POLYOLEFIN PRICE TRENDS AND TRADE FLOWS IN KEY AREAS

Is It Possible To Mitigate Market Volatility?

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ChemOrbis

11-12 June, 2014
FUTURE OF POLYOLEFINS 2014, Düsseldorf

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Agenda

1. ChemOrbis introduction
2. Polymers and Feedstocks Supply Overview
3. European Polymers Pricing
4. Benchmarks and Volatility
5. Trade Flows
6. Conclusions

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Introducing ChemOrbis

- Dynamic Market Information: PE, PP, PVC, PS, PET, ABS, Feedstocks, Monomers
- Handy Analysis Tools
- Flexible Trading Platforms
- Industry Publications
- International Events & Conferences
- Ideal for Advertising: 77,000+ monthly visits
- ChemOrbis Global Presence

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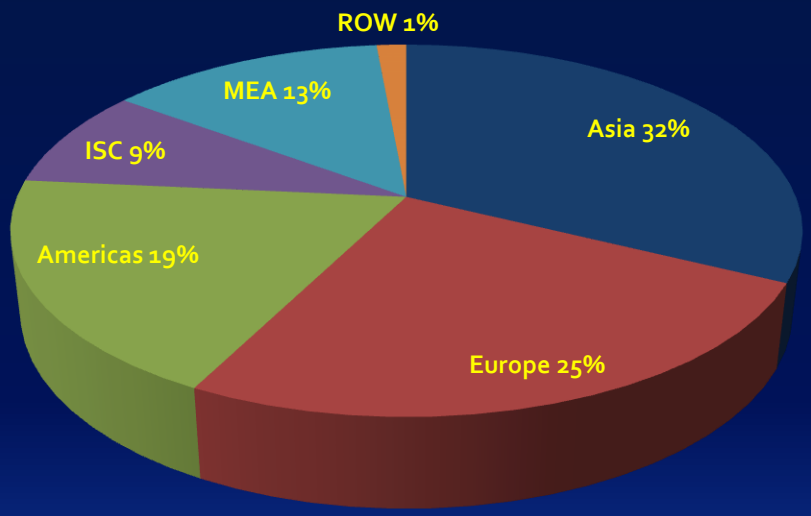
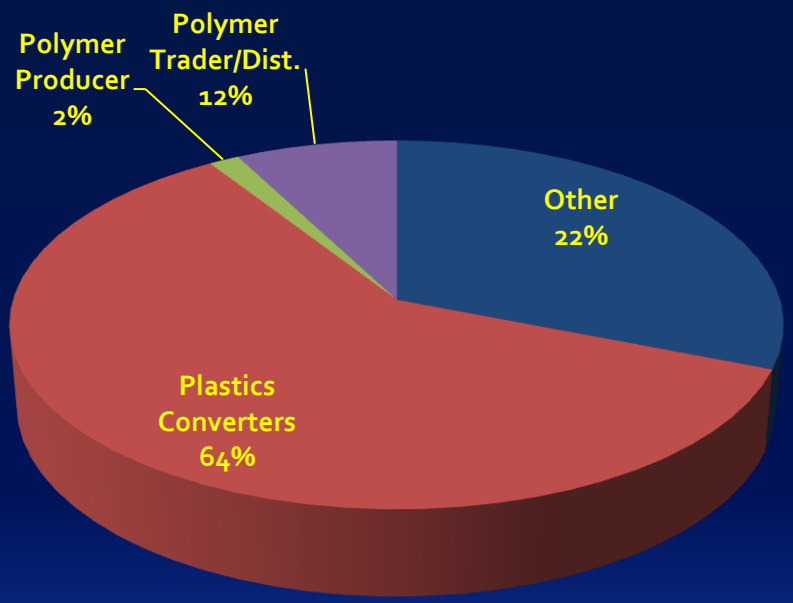
Global & Refined Community

63.500+ Companies - 90.000+ Professionals





- **Breakdown by Geography**
- **Breakdown by Company Type**

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ChemOrbis Methodology

- ChemOrbis interviews companies only directly involved in the transactions
- Statistical sample based on:
  - Company Type (Converter/Producer/Trader/Distributor)
  - Volume (typically 25 to 500 t/month)
- Real Market Prices: only real offers or done deals prices are considered
- Price Quality Controls:
  - Crosschecking by the local team
  - Independent Market Intelligence team runs other rigorous analytical tests, including netback and cost analysis

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Polymers & Feedstocks Supply
An Overview

- Impact of Shale Oil & Gas
- New capacities build
- Regional demand trends

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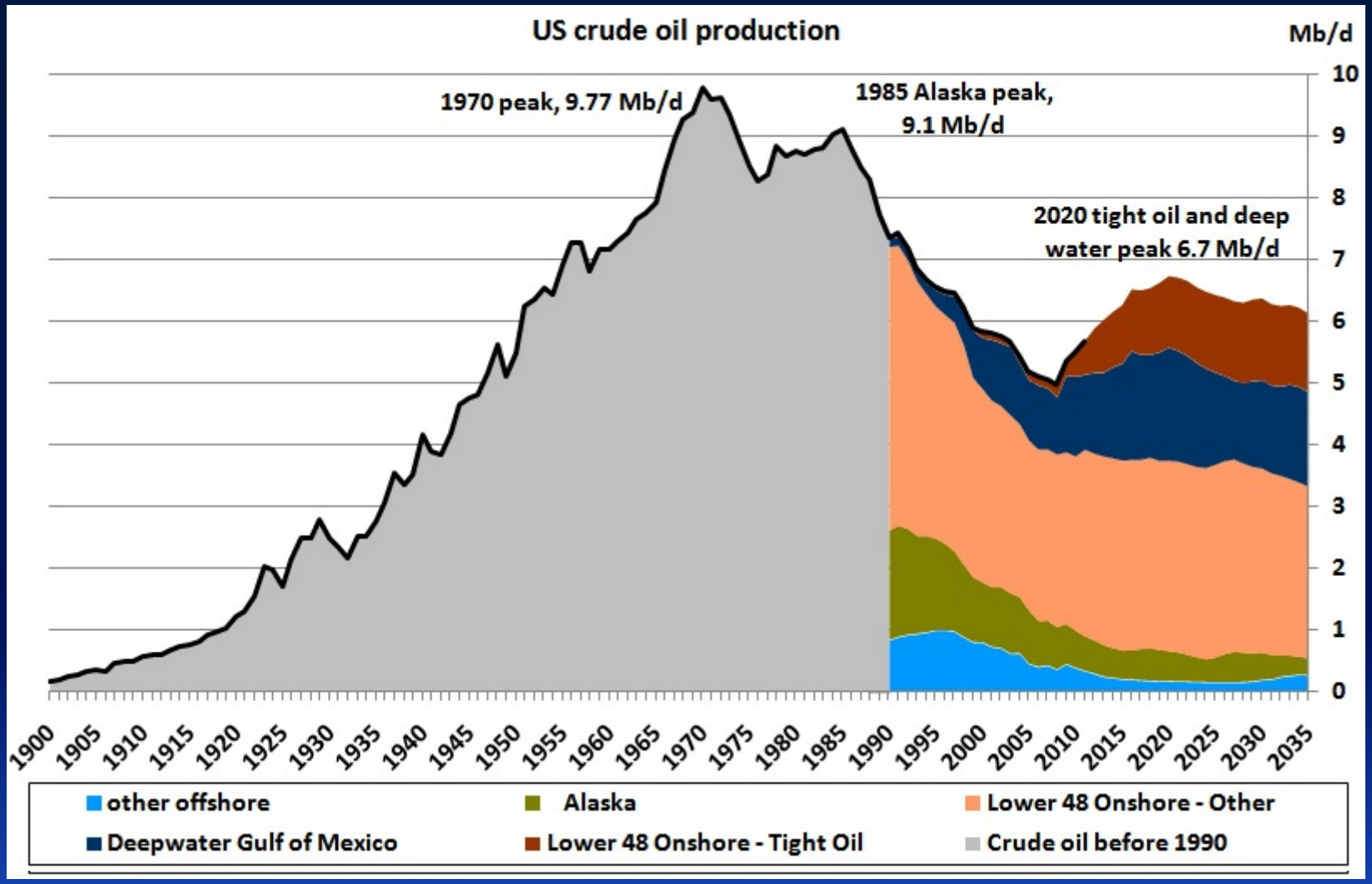
US Oil Production Outlook



