



Indian Polymer Business - Status & Outlook



In this presentation

- **GAIL In Petrochemical Business**
- **Domestic Scenario**
- **Way Forward**

GAIL In Petrochemical Business



Natural Gas



Olefins



Polyolefins

HDPE/LLDPE



Processors for
End Markets



BRANDS

- **G-LEX** (2 * 100,000 MTPA)

HDPE FROM MITSUI PLANT



- **G-LENE II** (1* 210,000 MTPA)

LLDPE FROM NOVA CHEMICALS SWING PLANT



- **G-LENE** ^{hd}

HDPE FROM NOVA CHEMICALS SWING PLANT

Capacity : 4,10,000 PA

PRODUCT SEGMENTS

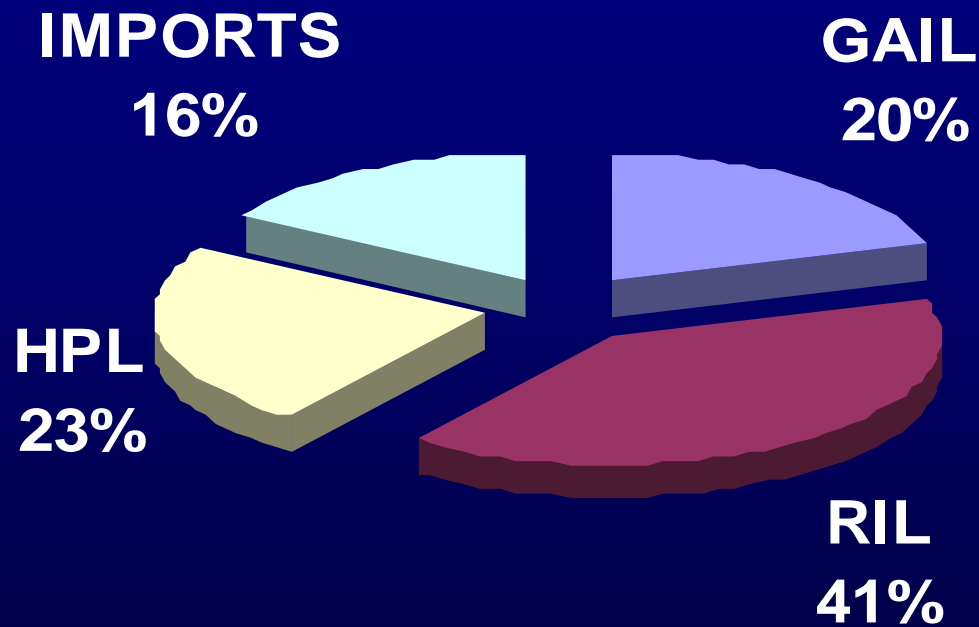
- **HDPE :**

- i) Raffia & Mono Filament
- ii) Blow Molding (General purpose & HM Blow)
- iii) Injection Molding (High & Low MFI)
- iv) HD & HM Films
- v) Pipe & Ducts

