

Global Outlook for PET Resin

October 6th 2005

**Andrew Noone
Managing Director
PCI (PET Packaging, Resin & Recycling) Ltd**

- Wellman Pearl River closed
 - 6% of regional capacity
 - Down for three months
- Wellman and DAK declare force majeure
- No major disruption to downstream markets so far
- Hike in PET prices in the US with 16 cents per lb surcharge
- Huge price differential sucking in imports

World PET Resin Consumption: 2005

	Total Demand	Increase on 2004		Proportion of World Total
	'000 Tonnes	'000 Tonnes	%	
North America	3,472	211	6.5	30.4
South America	893	47	5.6	7.8
Europe	3,426	253	7.4	30.0
Africa/Middle East	679	78	13.0	5.9
Asia Pacific	2,966	278	10.3	25.9
TOTAL	11,436	867	8.2	100.0

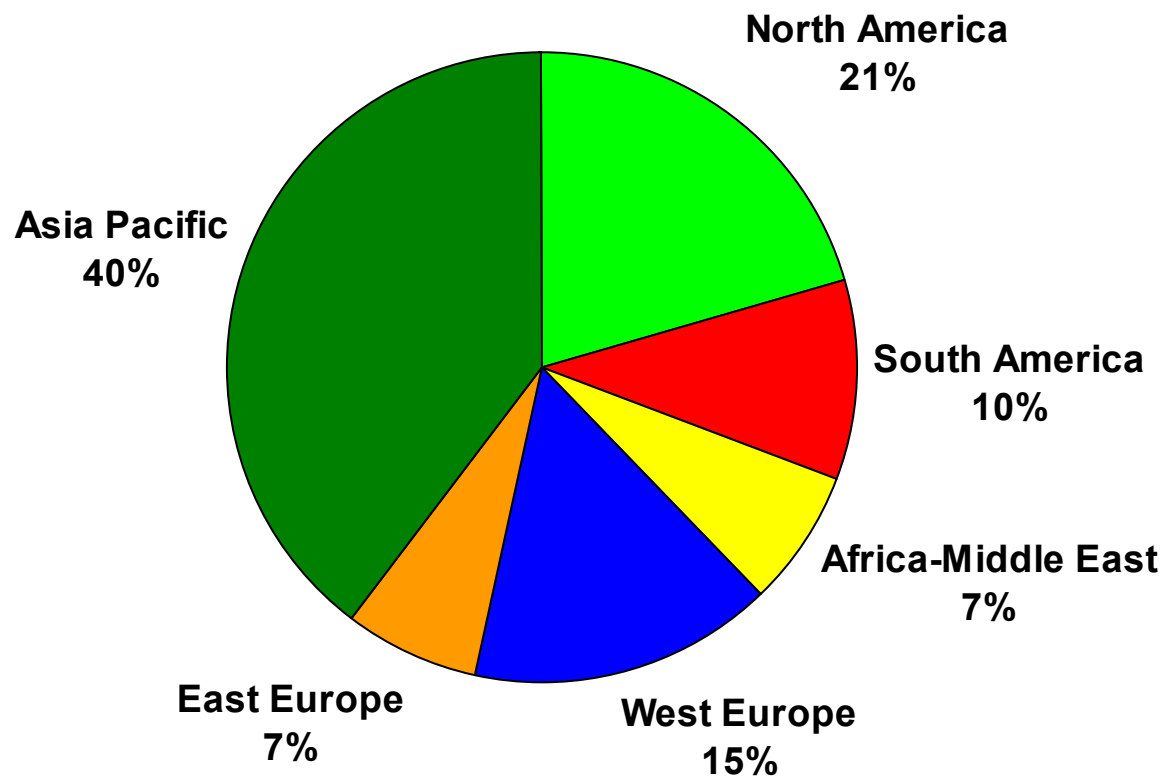
World PET Resin Consumption: 2005

	Total Demand '000 Tonnes	Increase on 2004		Proportion of World Total
		'000 Tonnes	%	
CSD	4,307	244	6.0	37.7
Water	2,950	285	10.7	25.8
Other Drinks	2,055	192	10.3	17.9
Food	1,058	65	6.5	9.3
Non Food	484	32	7.1	4.2
Sheet	1,154	112	10.7	10.1
RPET	-572	-63	12.4	-5.0
TOTAL	11,436	867	8.2	100.0

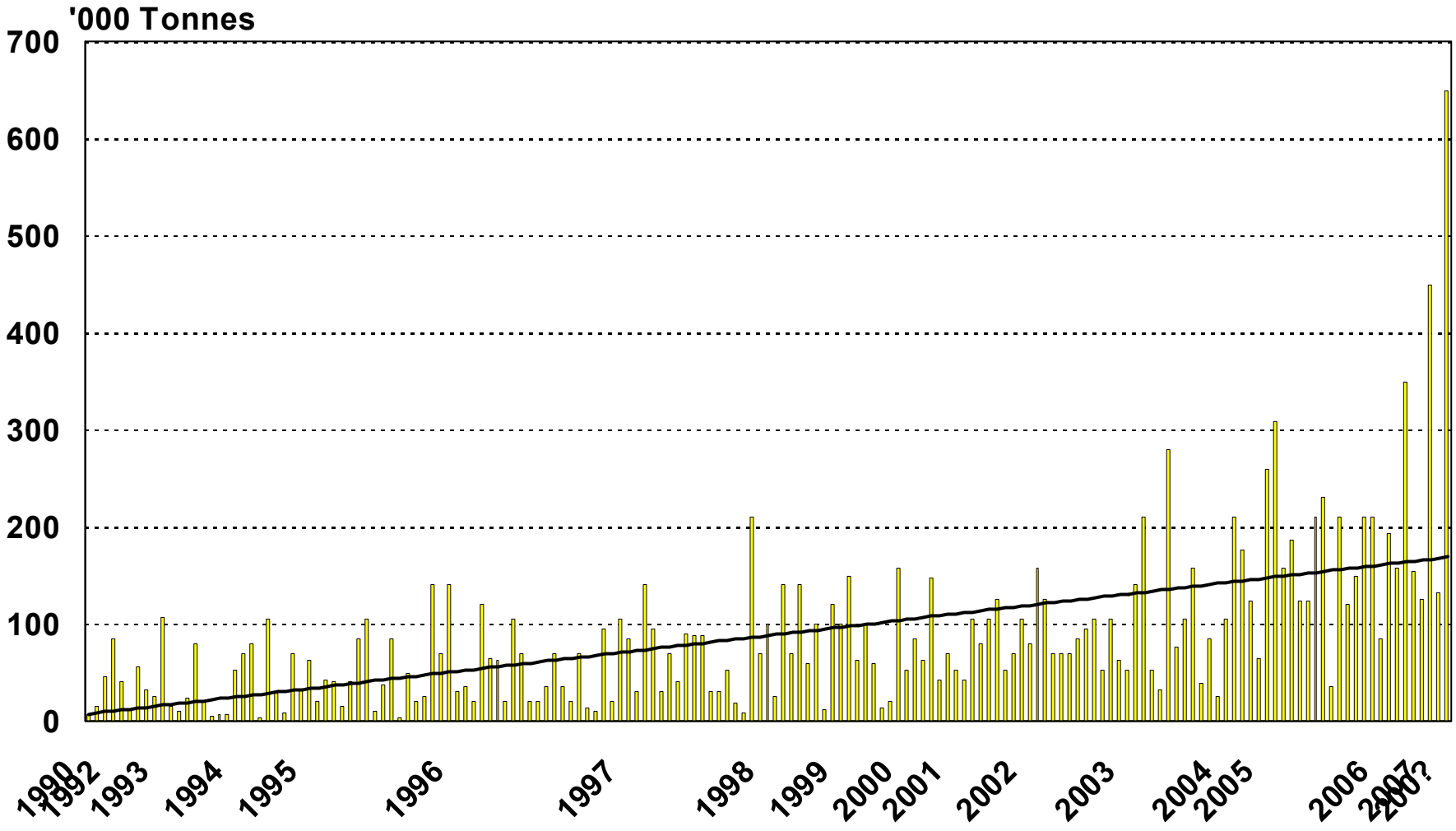
PET Capacity Confirmed Expansions ('000 Metric Tonnes)

	North America	South America	Africa / Middle East	West Europe	East Europe	Asia Pacific	Total				
2005	Starpet	30	NPC	186	PCH	308	DSR	168	2,195		
					SK	120	Hainan Xingye	210			
					Catalana	65	FET Taiwan	150			
							SFX	210			
							Changzhou W	150			
							Changzhou A	230			
							Cheng Xing	210			
							Nan Ya	158			
	30		186	493		1,486					
2006	Wellman	130			Indorama	195	Europlast	168	FET (China)	158	1,406
	Voridian	250					PCH	154	SFX	126	
	Invista	225									
		605			195	322	284				
2007	DAK	200	M&G	450	NPC	132				862	
	Starpet	80									
Total	915	450	318	688	322	1,770	4,463				

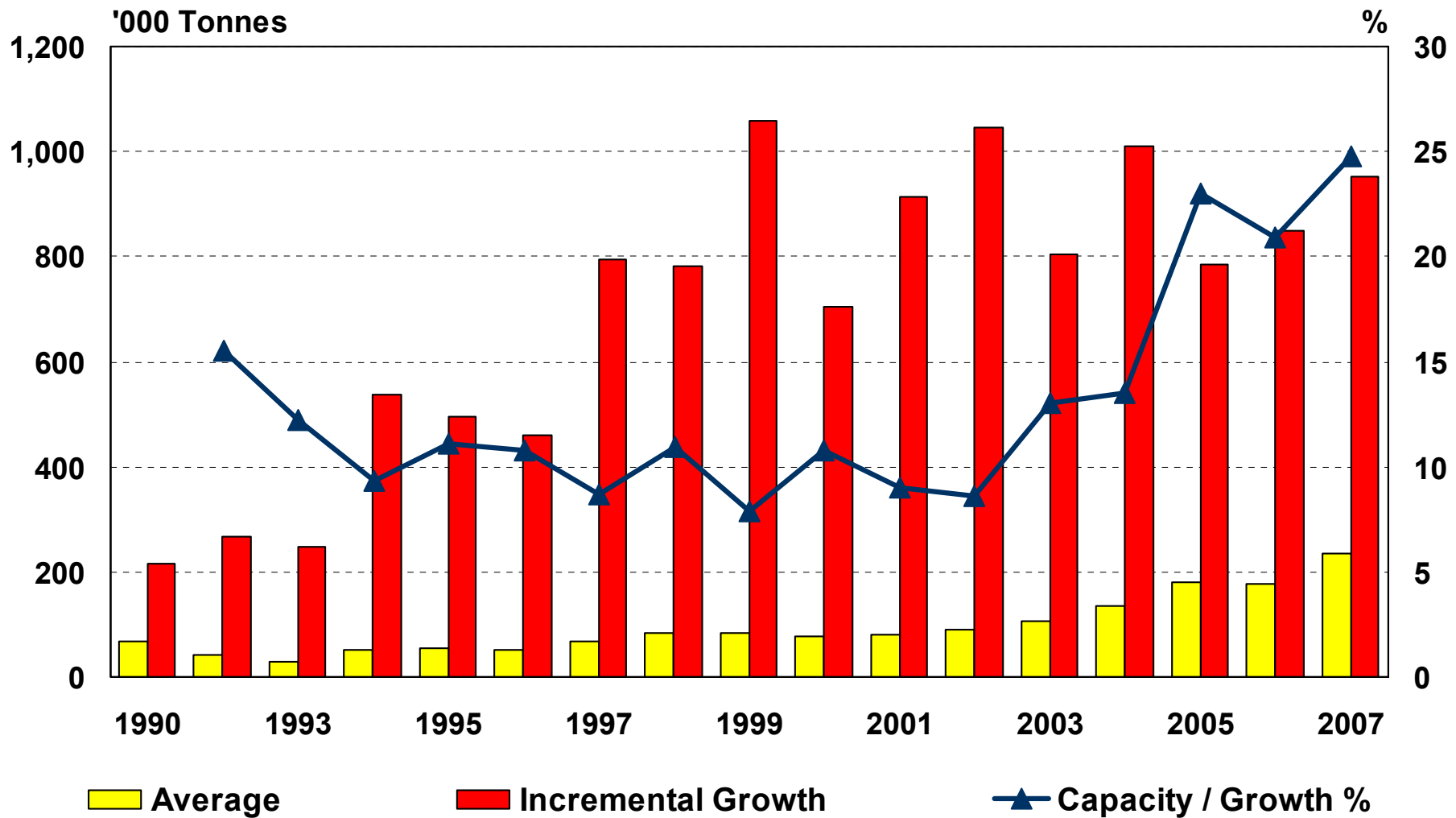
PET Capacity Confirmed Expansions ('000 Tonnes) 2005-2007



