US-European Refining Showdown

Special Presentation

The European Fuels Conference

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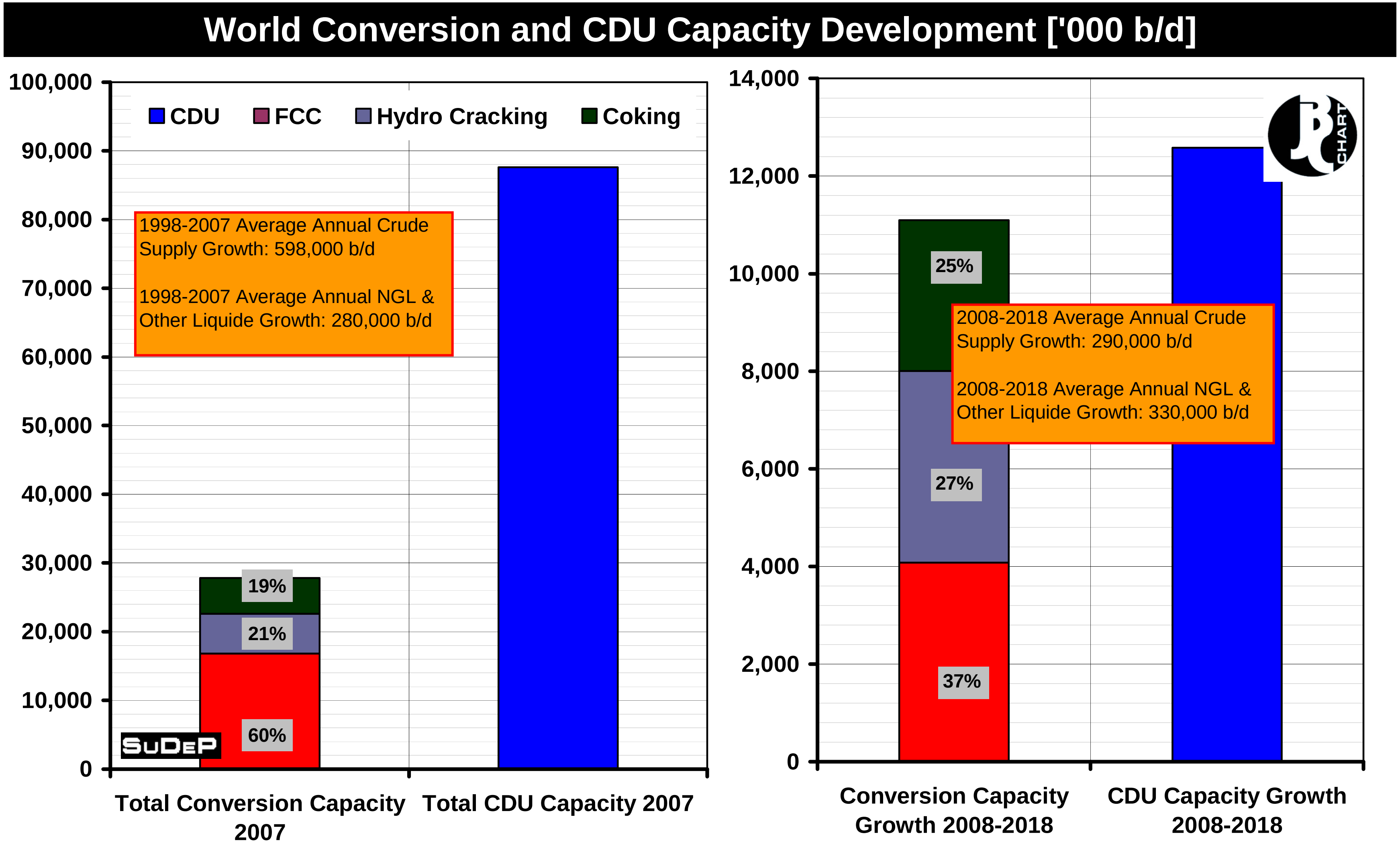