- **LLDPE :**

- i) Films (Slip & Non-Slip)
- ii) Rotational Molding
- iii) Extrusion Coating

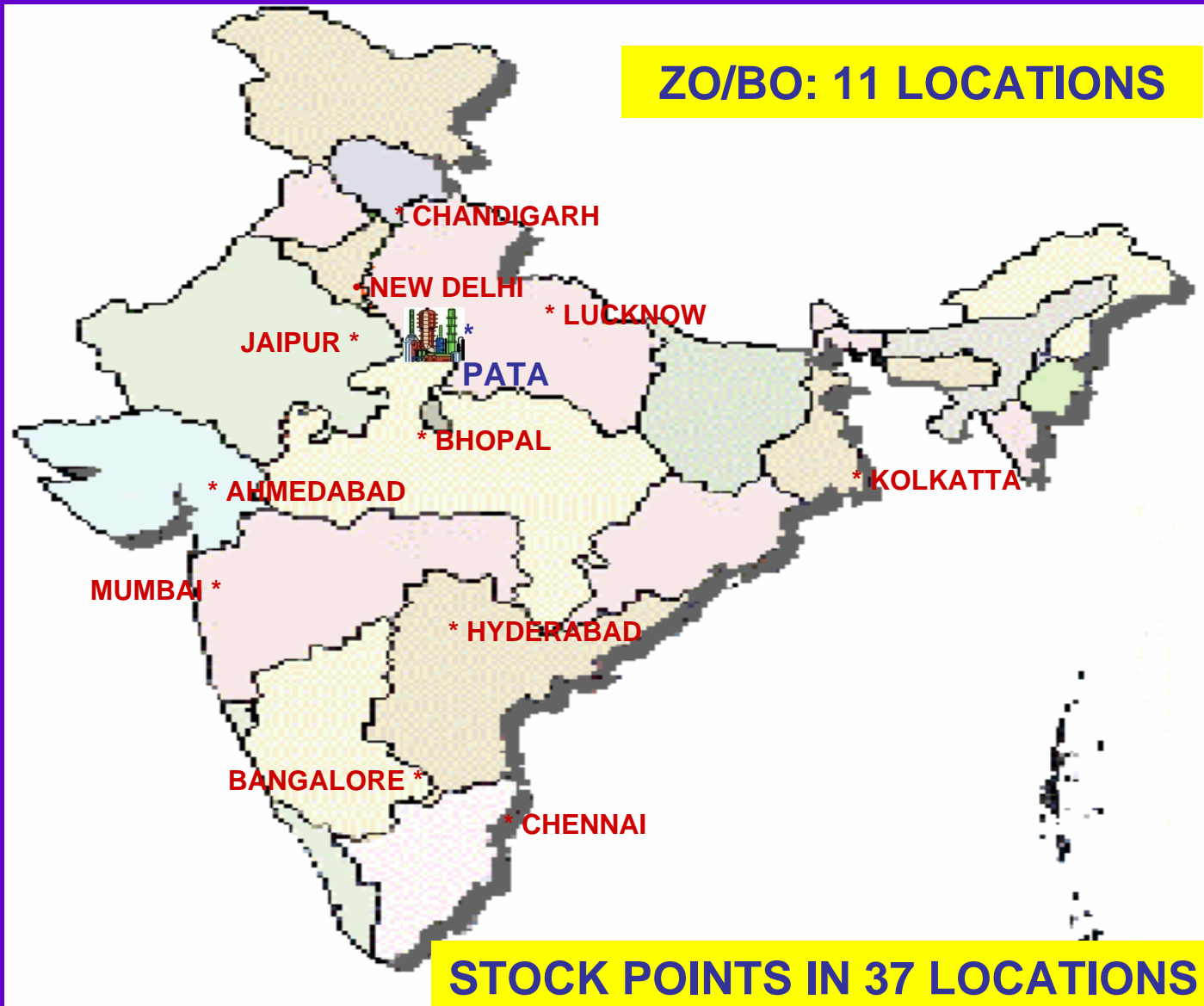
Indian Market Share-HD/LL



Over 2 Mn TPA market



ZONAL/BRANCH OFFICE - NETWORK





Capacity Growth of GAIL

YEAR	D/s Capacity	Remarks
1998-99	260	Inception
2005-06	310	DBN of NOVA plant
2006-07	310	Cracker 5 th furnace hooked
2007-08	410	HDPE-II commissioned