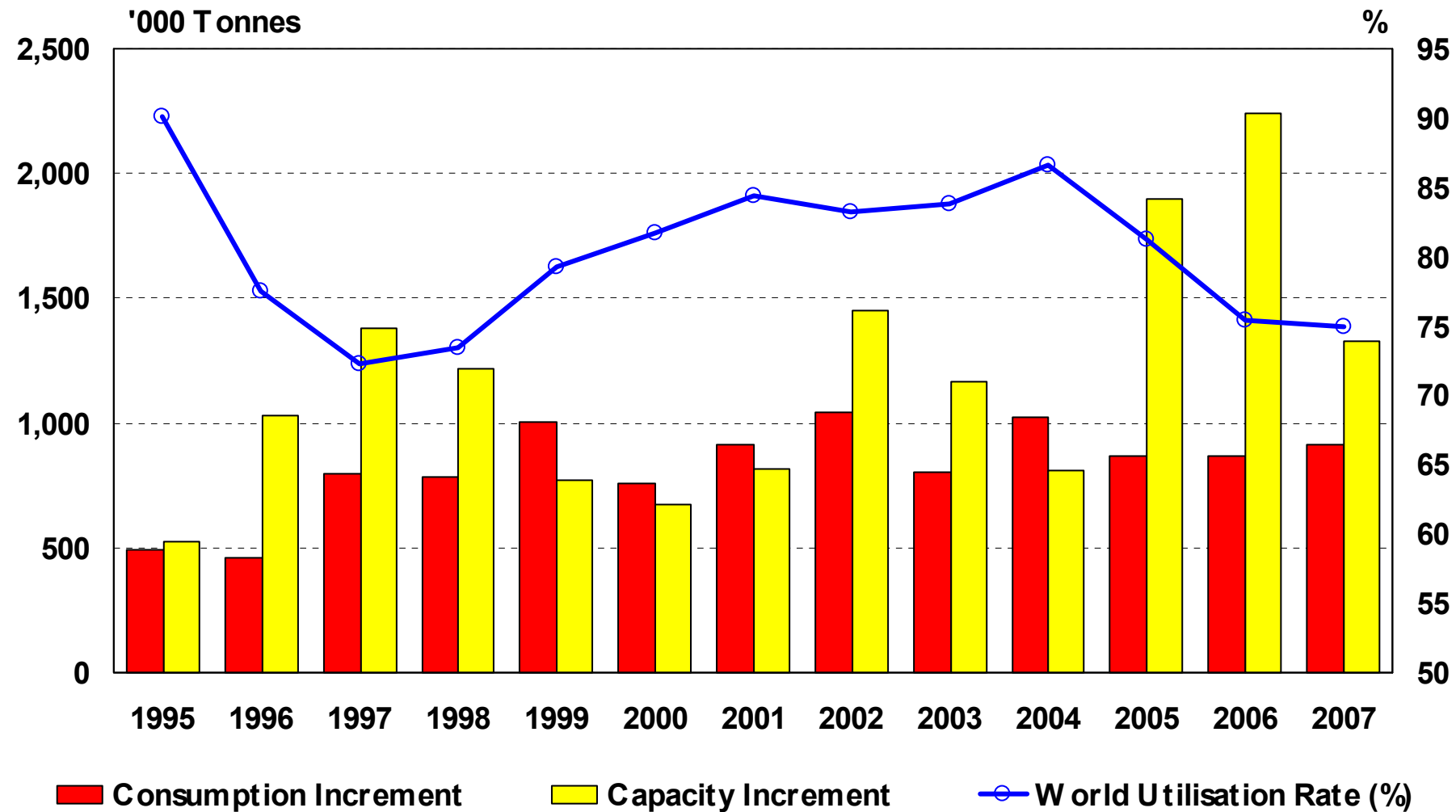
4.5 Million Tonnes



PET Capacity Expansions 1990-2007



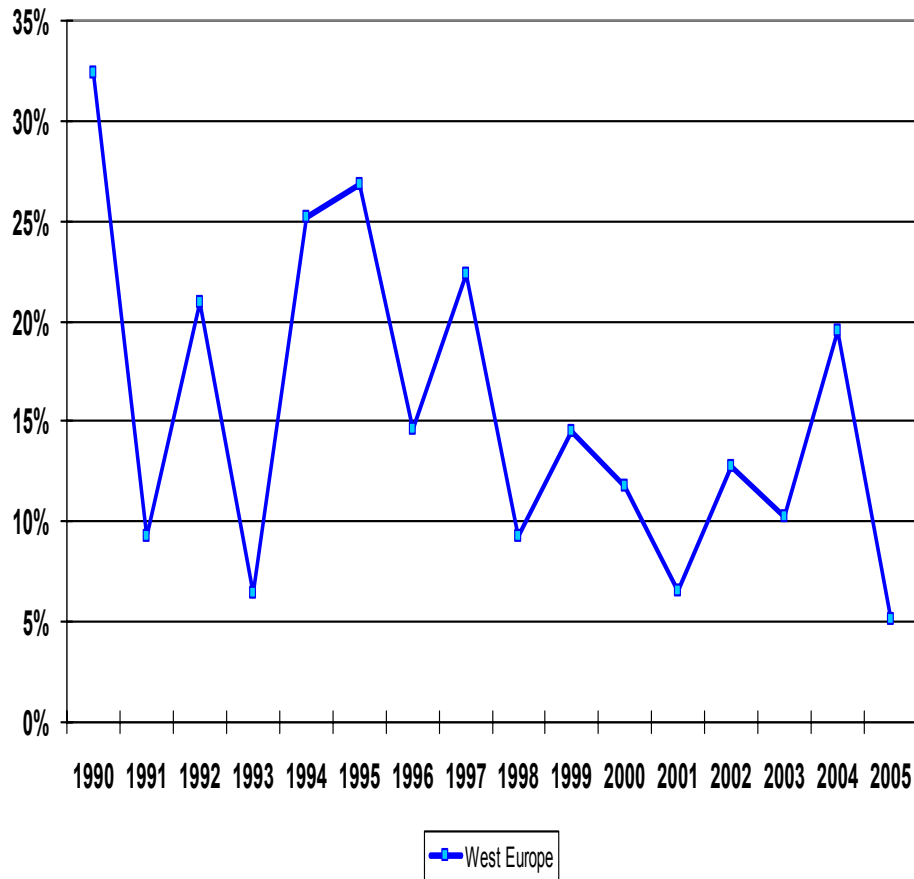
PET Business Cycle



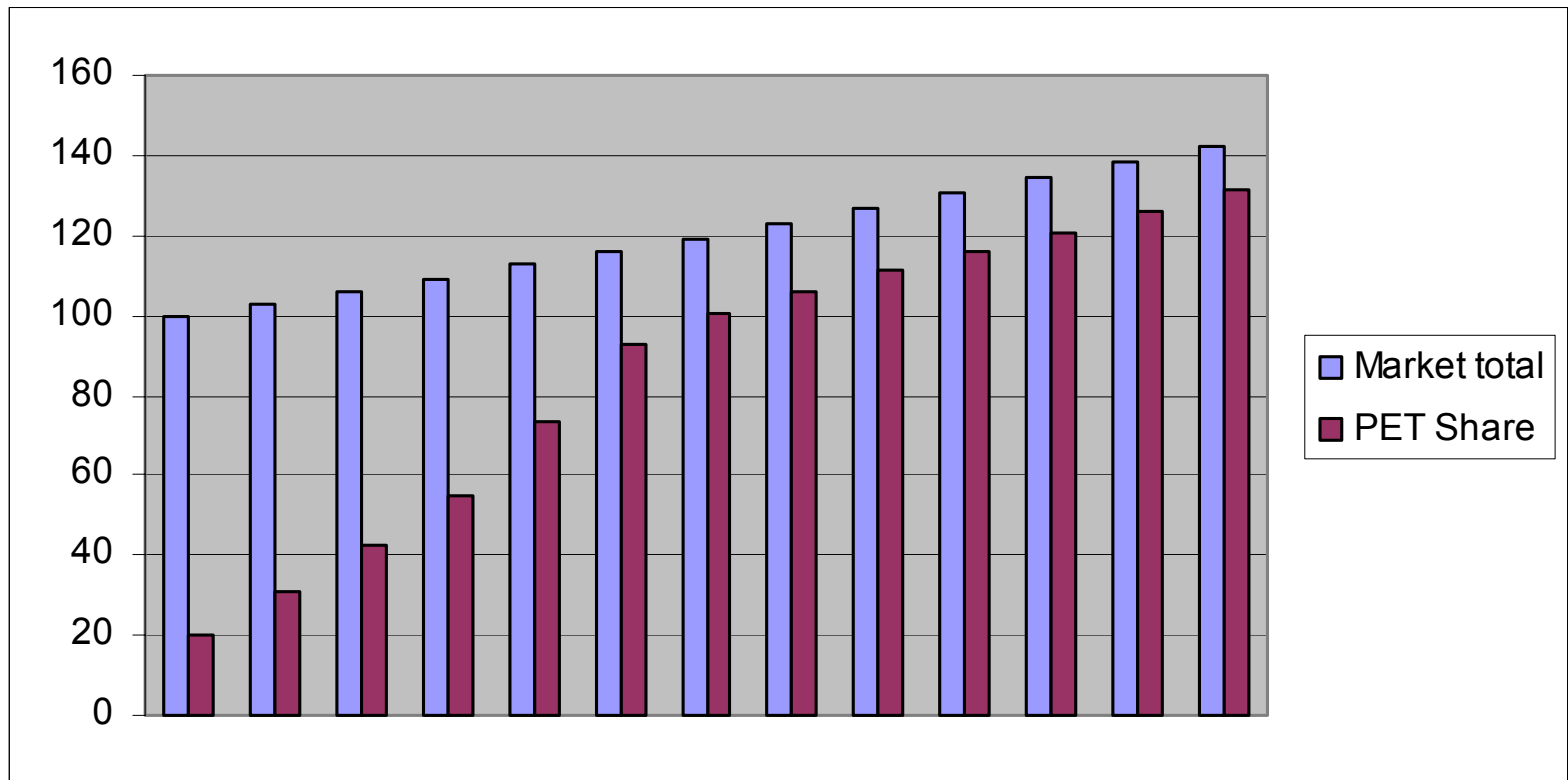
- Final consumption growth
- Capacity plans
- Supply demand balance