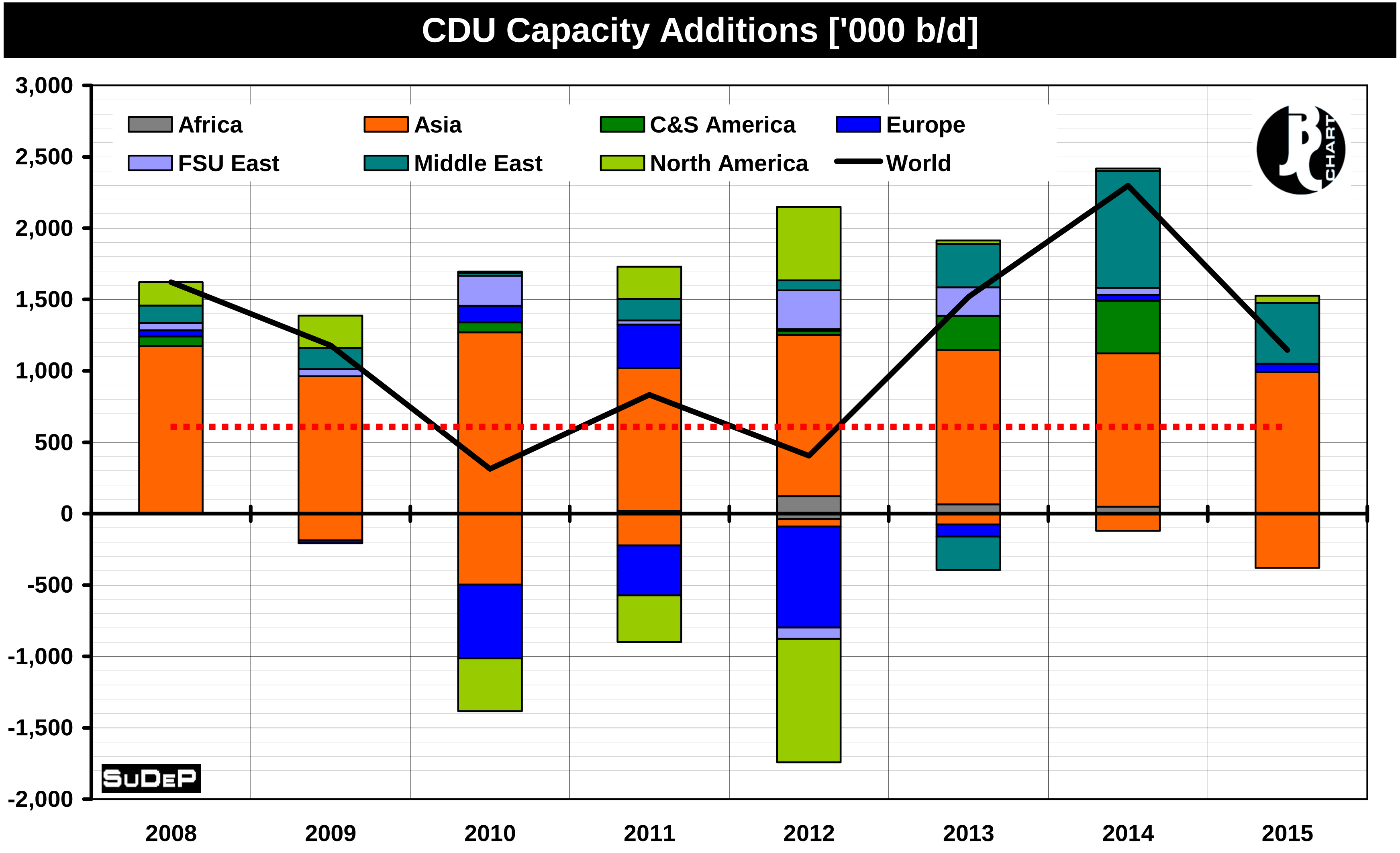
Overview

- Global Downstream Environment
- US vs. European Refining Sector
- PADD 1 Focus
- Conclusions