+15% Production in 2013

Source: EIA

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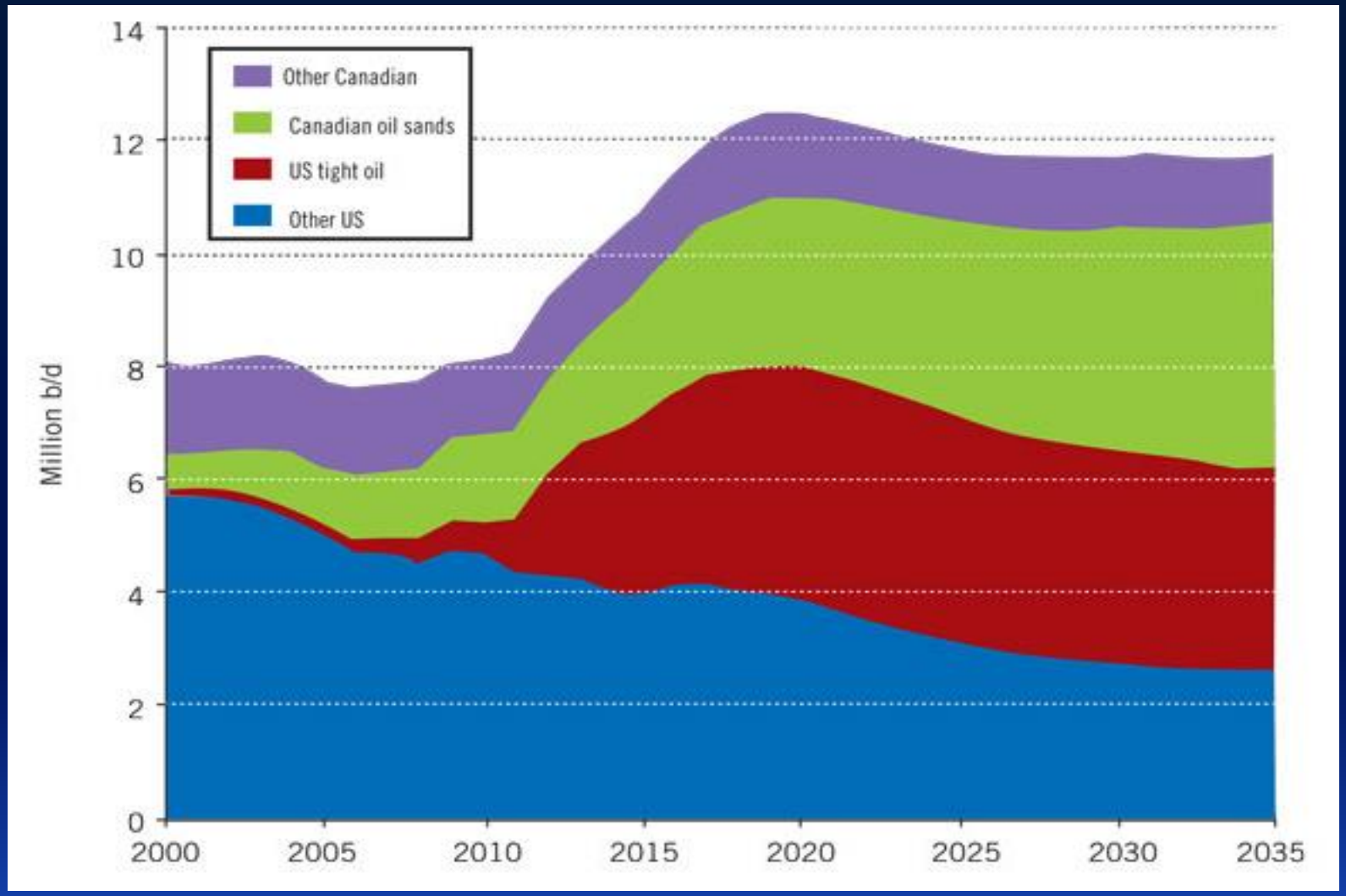
NAM Oil Production Outlook



New Production Peak by 2020

Source: EIA

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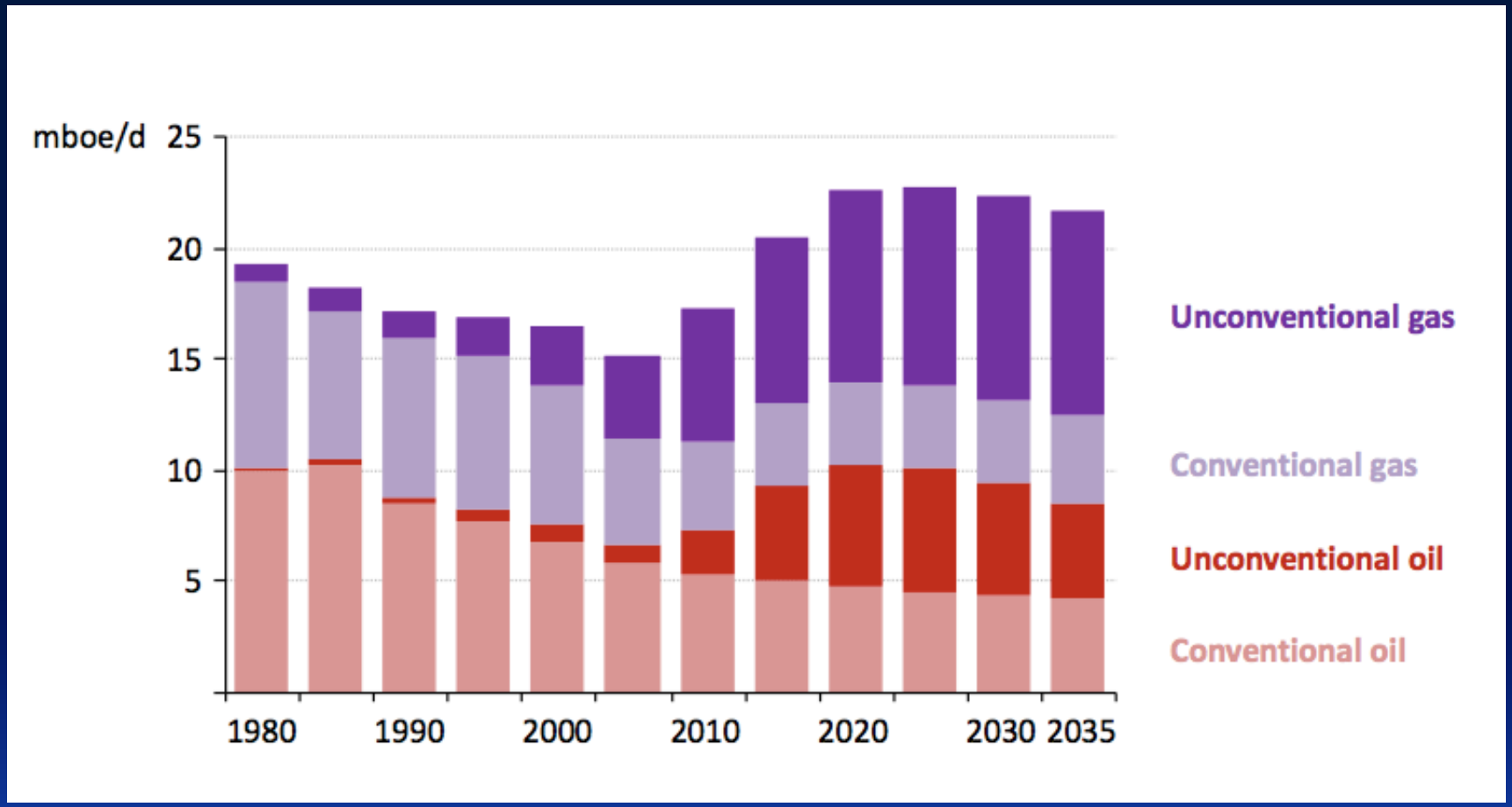
US Oil & Gas Production Outlook