West Europe Market Growth

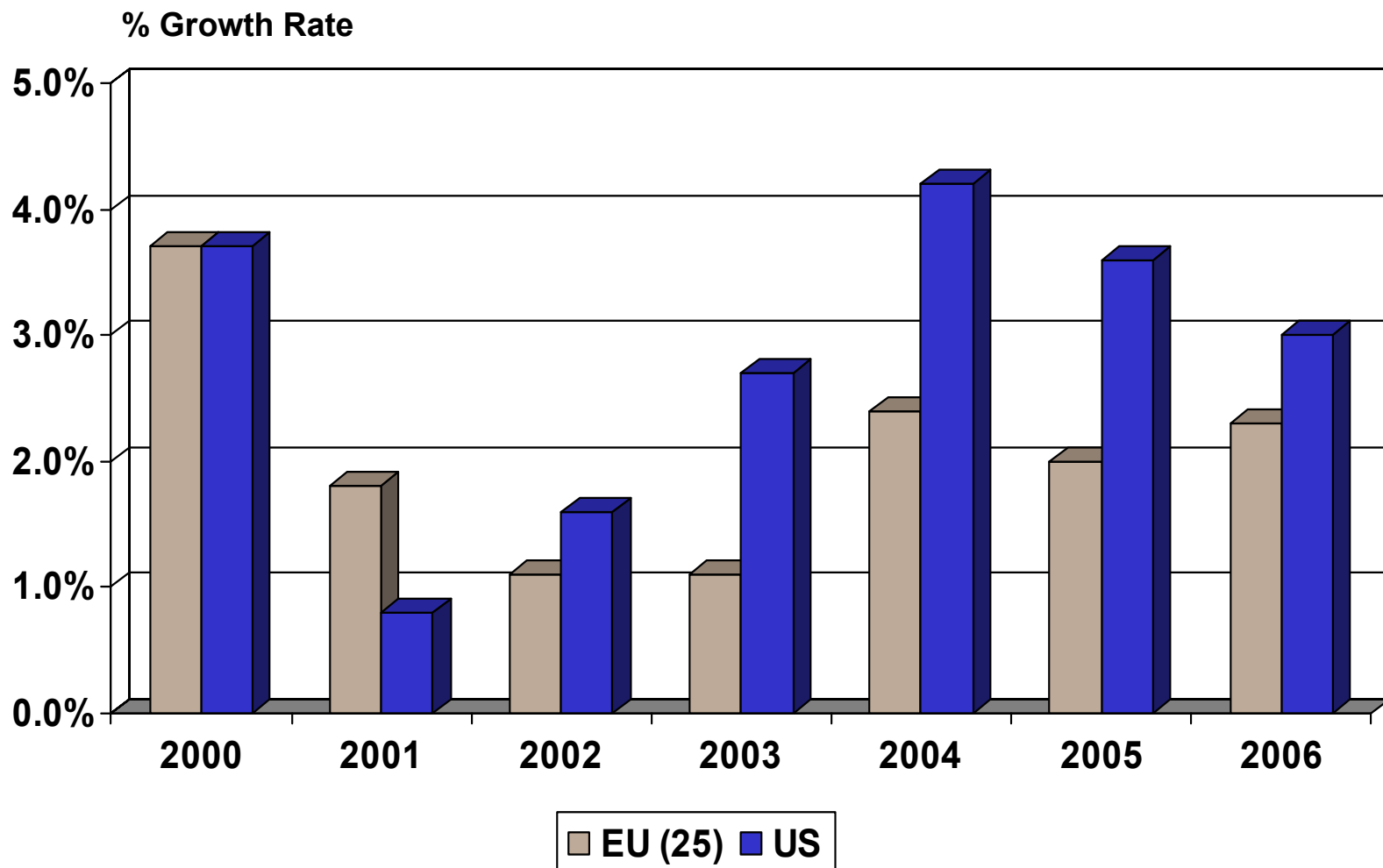
'000 Tonnes



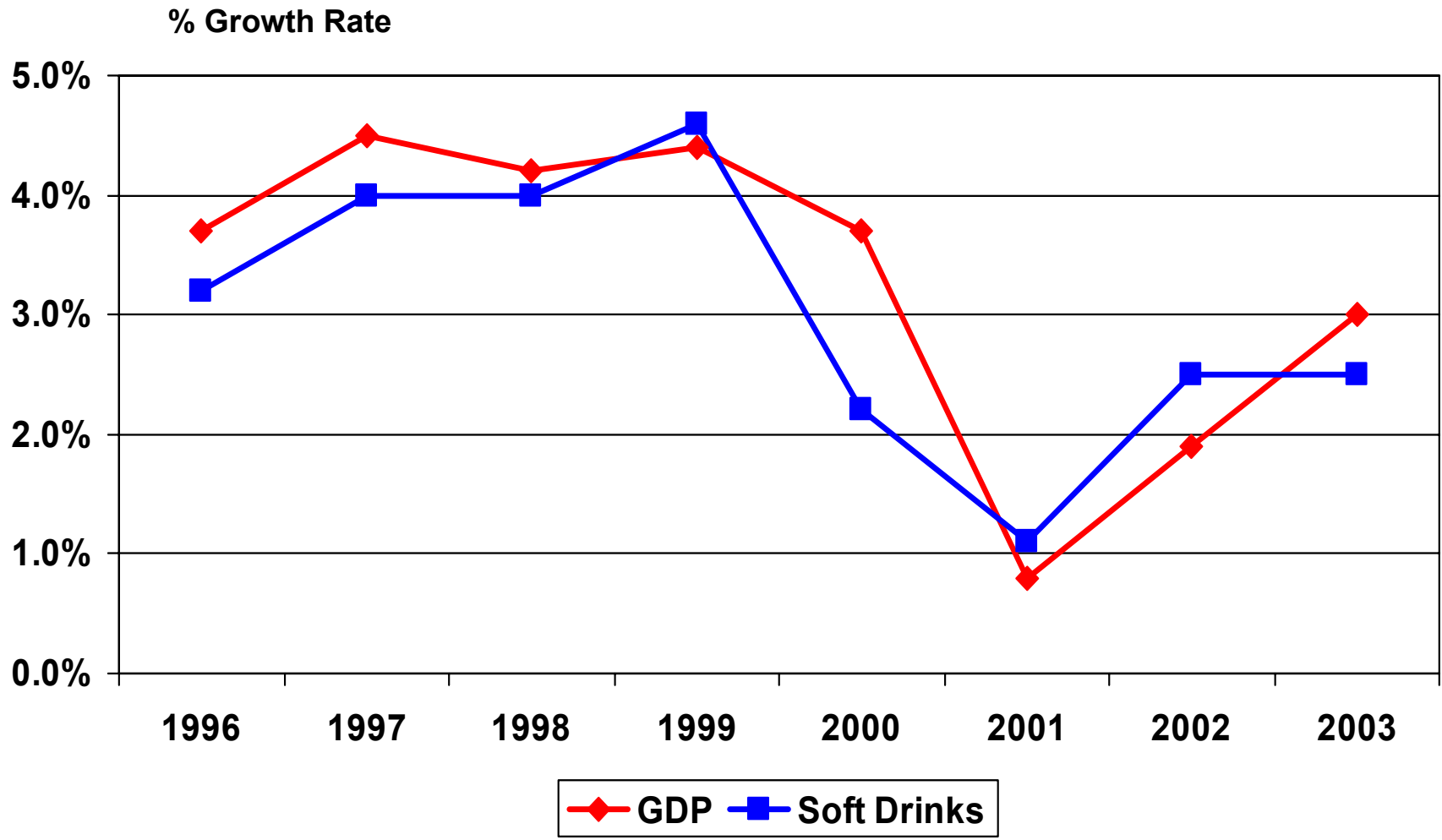
- 2005 demand poor January-April, and weak August
- Growth outlook
 - 2005-2010: 6.2%
 - 2005-2014: 5.7%
- Growth short term from
 - Germany
 - New EU
 - Netherlands