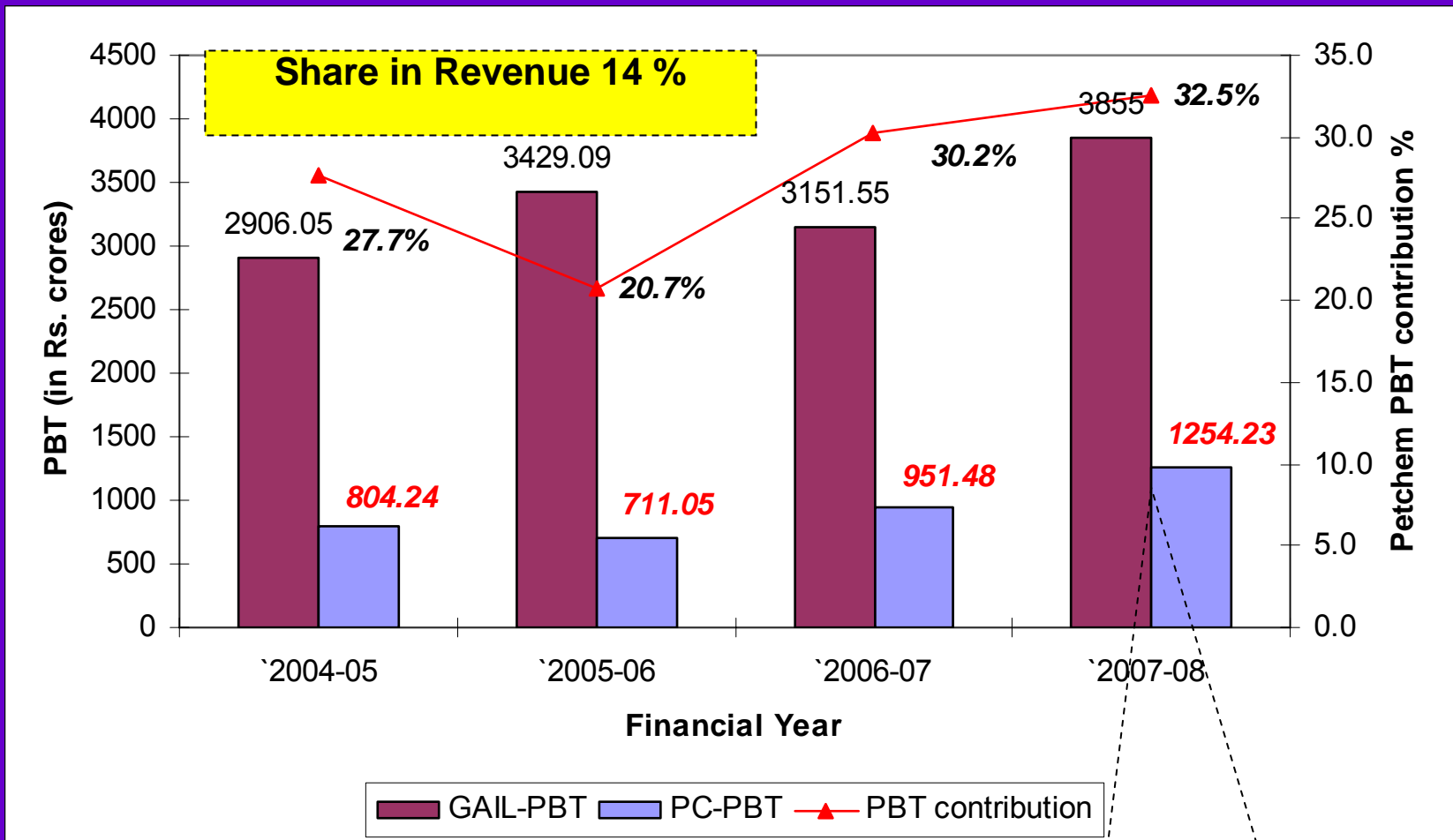
6th Cracker to be implemented in FY 2010-2011

Capacity enhanced by 58% since inception



Petrochemicals Contribution- GAIL Portfolio

- ▶ Capacity Share ~ 23%
- ▶ Market Share (Domestic) ~ 20%
- ▶ Profit contribution (PBT) ~ 33% of the total GAIL's profit in FY 2007-08