Gas Production Outpacing Consumption

Source: EIA

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US Low Cost Feedstocks

- US low energy cost
- Repatriation opportunity (not only labour cost matters: Shipping, Quality, Risks)
- Oil export ban still in place from 1975
- Exports of LNG & refined products (ethane, propane)
- Ethylene cash cost comparison:
  - US/Canada = 200$/ton
  - Saudi Arabia < 100$/ton
  - EU (naphtha) = 1000$/ton

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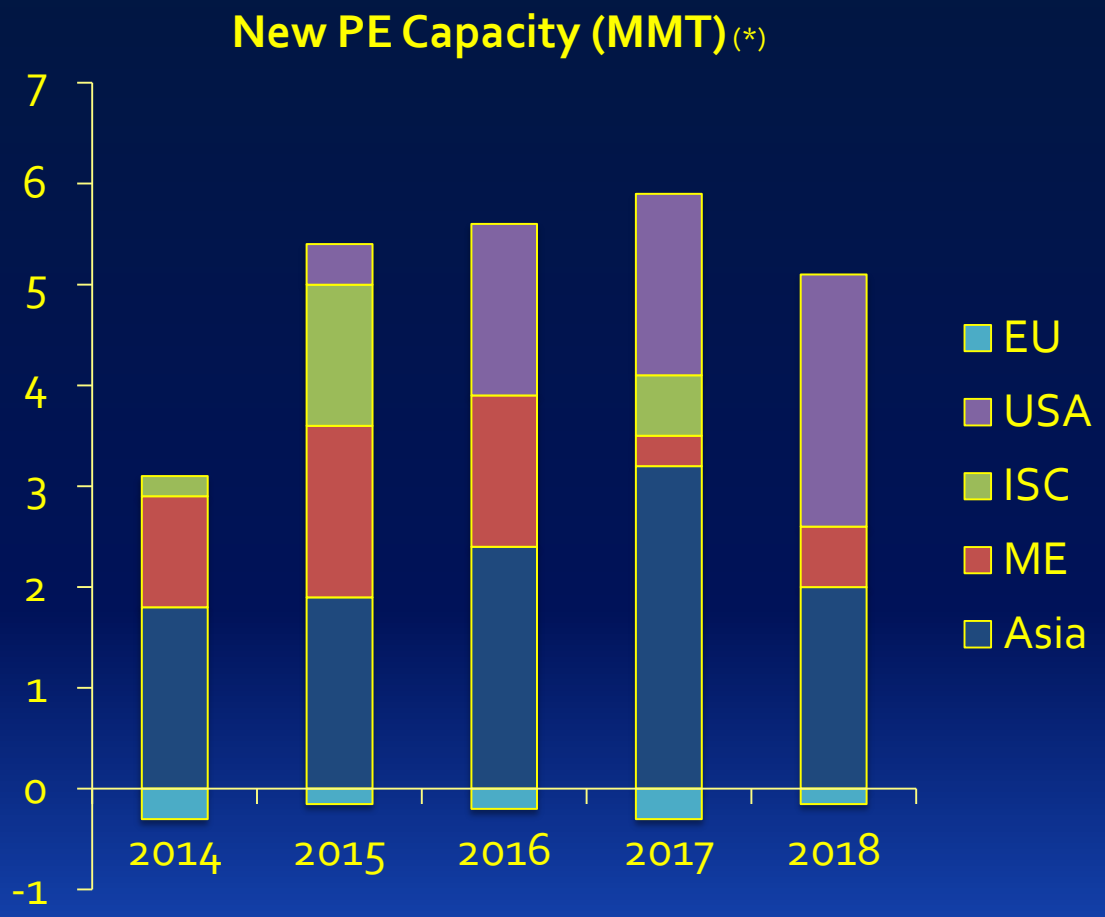
Polyethylene Supply & Demand

A 5 yrs Outlook



- 2013 Tot Demand about 80 MMT
- New Capacity exceeds Demand Growth
- 2 Low Cost Regions NAM/ME + China CTO (2/3)
- Trade More Competitive
- Iranian Exports restart in 2014
- Recycled PE gaining market shares
- Global Prices trend towards Parity (China)

(*) Source: ChemOrbis Production News

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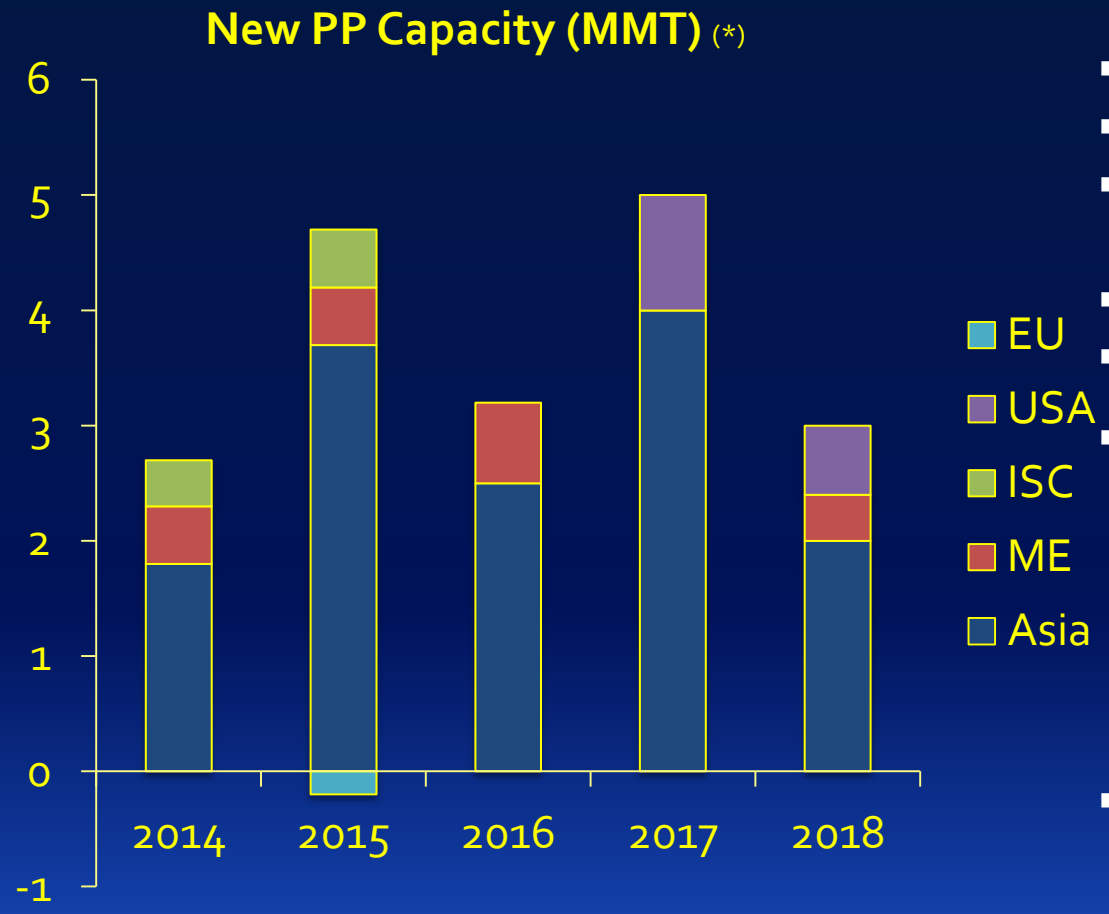
Polypropylene Supply & Demand