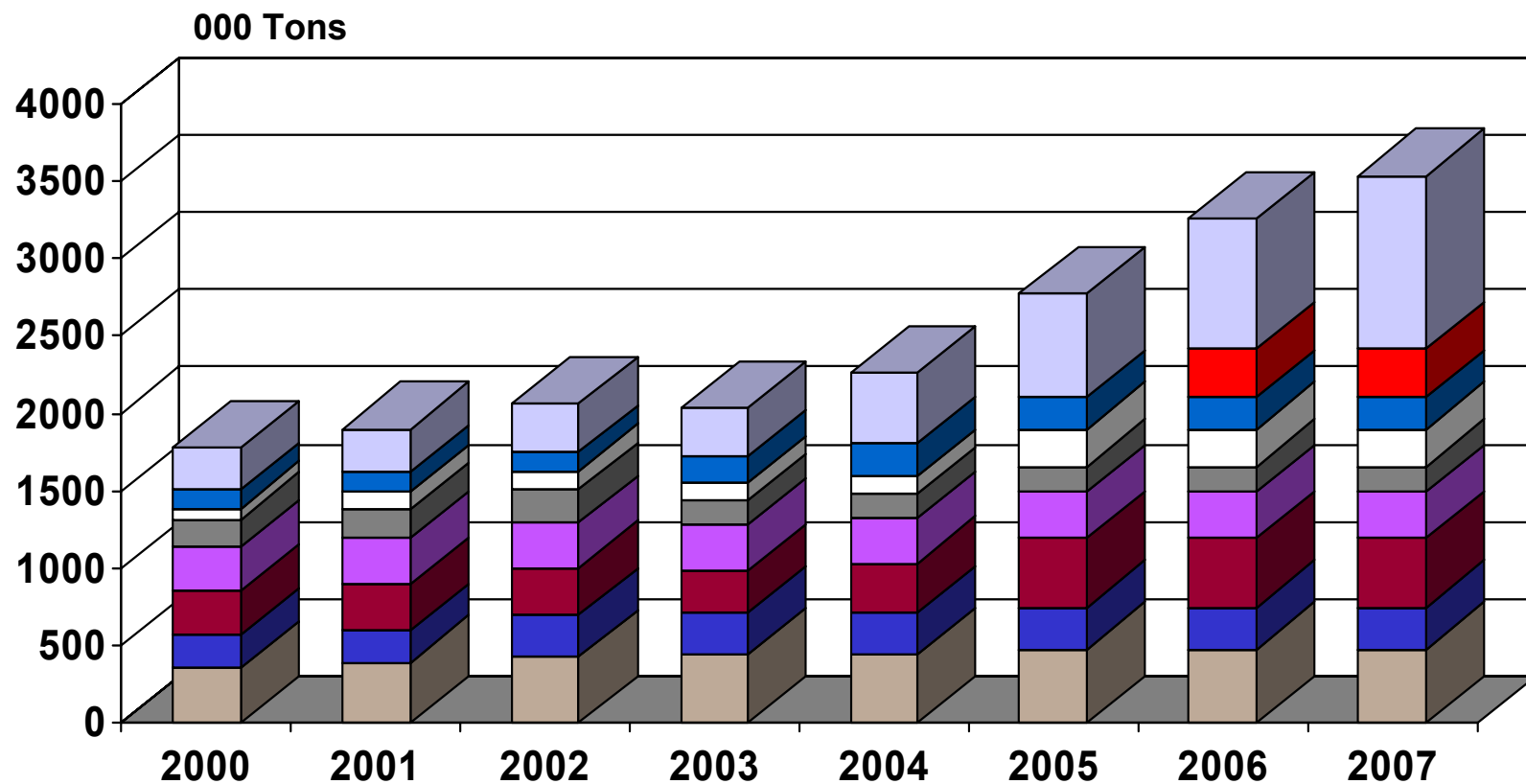
Europe Economic Performance



US Soft Drinks Consumption and GDP Growth



West Europe PET Resin Capacity



Voridian

Invista

Equipolymers

M&G

AdvanSA

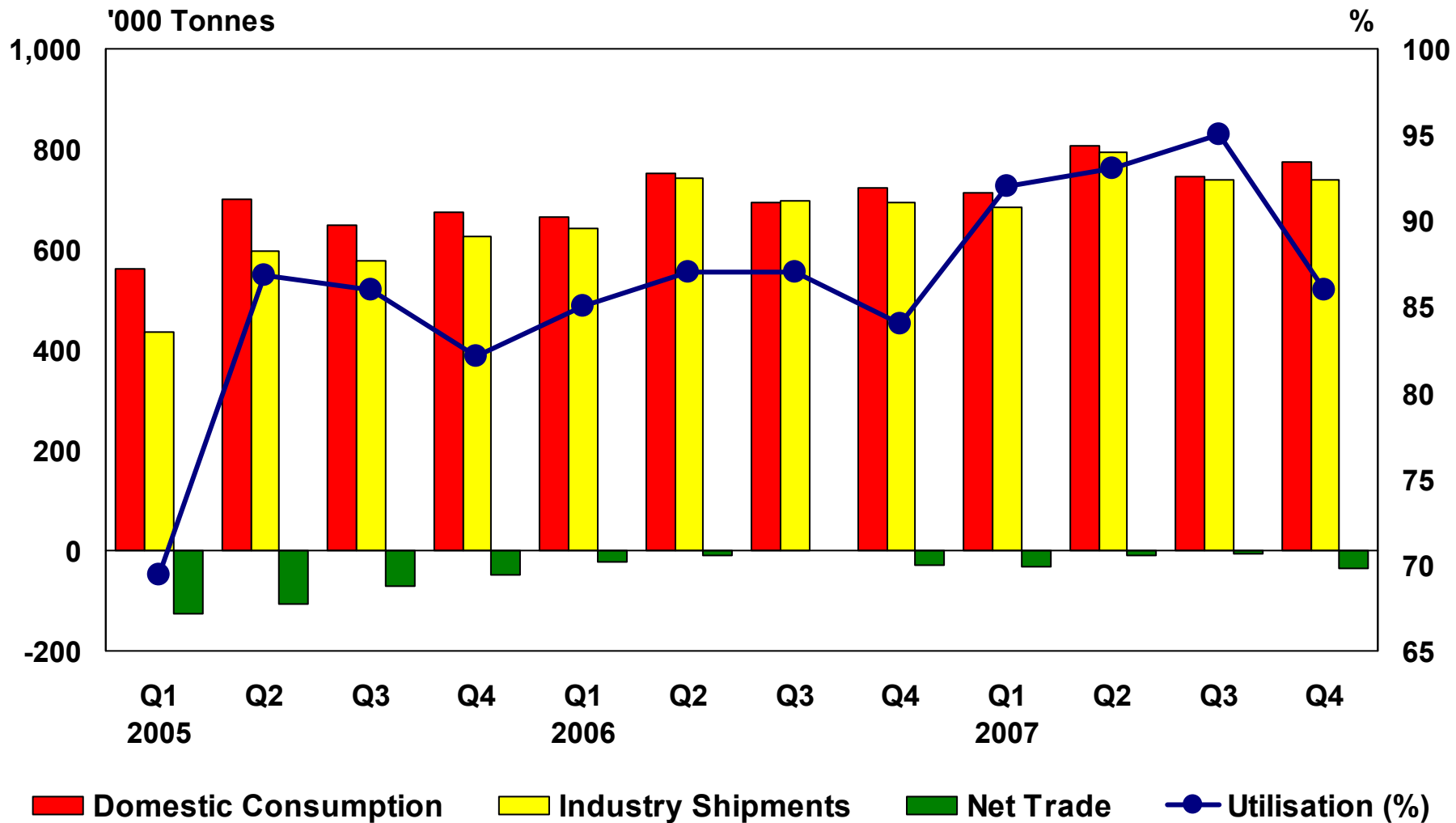
Brilen

Selenis

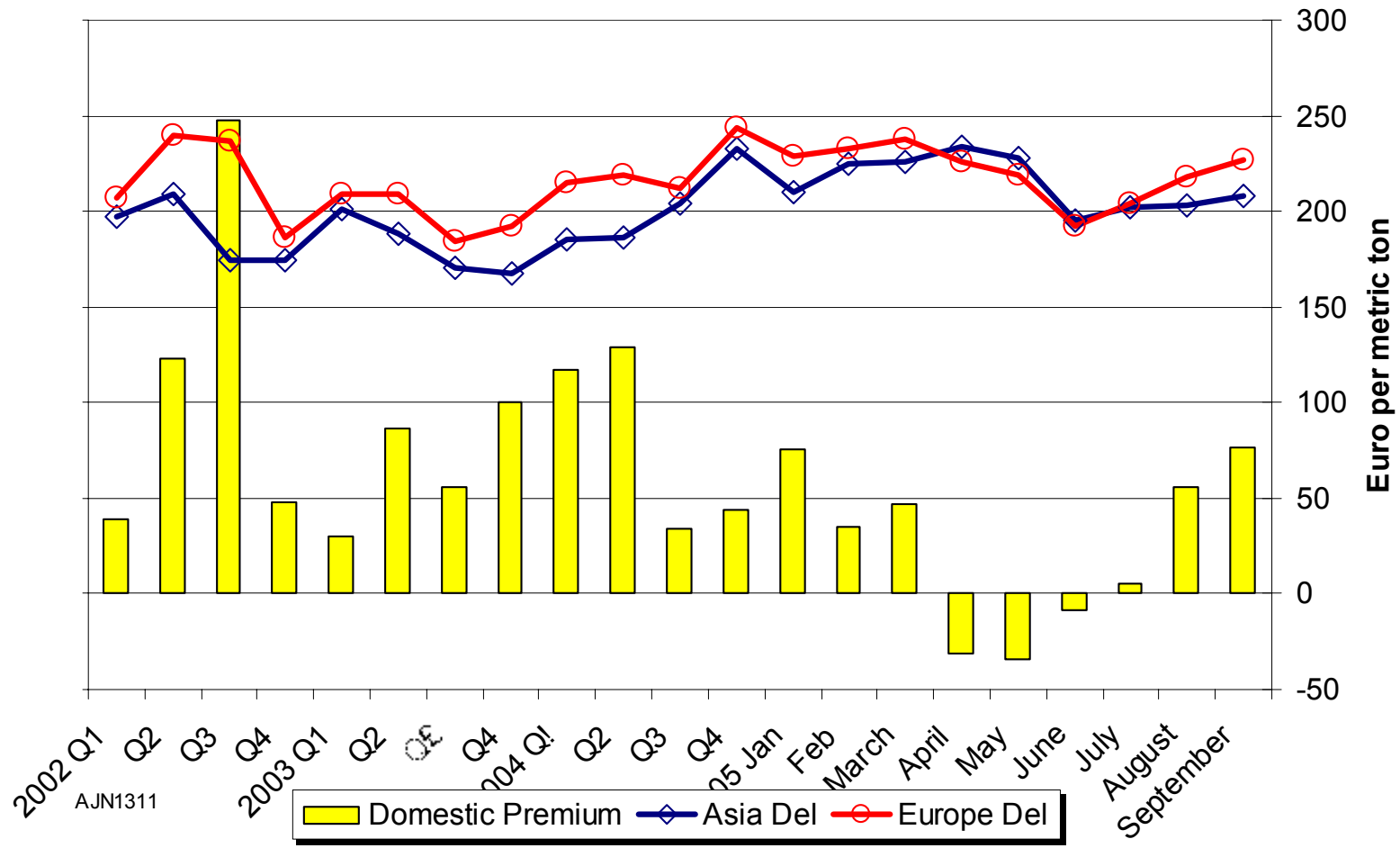
PCH

Other

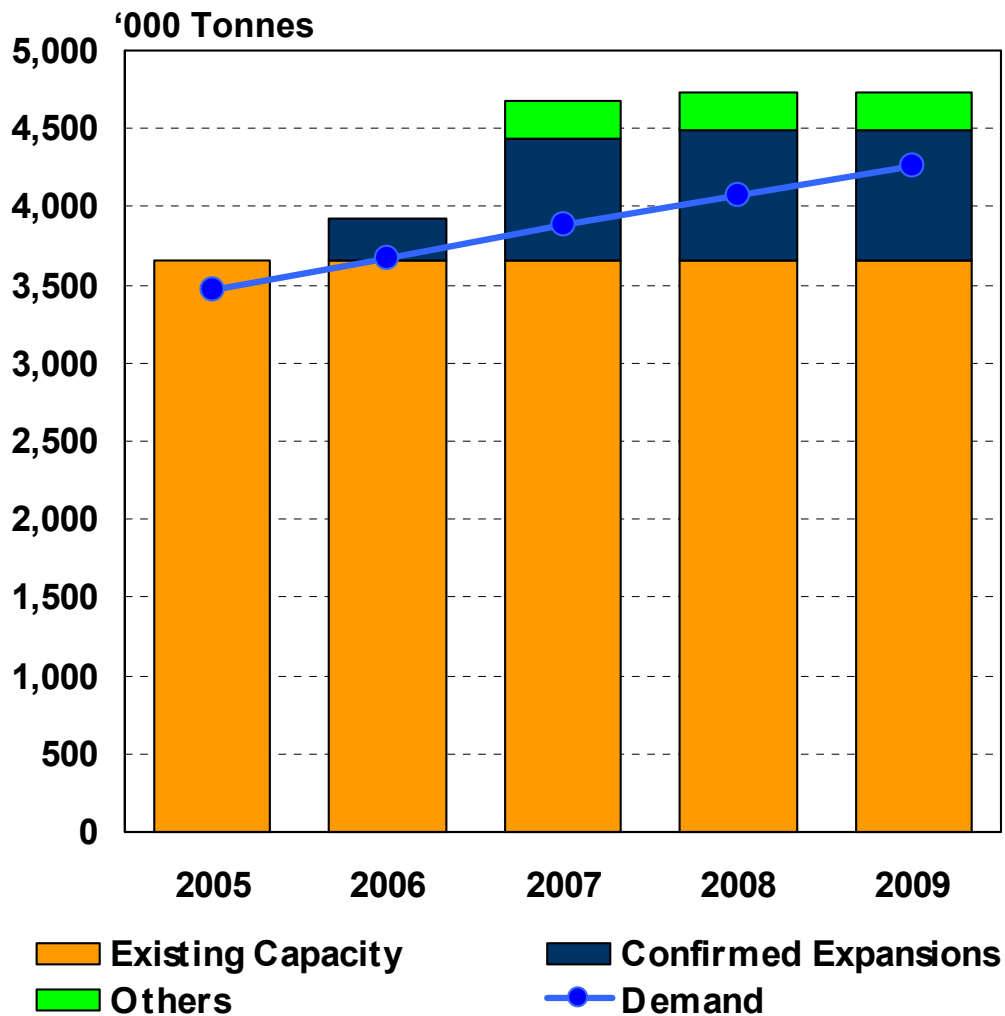
West Europe PET Market Balance by Quarter