Source:- GAIL Annual Reports & Industry Data

PBT increase by 32% in 2007-08 wrt 2006-07



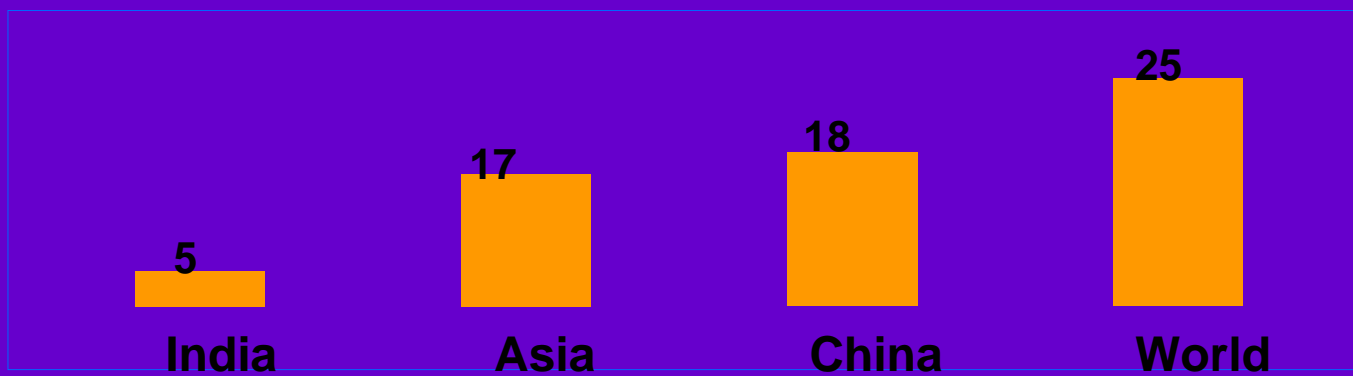
DOMESTIC SCENARIO



Per Capita Polymer Consumption

Year	2007	2010
Global	25	28.9
Asia	17	21.6
China	18	24.2
India	5	7.4

PCC – Current Per Capita Consumption of all polymers (Kg)



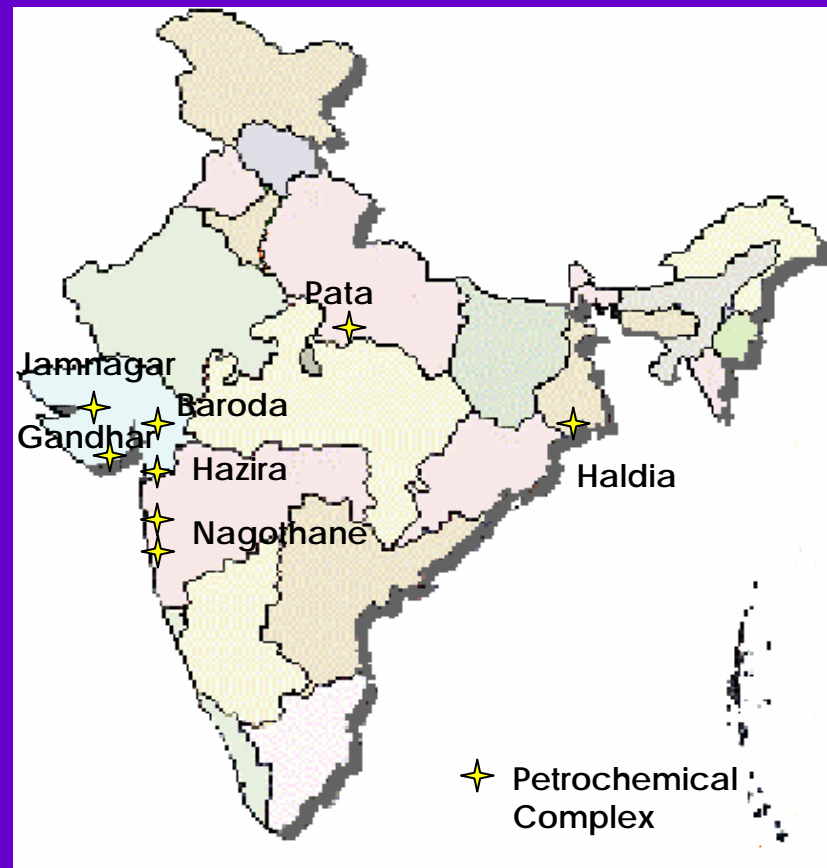
Wide Scope of Polymer Consumption in India