A 5 yrs Outlook



- 2013 Tot Demand about 55 MMT
- Installed Capacity Est. 65MMT
- New Capacity exceeds Demand Growth
- China Capacity 24%, Demand 34%
- Europe Capacity 15% will decrease
- Global Trade Shifting
  - ✓ ME will redirect exports to EU, Africa, India
  - ✓ South Korea to SEA, EU
  - ✓ US (PDH) will serve South America
- China price setting the benchmark

(*) Source: ChemOrbis Production News

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Europe Polymer Pricing Environment

+ Further Rationalization will strengthen the industry
+ Economy Recovering
+ Access to low cost feedstocks – Ethane Imports
+ Specialty Products (metallocenes)

- High costs operations
- Low operational efficiency
- Imports
- Tariffs changes
- Regulatory - i.e. Shopping bag ban

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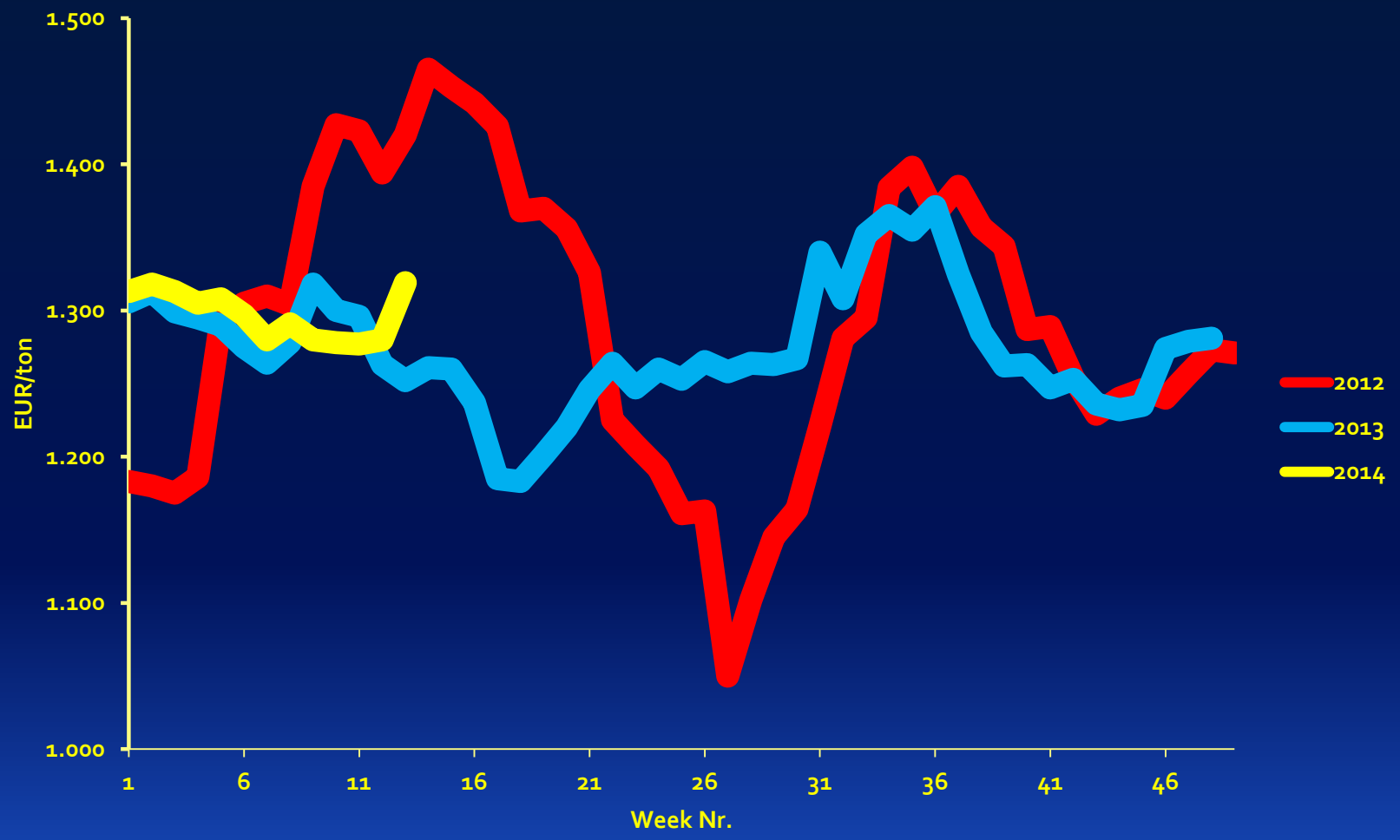
PP homopolymer - FD Italy