Asia Europe Price Comparatives



North American Market Projection

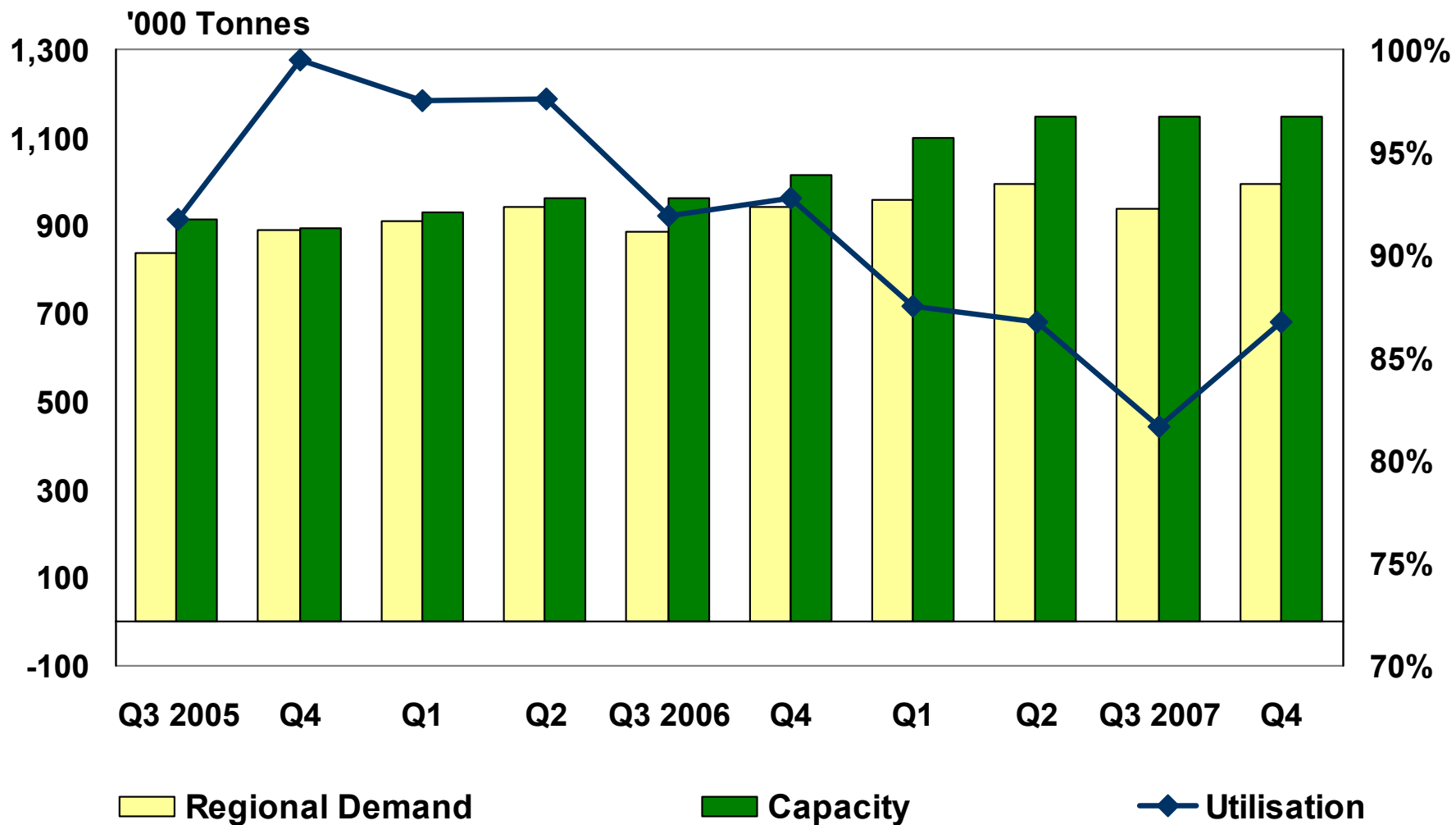


- Growth in 2005
 - 6.5% North America
 - 6.1% US
- Projected growth North America
 - 2005-2010: 5.5%
 - 2005-2014: 4.8%
- 2005 looking less tight than expected due to higher imports/lower exports plus some debottlenecks.
- Confirmed expansions by Wellman, Voridian, Invista, Starpet and DAK add 900,000 tonnes.
- New technology from Voridian and DAK
- Renewed confidence in regional investment
- Market long in 2007-2008

Global PET Developments

COMPANY	TECHNOLOGY	SIZE 000KT	TIMING
Voridian	Integrex	350(-100)	2007 Q1
DAK	EMS	200	2006 Q4 / 2007 Q1
Wellman	Buhler	130	2006 Q2
Invista	UOP	225	2006 Q4
Indorama		80	2007 Q1

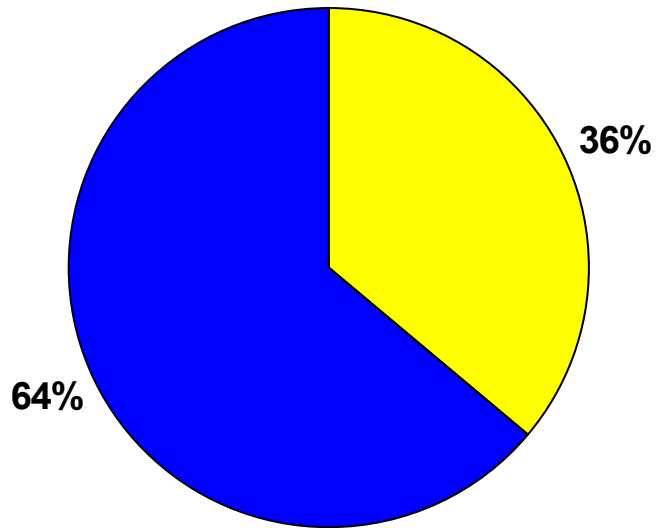
North American Short-Term Balance



- Historic pattern likely to be affected by:
 - M&G capacity in Brazil in 2007
 - Brazil anti dumping duty limiting US exports