Petrochemical Map - India

(MMTPA)

Company/Location	Feed Stock	LDPE	HDPE-LLDPE	PP
RIL (IPCL) / Nagothane /Mah	Gas	0.1	0.24	0.1
RIL (IPCL) / Gandhar/ Guj	Gas	-	0.16	-
GAIL / Pata / UP	Gas	-	0.41	-
Sub Total		0.1	0.81	0.1
RIL (IPCL) / Baroda/Guj	Naphth a	0.1	-	0.15
RIL / Hazira / Guj	Naphth a	-	0.45	0.4
RIL / Jamnagar / Guj	Naphth a	-	-	1.1
HPC / Haldia	Naphth a	-	0.55	0.3
Sub Total		0.1	1.0	1.95
TOTAL		0.2	1.81	2.05

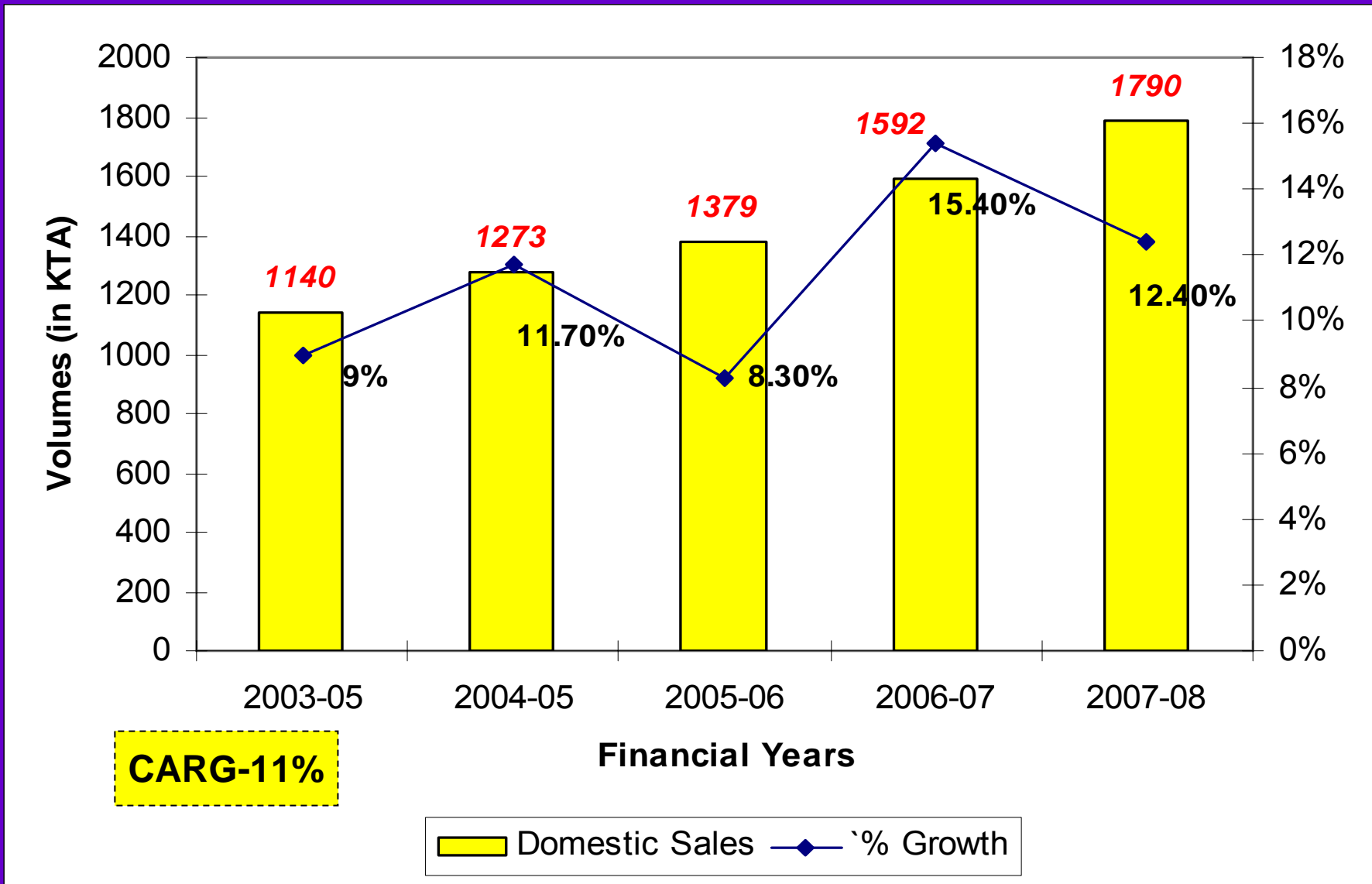


Capacity of PE and PP is about 2.0 MMTPA each

– Reliance is the market leader – GAIL and HPL are other major players




HD/LLD Industry Sales & Growth Trend



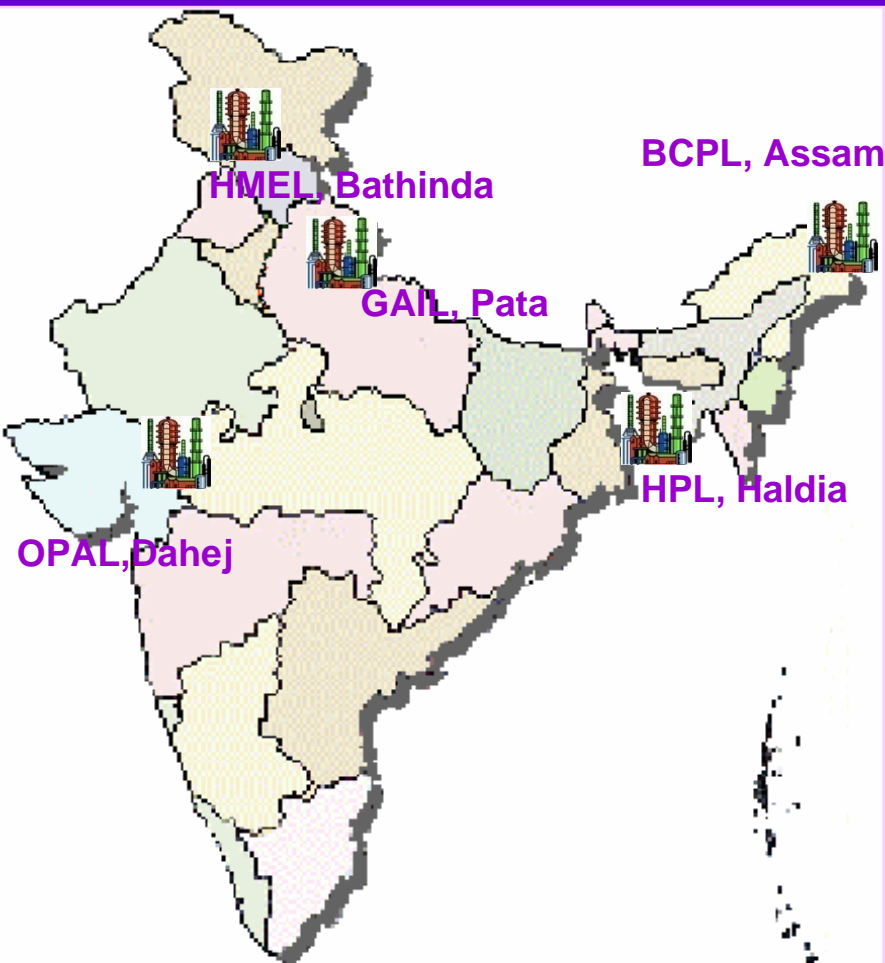


GAIL EXPANSION PLAN

YEAR	Polymer Capacity (MTA)	Action	Status
2008	4,10,000	Existing	-
2009-10	5,00,000	6th Furnace Installation	In Progress
2012-13	7,80,000	BCPL (A 70% JV of GAIL) (2,80,000 MTA)	D/S Technology - Innovene/ Lummus Selected 
2013-14	10,80,000	Pata Expansion from 5 Lac MTA to 8 Lac MTA	DFR Study under process.



Petrochemical Future Addition - India



(MMTPA)

	PE	PP	Expected Timeline
HPL, Haldia	0.2	0.15	2009-10
GAIL, PATA	0.1	-	2010-11
