this region with over 30% market share in the organised segment.

1.72 The unorganised sector who sells in this region comprises players concentrated in the western region such as Gujarat (Thangarh and Morbi) and Rajasthan (Nagaur and Bikaner). They supply low technology me-too products and give stiff competition to the branded tile market in the economy segment.

1.73 Exhibit 13 gives the consumption of the Ceramic Glazed tile in each of the state in the North-East region.

Exhibit 13

Statewise demand of Ceramic Glazed Tile in North-East Region

State	Total Demand (MT)
Assam	12,150
Meghalaya	1,500
Tripura	1,600
Nagaland	1,100
Arunachal Pradesh	550
Sikkim	400
Mizoram	500
Manipur	1,200

Source: AFF Estimates based on Field survey

1.74 As seen in the Exhibit, Assam, by virtue of its geographical size and population accounts for the highest consumption of tiles in the North-East region. It accounts for nearly two-thirds of the total Ceramic glazed tile consumption in the region.

1.75 Based on the growth trends in the construction activities and the per capita income levels in each of these states, the demand for the Ceramic glazed tile is expected to show a CAGR of 8 % over the next ten years and is estimated at around 40,000 MT by the year 2012-13.

MANUFACTURING POTENTIAL IN NORTH-EAST SECTOR

1.76 The growth in this sector, highly indexed on the construction scenario, sees a revival especially due to the thrust given to the housing sector, owing to the conducive Government policies (such as availability of housing loans at low interest rates, etc).

1.77 Presently, the North-East region is devoid of a Ceramic manufacturing base and the entire demand is met by the manufacturers located in other parts of the country. The unavailability of the key raw materials required for the manufacturing of the Glazed tiles has been cited as one of the primary reasons

for the non - existence of the manufacturing units in this region.

1.78 However, a recent study carried out by Regional Research Laboratory, Jorhat (Assam) in collaboration with the Indian Bureau of Mines (IBM) suggests that there exist ample reserves of one of the key raw materials i.e. Kaolin (China Clay) in Meghalaya. There are 8 deposits of Kaolin (explored so far) in this region. Besides Kaolin, other raw materials such as Quartz, feldspar, etc are also available in abundance in North-Eastern states primarily in Assam and Tripura.

1.79 In addition, Meghalaya has high reserves of coal, which can be used as fuel in the manufacturing

of tiles. Thus the existing scenario presents excellent opportunities for the entrepreneurs to set up manufacturing units for the Ceramic Glazed tiles in the region.

1.80 The proximity to the raw materials would enable the Ceramic tile players to manufacture tiles at competitive rates as it would result in significant savings in the freight costs, which otherwise form a large component of the total costs. The availability of the Glazed tiles at competitive rates would in turn further increase the demand for the tiles in this region.

POTENTIAL MARKET

1.81 To start with, the market for the proposed Ceramic Glazed tile unit would be the entire North-East region with focus on Assam. Assam, by virtue of its geographical size and population, is one of the most attractive market with an existing share of around 70% of the total Ceramic glazed tile consumption in the region.

1.82 Besides, the unit will serve the other states as well in the North-East region. Gradually, the unit may explore the possibility of catering to the other states in the Eastern region as the entire region is devoid of the manufacturing base for Ceramic Glazed tiles.

LOCATION OF THE UNIT

1.83 The manufacturing plant may be located near the key markets viz. Assam. However, given the importance of the proximity of the unit to the raw materials, to make savings on the freight costs, it is recommended to set up a plant in Meghalaya. It is therefore suggested to set up a plant in Barapani Industrial Area situated in Ri-Bhoi district (Meghalaya). Most of the proven reserves of Kaolin lie in the East Khasi and Jaintia Hills, which are not far off from the industrial area. Moreover, the Industrial area is situated on Guwahati-Shillong National Highway (NH-40), which facilitates easy accessibility to the unit.