North America Exports to Central and South America

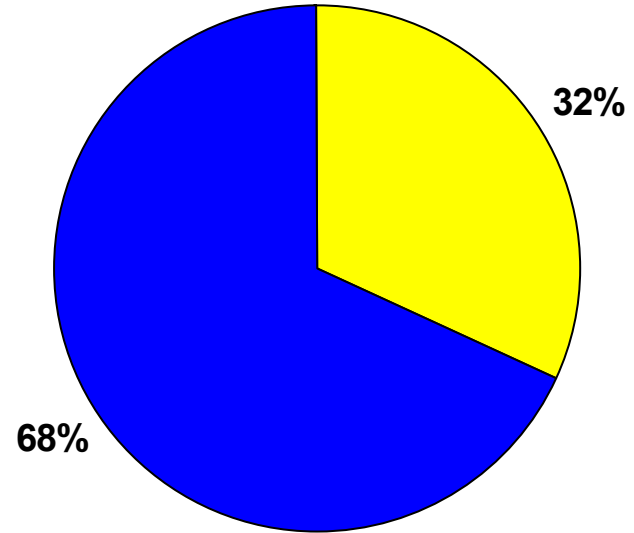
2003



Total: 212,000 Tonnes

■ West Coast South America

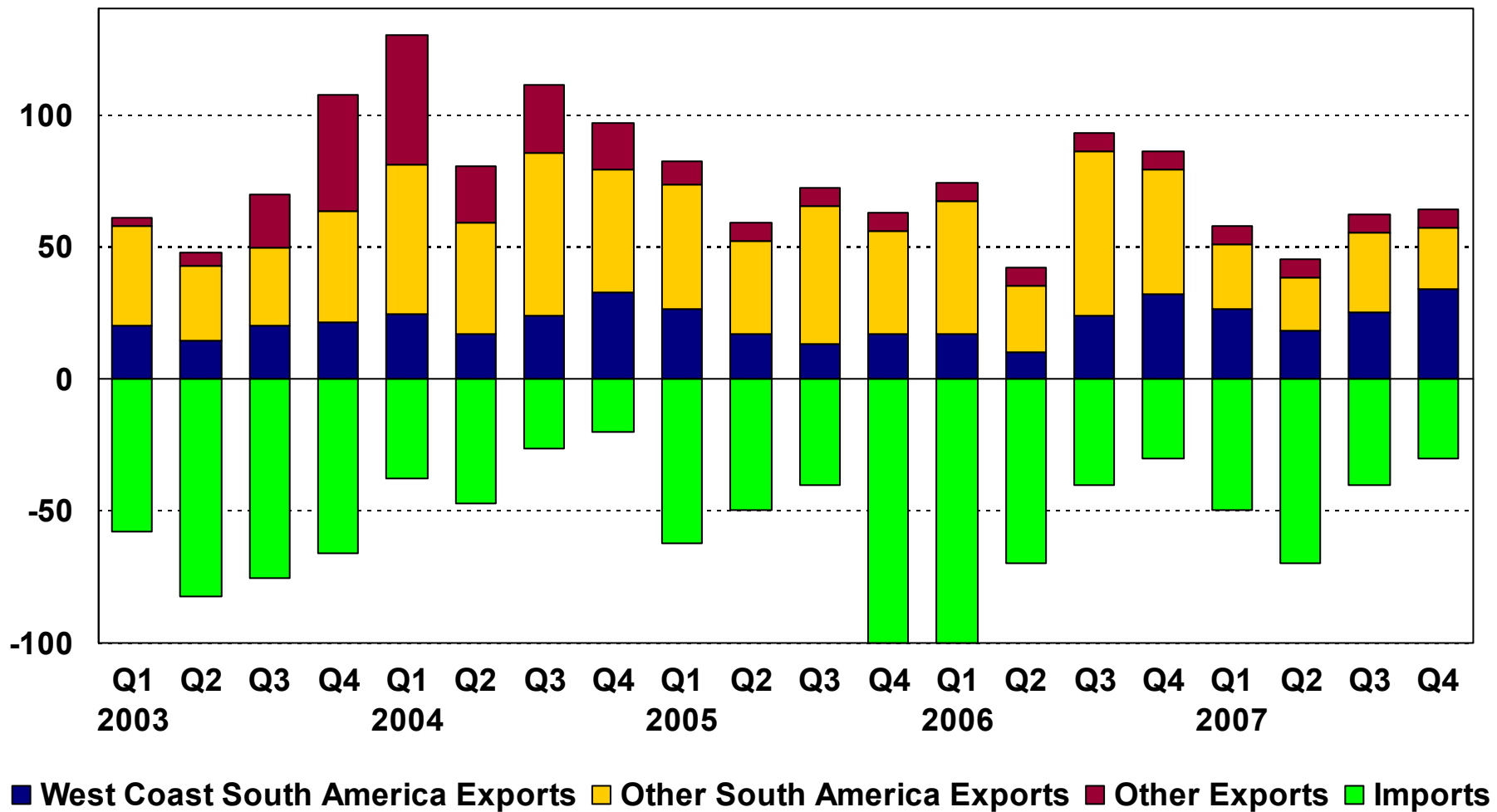
2004



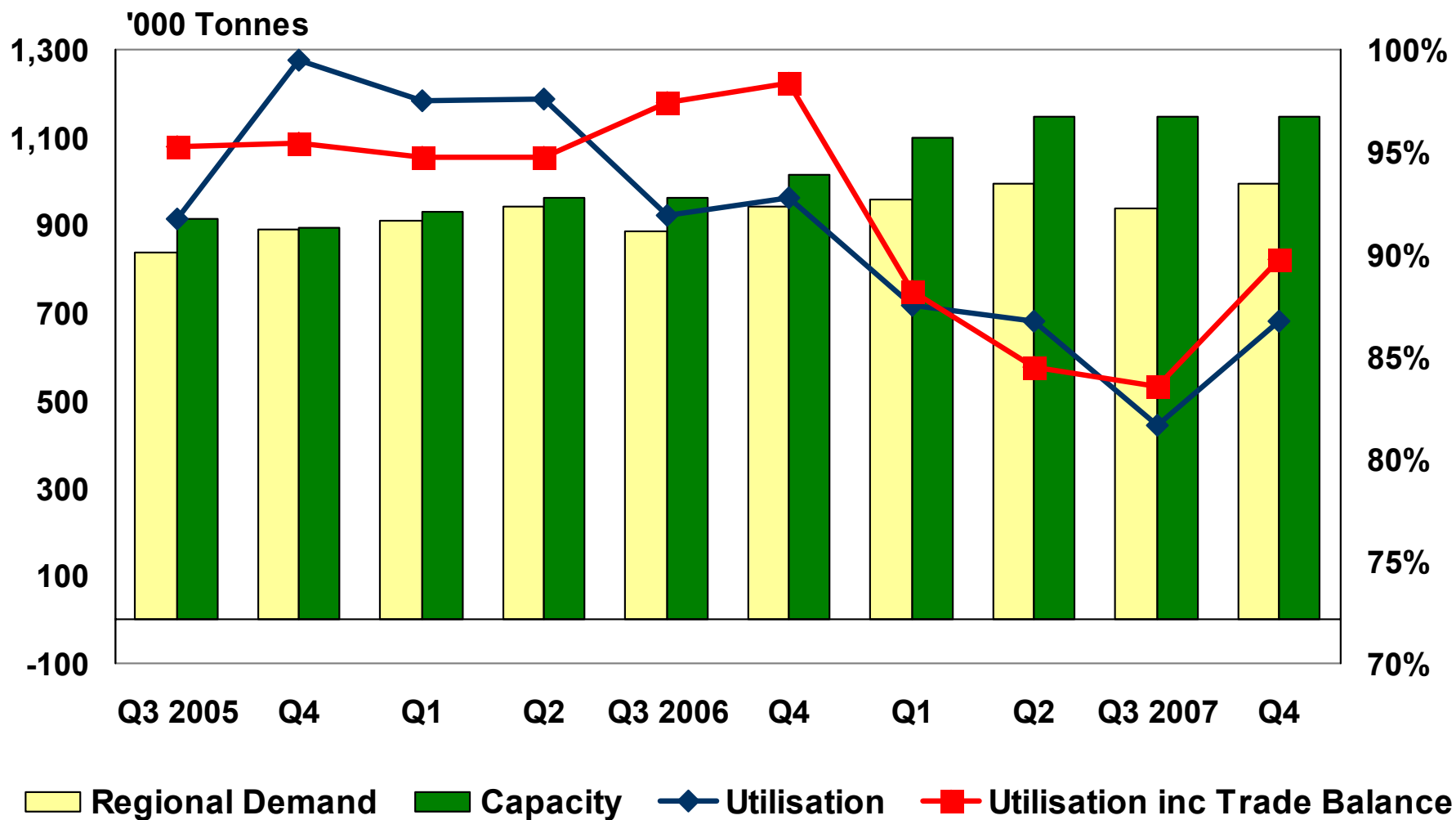
Total: 304,000 Tonnes

■ Central/Carib/East Coast South America

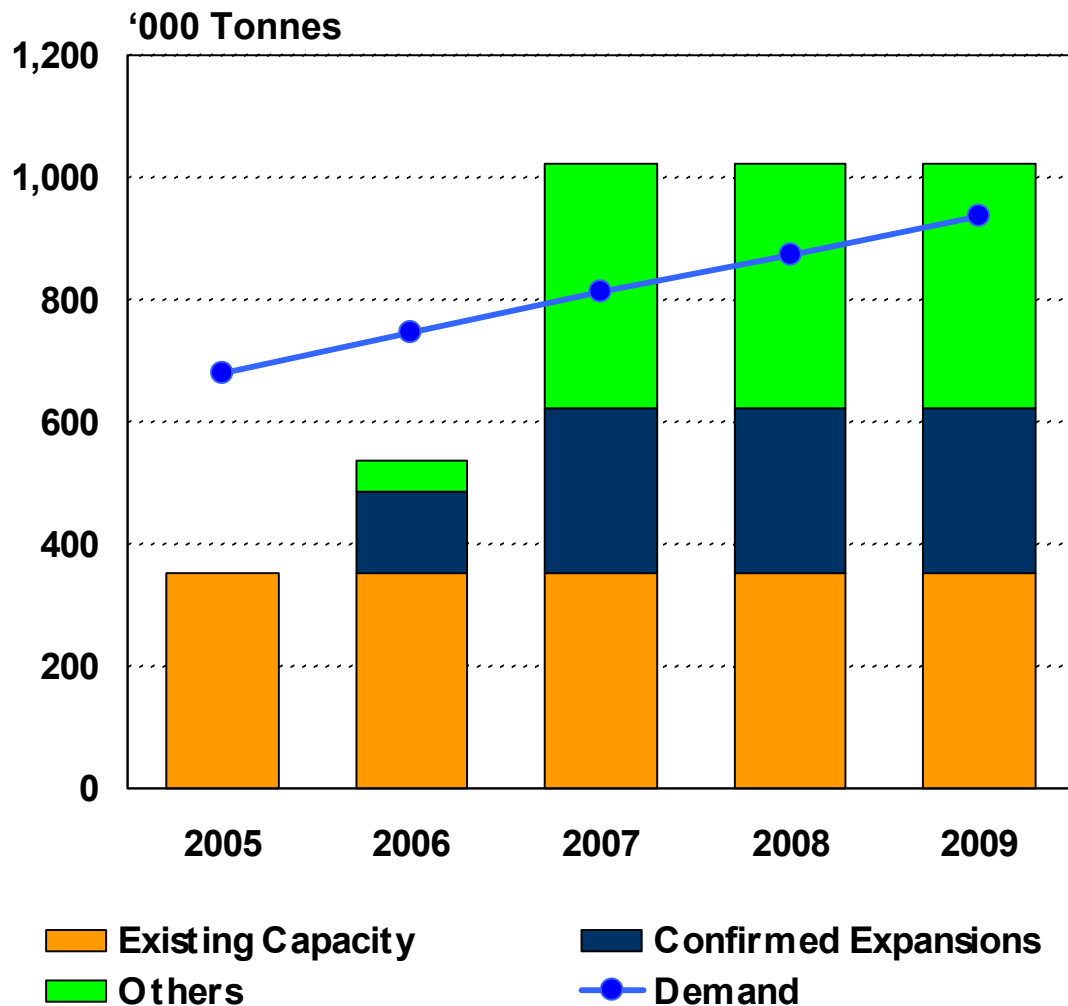
North American Trade: What If.....



North American Short-Term Balance

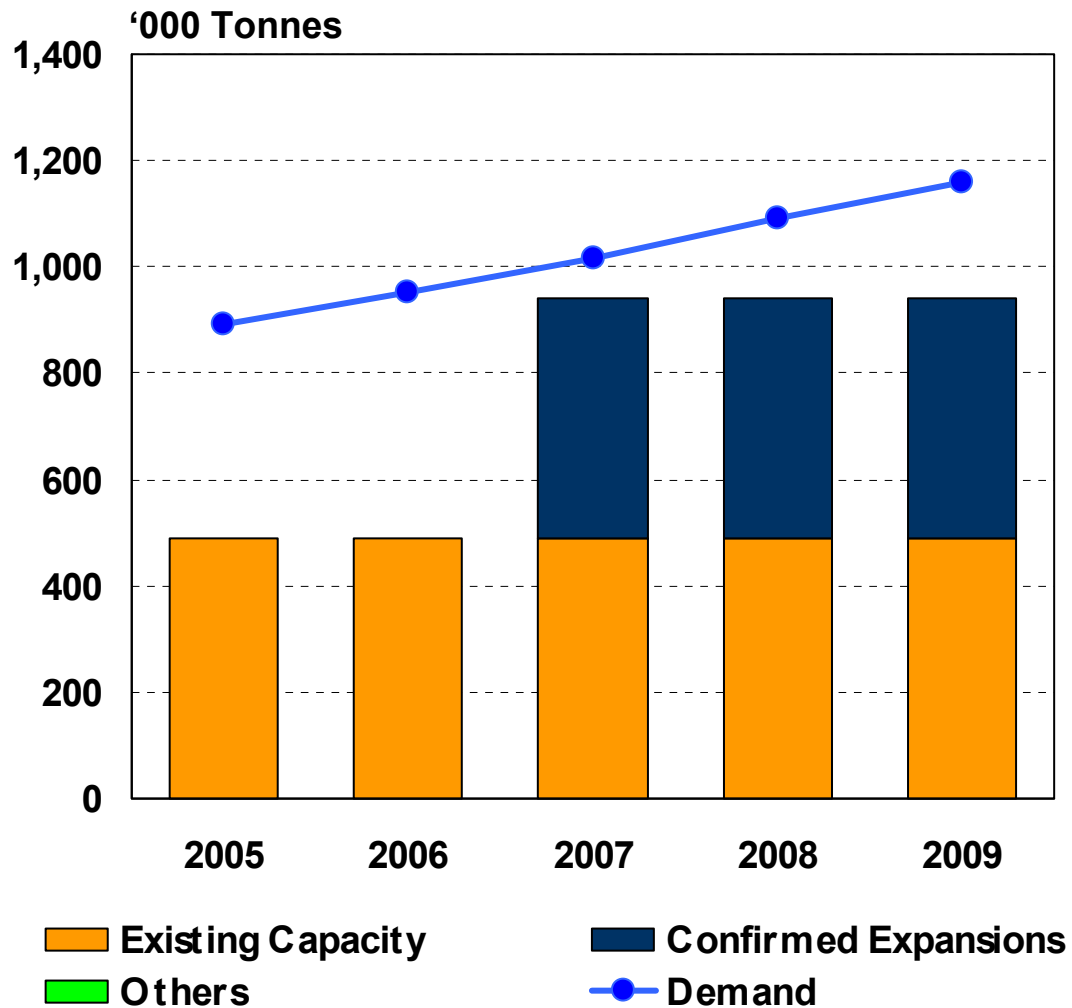


Africa/Middle East Market Projection



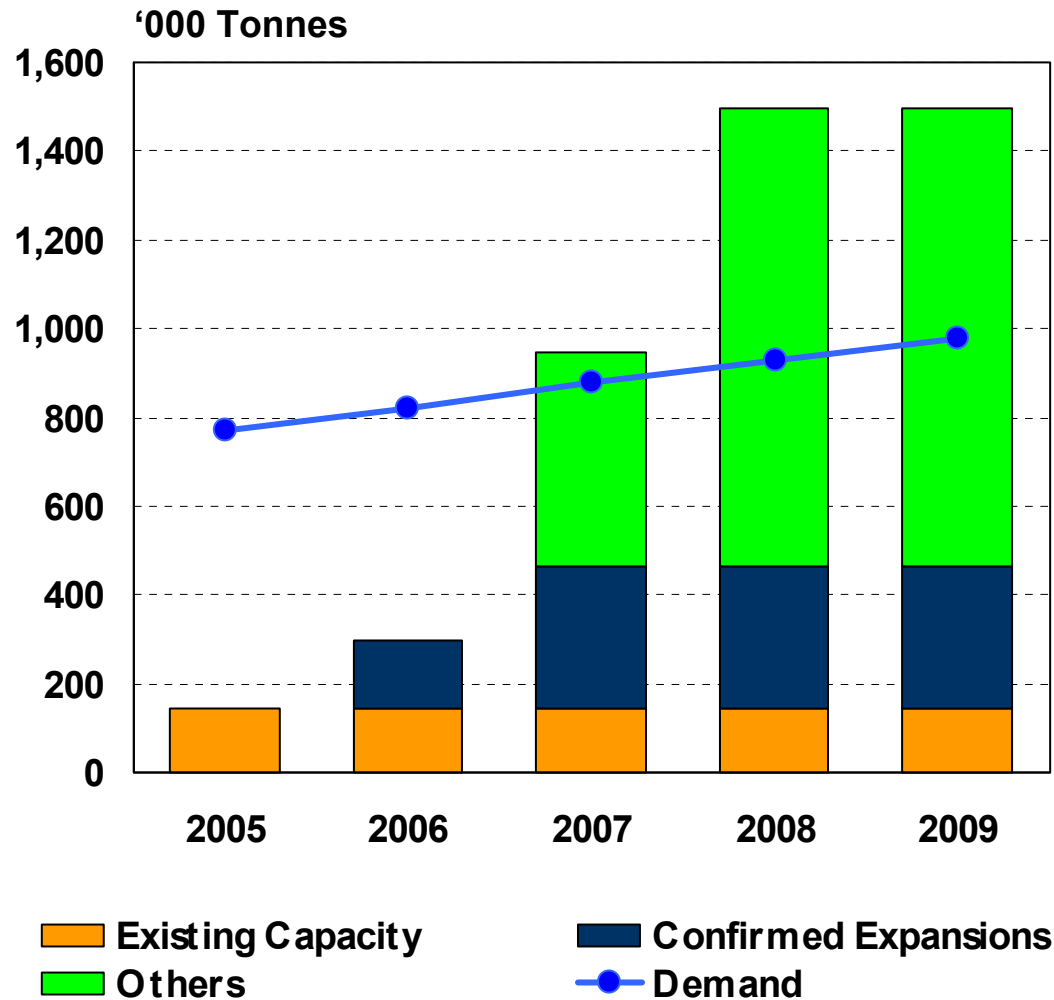
- Growth in 2004 – 27.6%
- Projected growth 2005 – 13.0%
- Growth projection
 - 2005-2010: 9.3%
 - 2005-2014: 9.4%
- NPC only likely expansion this cycle. Major volumes not until 2006. EU is prime export target. Still not fully operational.
- Continuing investor interest- Egypt, KSA, UAE, Kuwait- but nothing firm, yet.
- Potential regional capacity surplus by 2007/2008.