BCPL, Assam	0.22	0.06	2012-13
IOCL, Panipat	0.65	0.60	2009-10
HMEI, BATHINDA	-	0.35	2011-12
OPAL, DAHEJ	1.02	0.34	2012-13
GAIL, PATA	0.30	-	2013-14
Total	2.49	0.9	

SEZ status for Export focus

About 2.5 MMTPA of PE capacity and about 1 MMTPA of PP capacity are being added within 2013. **Domestic /DTA capacity augment ~1.7MMTPA**



Market Status

- **Indian Polymer market is over 5 MMTPA (PE-2 ; PP – 2; PVC-1.2; LD-0.2, PS-0.5)**
- **75% of the processing in SSI**
- **Over 3.3 Mn employed in ~ 22,000 units**
- **Processing m/cs > 55,000 nos.**
- **Average unit output 200-225 TPA ($\frac{1}{4}$ th of China & $\frac{1}{8}$ th of USA)**



Challenges

- **Per unit processing capacity- LOW**
- **Avg. capacity utilization < 70%**
- **High use of re-processed plastic (~30%) for “ Bottom of the Pyramid” market.**
- **Cost competitiveness LOW (Low Productivity)**
- **Producer Margins to be ‘tight’.**
- **Policy embargos due to poor waste management**



Opportunity

- **India's growth is largely Internal consumption driven (Indian trade share at 1 to 1.4 % of the global trade).**