Source: ChemOrbis Price Indexes

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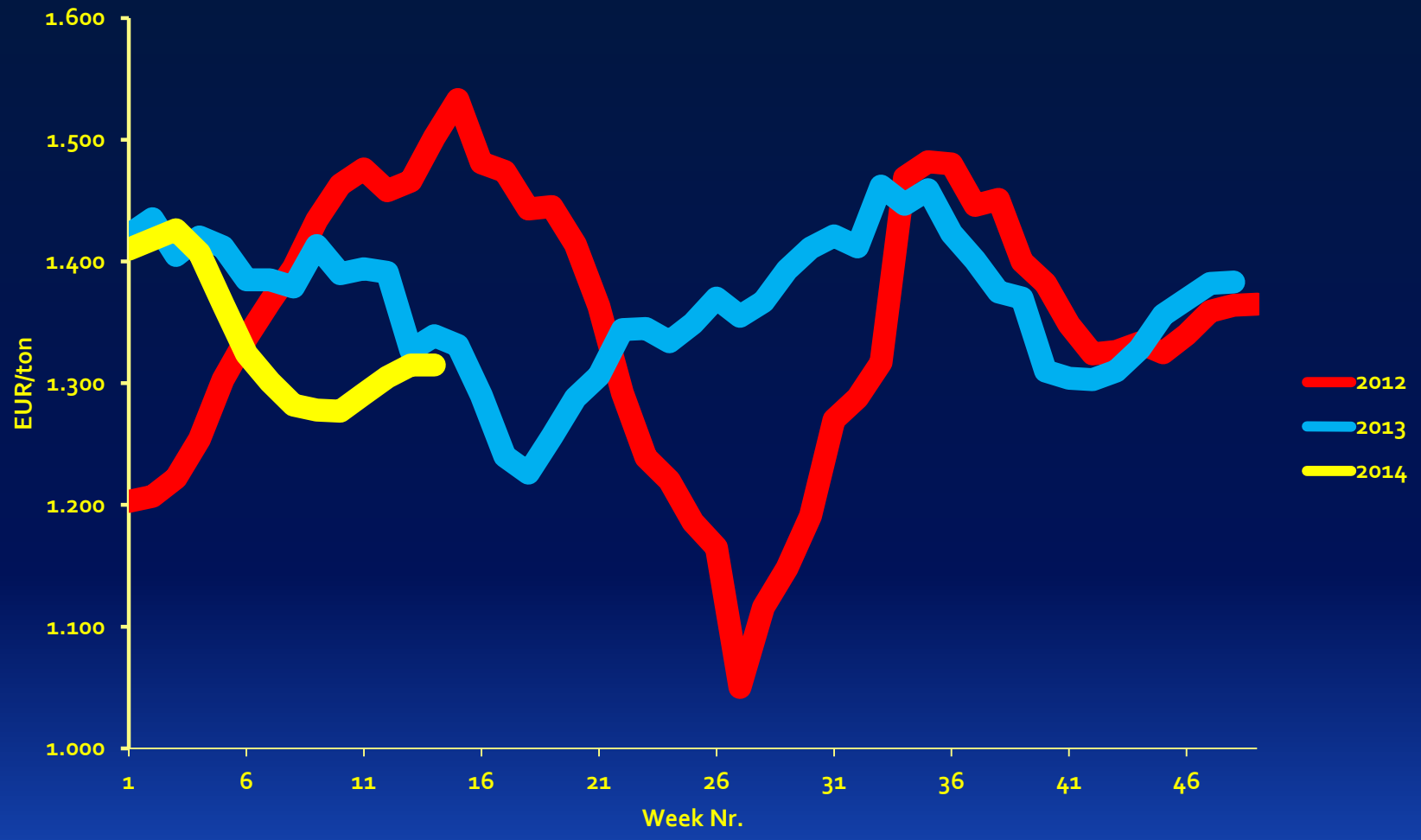
LDPE - FD Italy



Source: ChemOrbis Price Indexes

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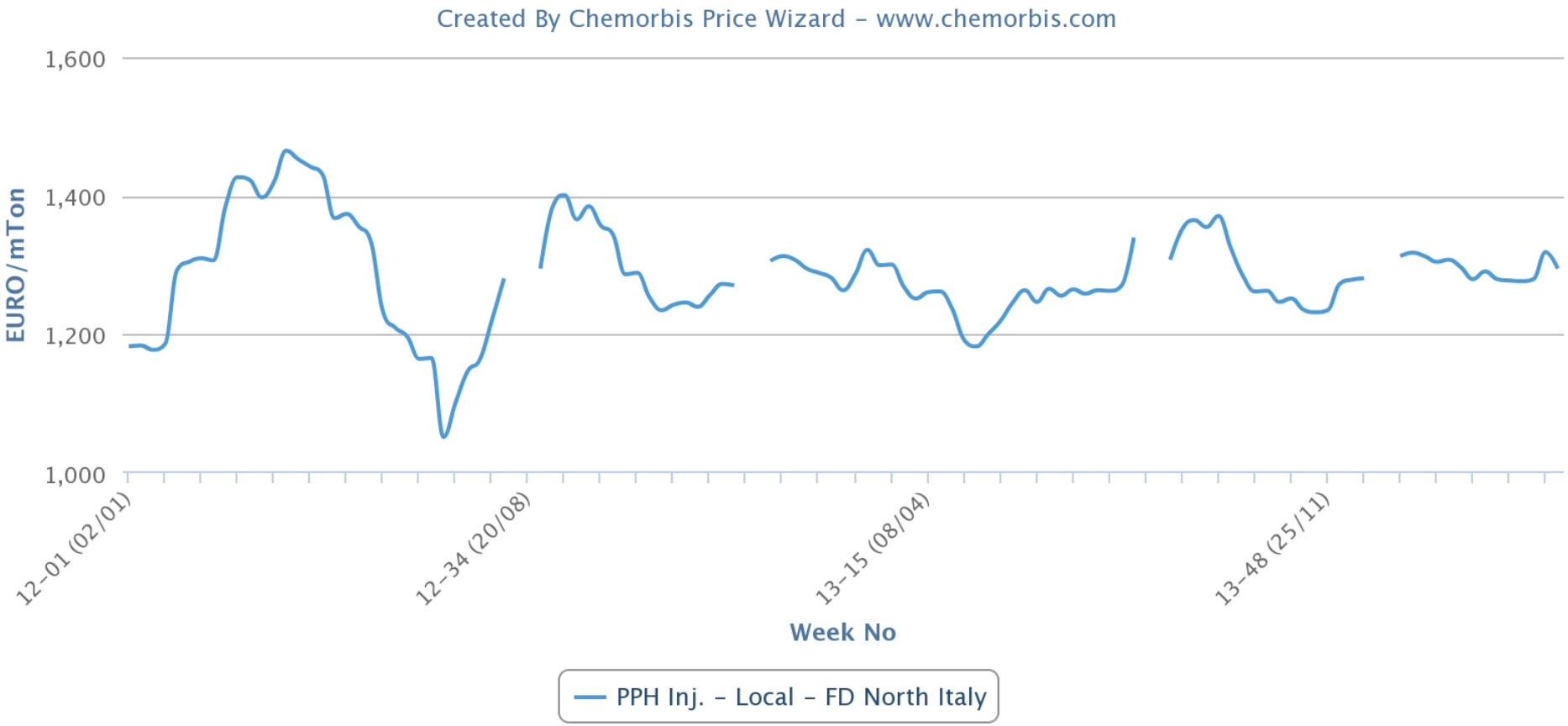
Looking for a Benchmark: PPH



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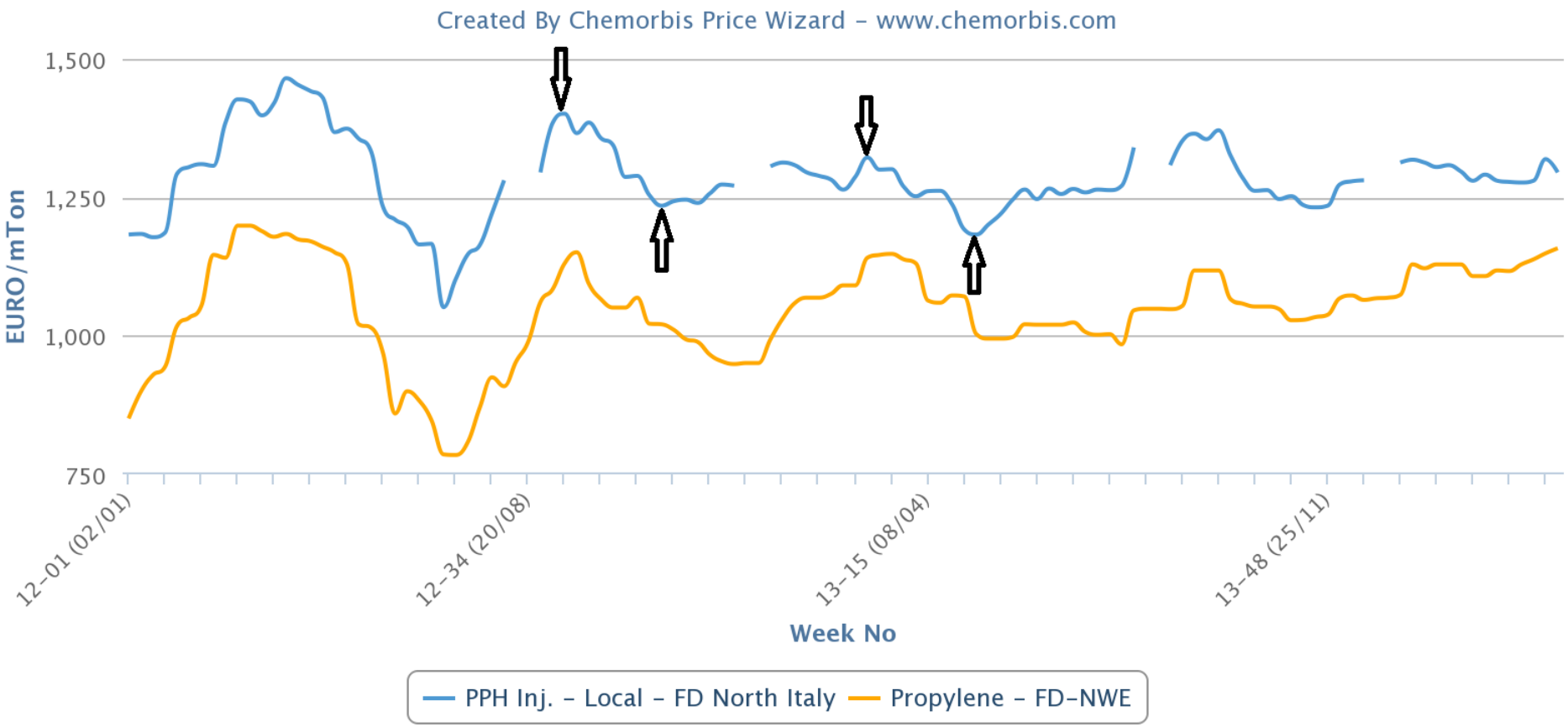
Looking for a Benchmark: PPH Vs. Monomer Spot