South American Market Projection



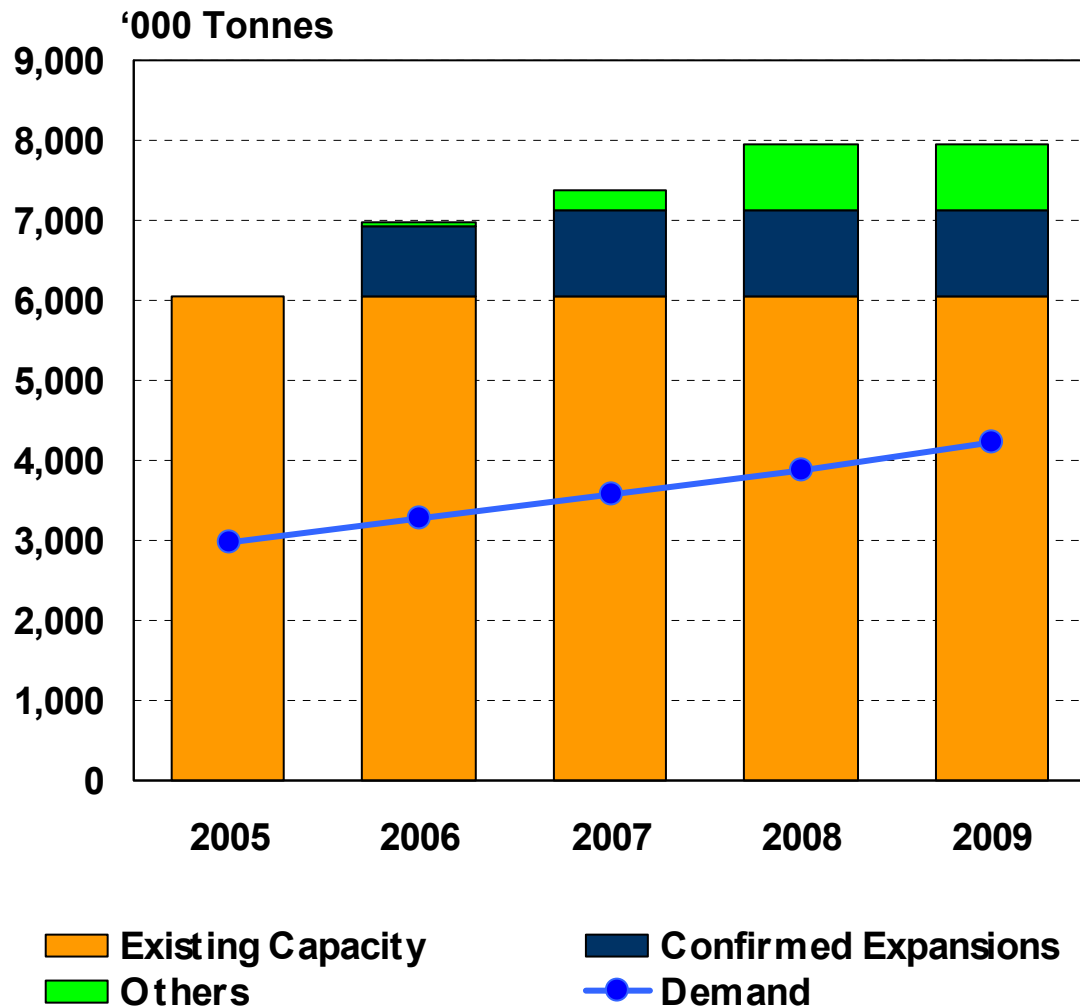
- Growth projection
 - 2005-2010: 7.6%
 - 2005-2014: 8.3%
- M&G project of 450,000 tonnes for 2007 now confirmed.
- Expansion will reduce export potential for North American and Asian suppliers, with potential rebound on North American market in 2007.
- Import duties by Brazil on Argentina up to \$640 and US \$314-890 per tonne

East Europe Market Projection



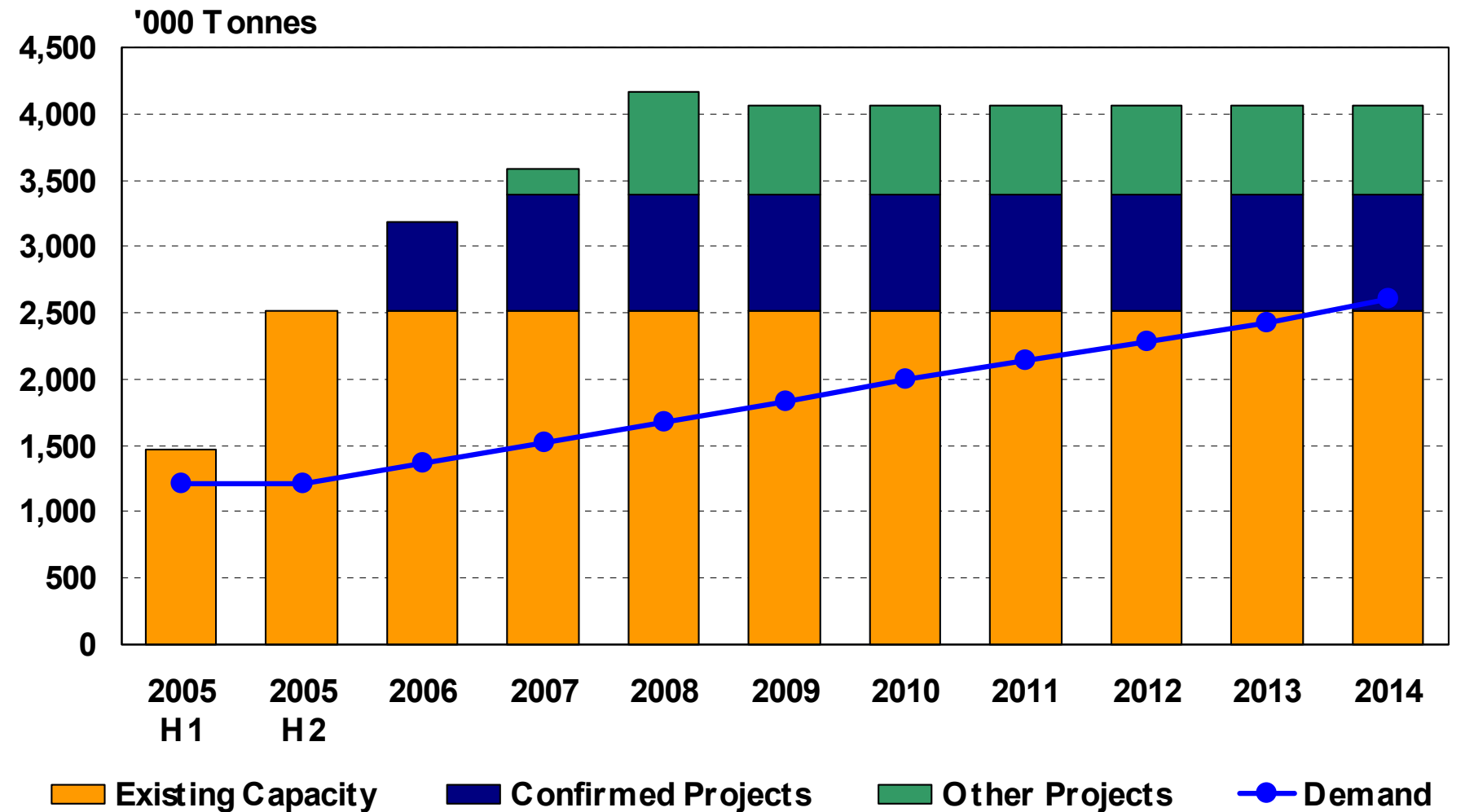
- Comprises Russia/CIS, Ukraine, Belarus, Former Yugoslavia, Albania, Bulgaria and Romania.
- Projected growth:
 - 2005-2014: 7.2%
- Large production deficit.
- New plants from
 - Europlast
 - Petrochemical Holdings
- Baltic States plants will supply major Russian converters.
- Other projects:
 - Belpac (Belarus)
 - Polief (Russia)
 - Uniplast (Ukraine)
 - Project (Kaliningrad)
- Projects total over 700,000 tonnes.

Asia Market Projection

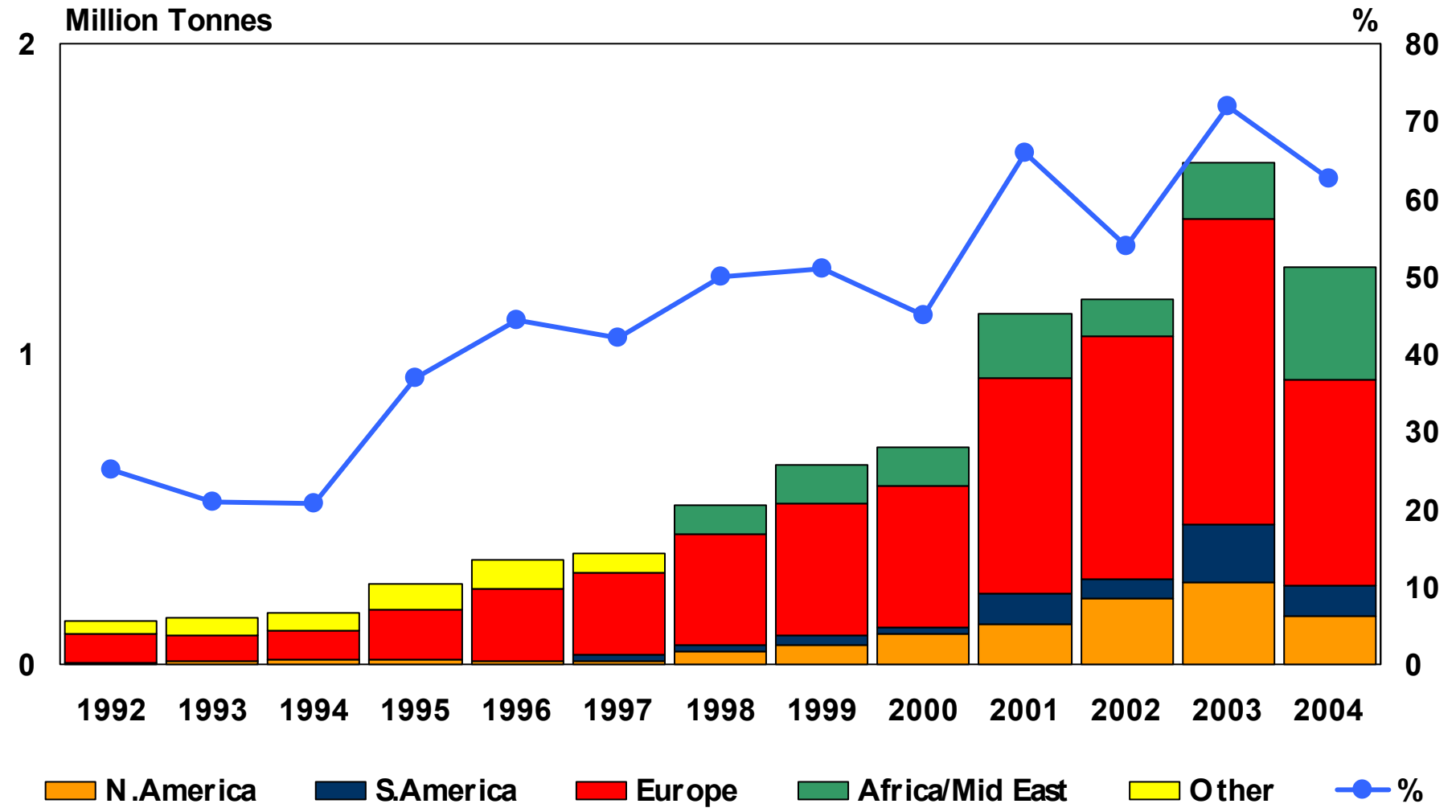


- Projected growth 2005 – 10.3%
- Growth projection
 - 2005-2010: 10.6%
 - 2005-2014: 11.0%
- Nameplate surplus now 3.0 million tonnes, rising to 3.5 million in 2007.
- Low regional utilisation in 2005 of 71.7% and lower in 2006 59.9%. Some rationalisation now underway.
- Capacity expansions in China this year, not much thereafter, aggressively gaining share in export markets.