- **Recession proof market is 60% - rural & agri-based population. Agri-GDP growth AAGR @ 4.5%, segment consumption to be stable. (30% PE in Agri directly)**
- **End products (packaging) largely for essential and non-conspicuous consumption, (barring PP in auto segment)**
- **High scope of increase of irrigable cropland (only 32% currently). Subsidy outlay about 40-45% of the farm subsidy.**



Way Forward

- **Industry to collaborate with state governments for waste disposal mechanism.**
- **Processor capacity scale-up with increased productivity to improve domestic consumption as well as cost competitiveness.**
- **Increased consumption of plastics for agri-productivity & agri-product storage to provide growth impetus.**
- **Base case of 5% AAGR. GDP growth in next 5 years to increase polymer consumption to ~ 7.5 MMTPA.**



THANK YOU!



Brahmaputra Cracker Polymers Ltd. (BCPL- A 70% JV of GAIL) - Update

Sr. No.	Product	Technology / Licensor	Capacity (TPA)	Expt. Date of Commencement
01	HDPE / LLDPE	Innovene Gas Phase / M/s Ineos, UK	2,20,000	2012-13
02	PP	M/s Lummus Novolen, Germany	60,000	2012-13
03	Naphtha/ Gas Cracker	M/s Lummus	2,80,000	2012-13