Looks like PP is dragging Propylene

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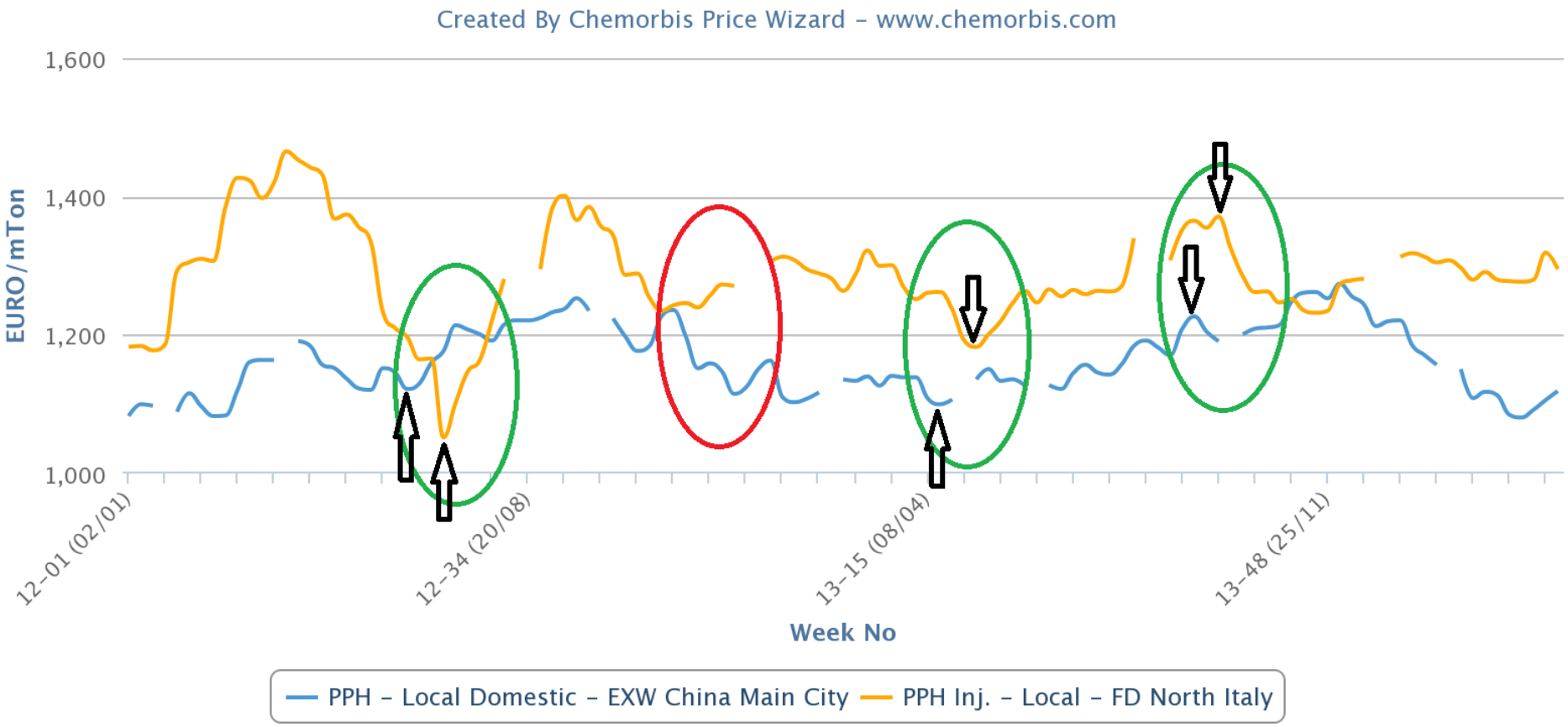
Looking for a Benchmark: PP Vs. China Price



PP China Price Moves Ahead

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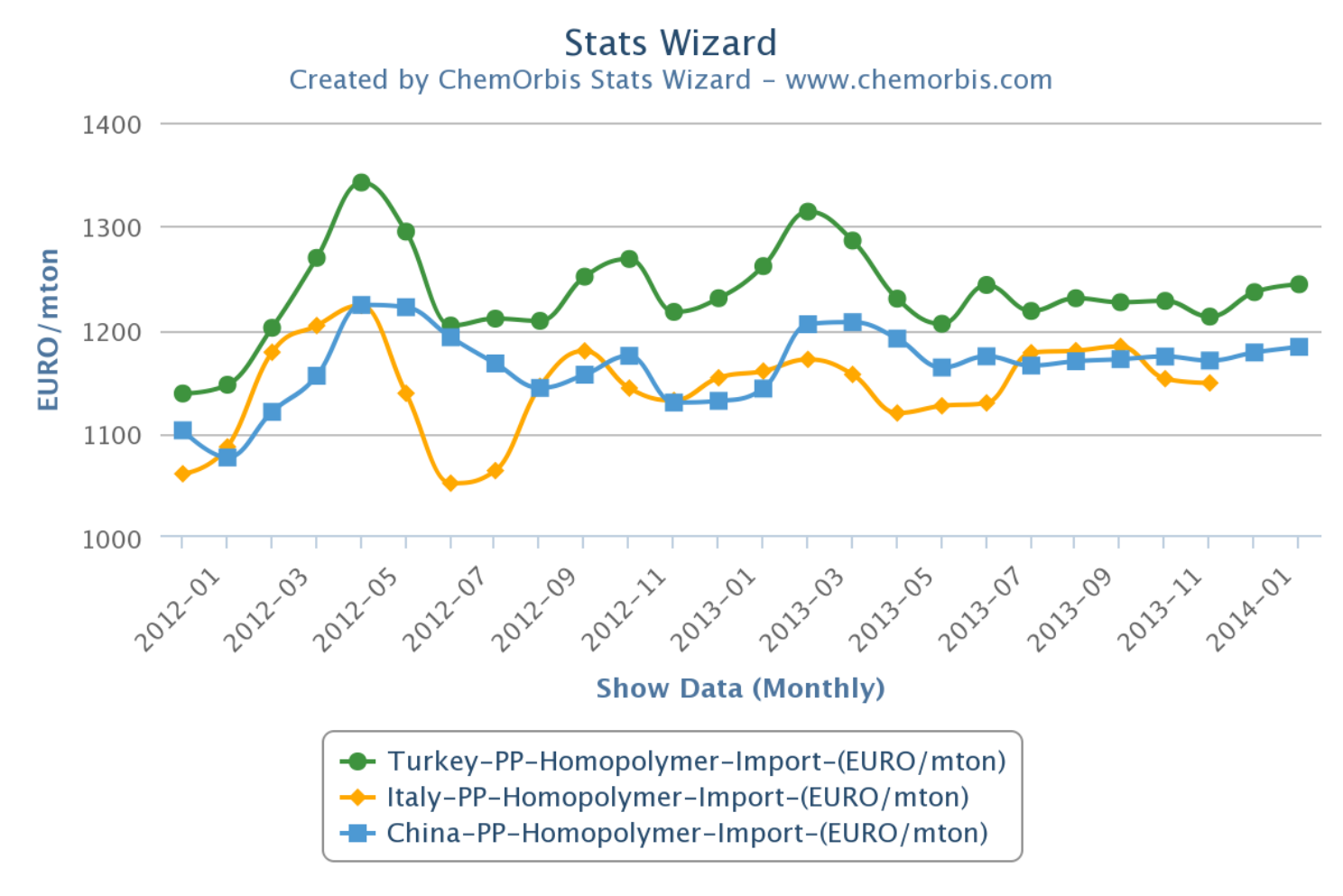
Import Prices: PPH comparison Italy Vs. China & Turkey