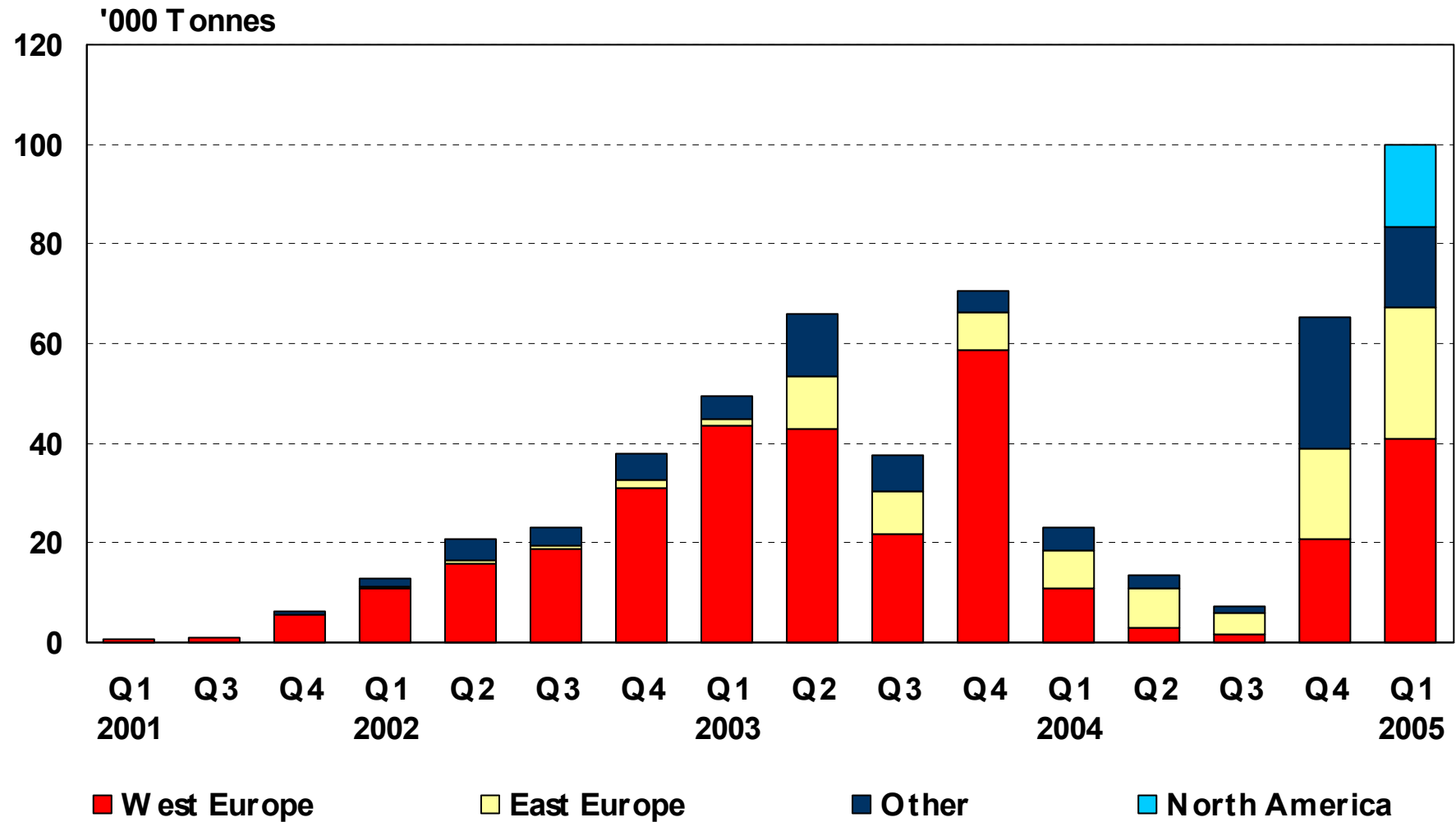
China Supply-Demand: Longer Term Prospects



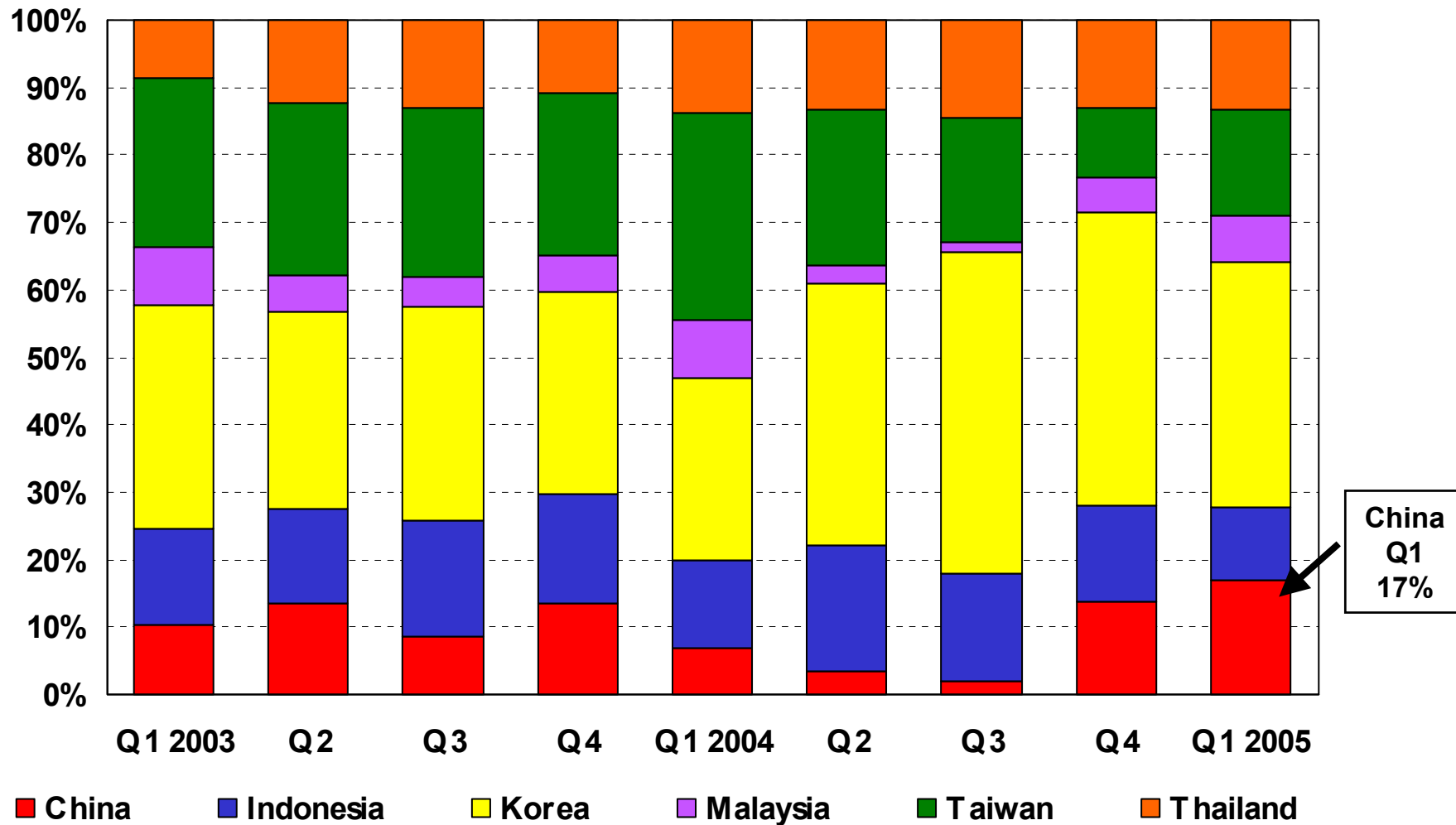
Asia PET Export History



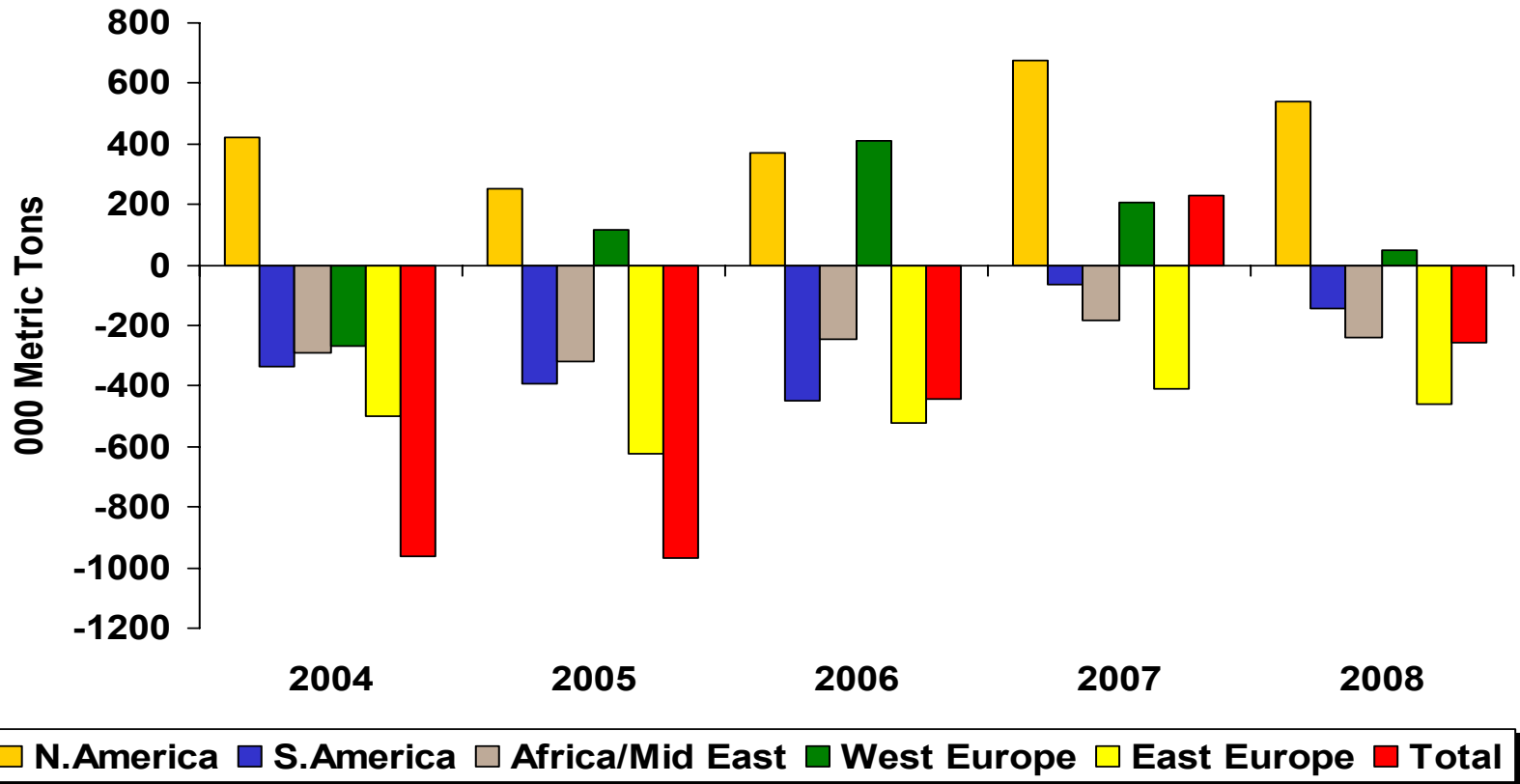
China PET Exports



China % Share of Total Asia Exports



KEY MARKET BALANCES (AMERICAS, EUROPE, AFRICA / MID EAST)



Some Conclusions

- Europe into its downcycle ; North America during 2006
- Turning points end 2007
- Issues for raw material suppliers.....
 - In 2006 PET margins in most regions will be dreadful ; don't expect margin gain except in the US.....
 - The historic pattern of world trade in PET and therefore its raw material supply is in a process of fundamental realignment
 - The merchant market for raws into PET will shrink because of PET integration