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European Polymer Pricing Considerations

- Volatility is high in Europe
- Past history is not valid for reference
- Best Benchmark reference is a combination of Spot Market Prices & Local Supply-Demand
- Import Prices can be as competitive as China

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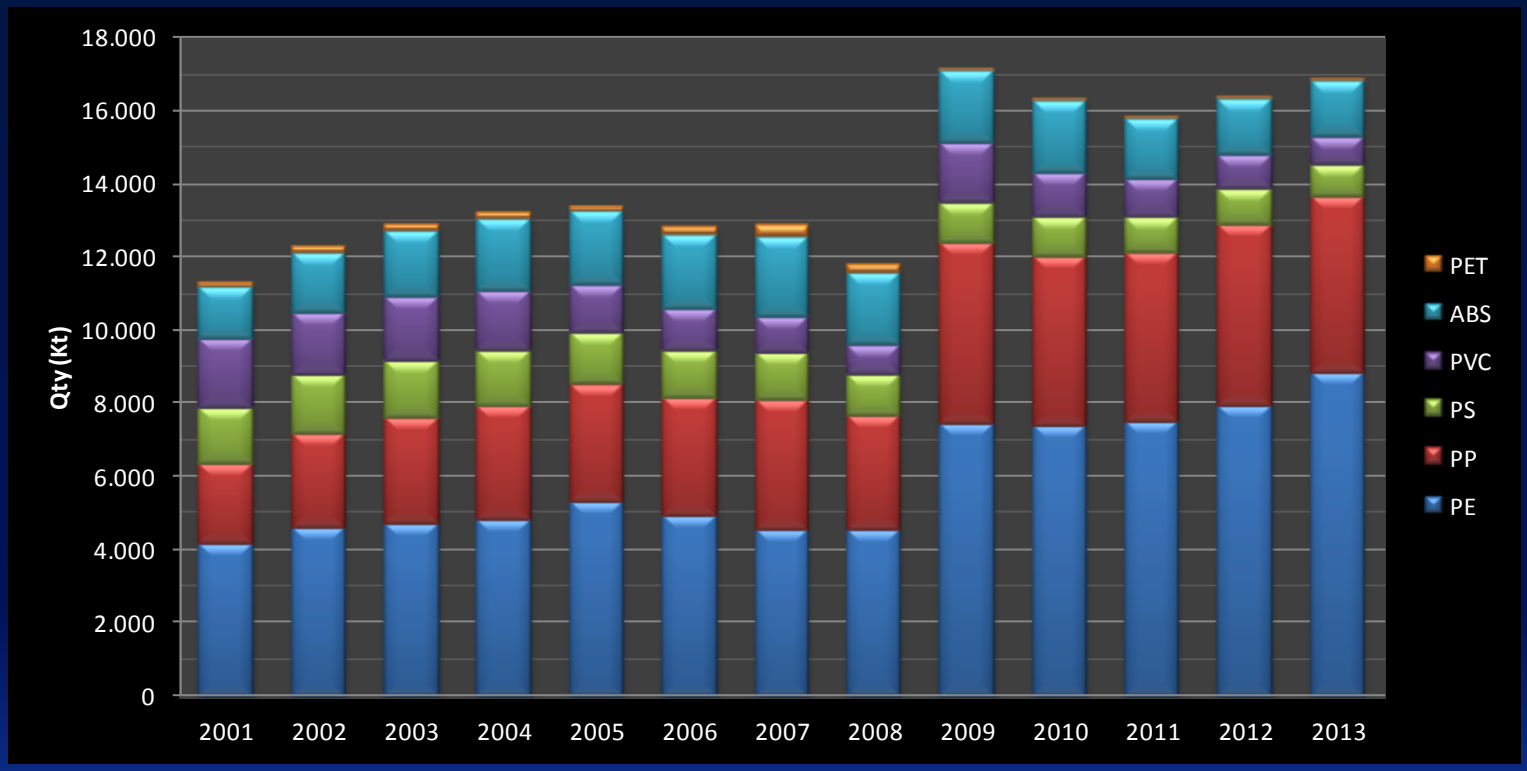
China Polymer Imports



Source: ChemOrbis Stats Wizard

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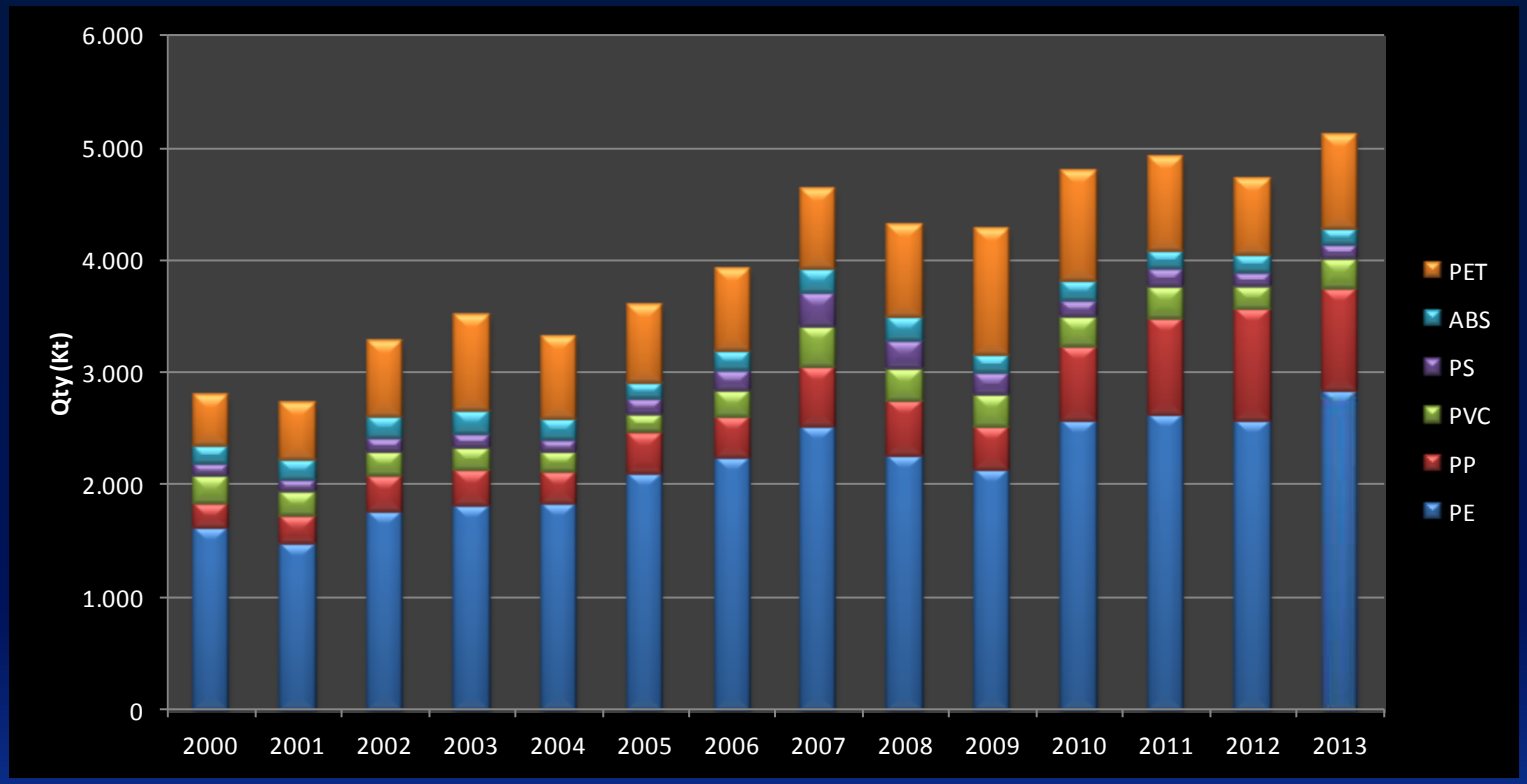
EU Polymer Imports



Source: ChemOrbis Stats Wizard

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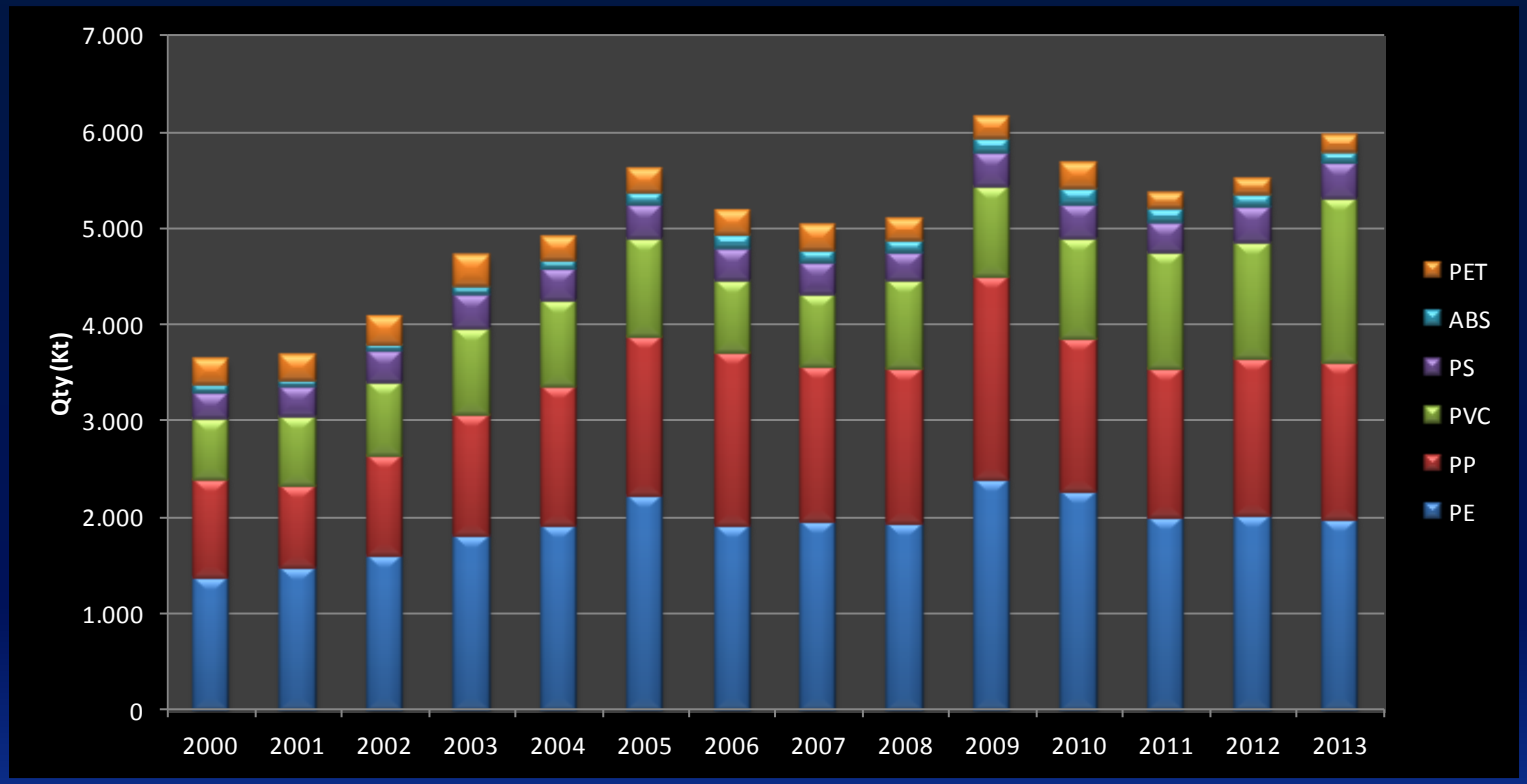
EU Polymer Exports



Source: ChemOrbis Stats Wizard

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China Major Polymer Importers

	2013 Qty (Kt)	2012 Rank	Position
South Korea (+1.4%)	2.949	1	=
Saudi Arabia (+2.9%)	2.449	2	=
Taiwan (+6.5%)	2.386	3	=
Iran (+25.2%)	1.442	5	UP
Singapore (+30.0%)	1.243	7	UP
Thailand (=)	1.206	4	Down
United Arab Emirates (-6.3%)	910	6	Down
United States (-23.0%)	690	8	=
Japan (-3.2%)	684	9	=
Qatar (+23.8%)	488	13	UP
Total TOP 10	14.447	85.9%	
TOTAL (+3.2%)	16.824		

Source: ChemOrbis Stats Wizard

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EU Major Polymer Importers

	2013 Qty (Kt)	2012 Rank	Position
Saudi Arabia	1.614	1	=
South Korea	598	2	=
Qatar	412	3	=
United States	263	6	UP
Brazil	255	4	Down
India	222	16	UP
Norway	197	5	Down
Oman	167	10	UP
Mexico	157	9	=
Israel	122	8	Down
Total TOP 10	4.008	78.4%	
GRAND TOTAL	5.111		

Source: ChemOrbis Stats Wizard

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Conclusions

- US again competitive
- ME exports and downstream
- Asia, strong investments and growth
- Europe optimization and high price volatility
- Spot Markets Price Benchmark combined with Regional Demand-Supply

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THANK YOU...

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