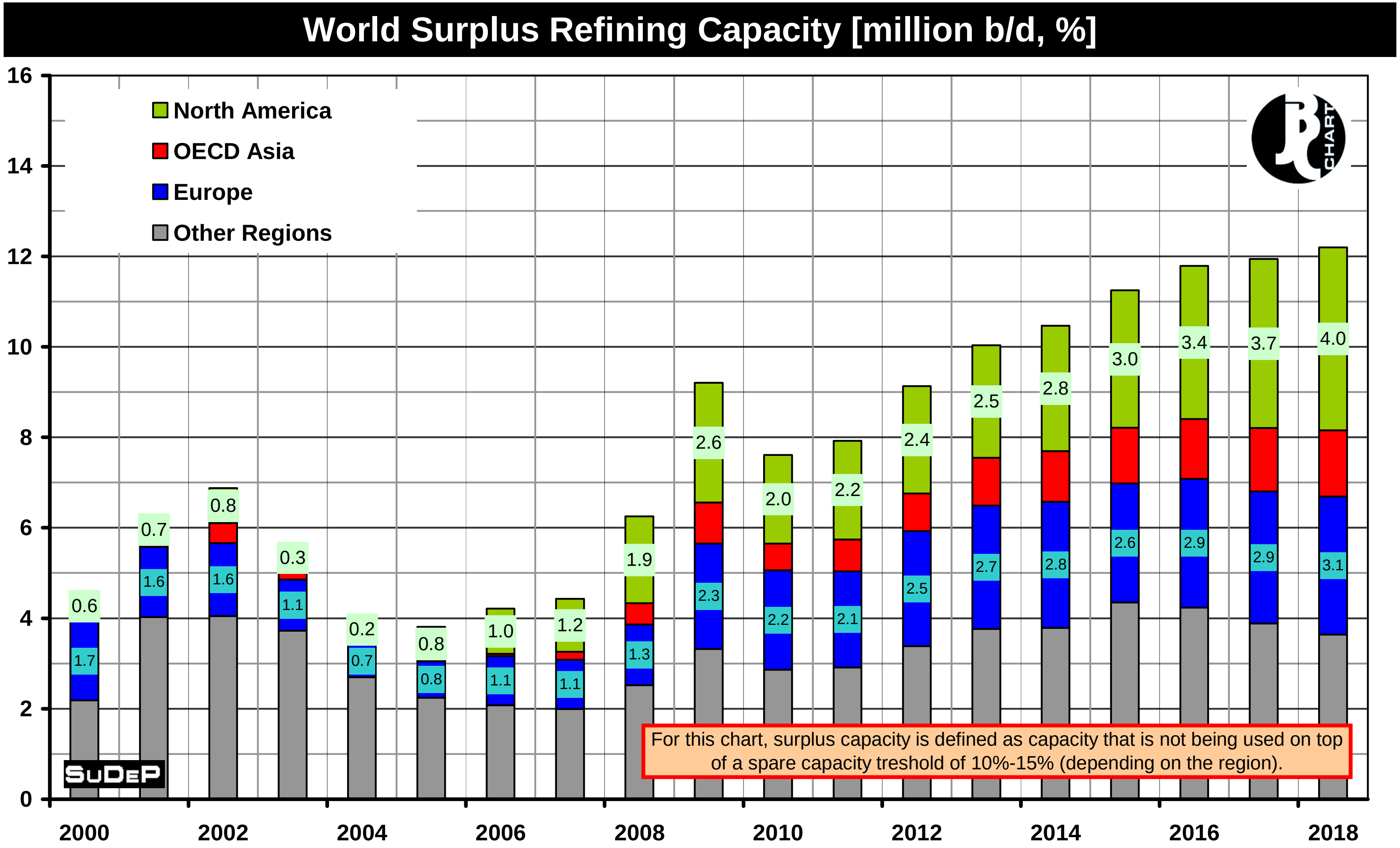
Global Downstream Environment



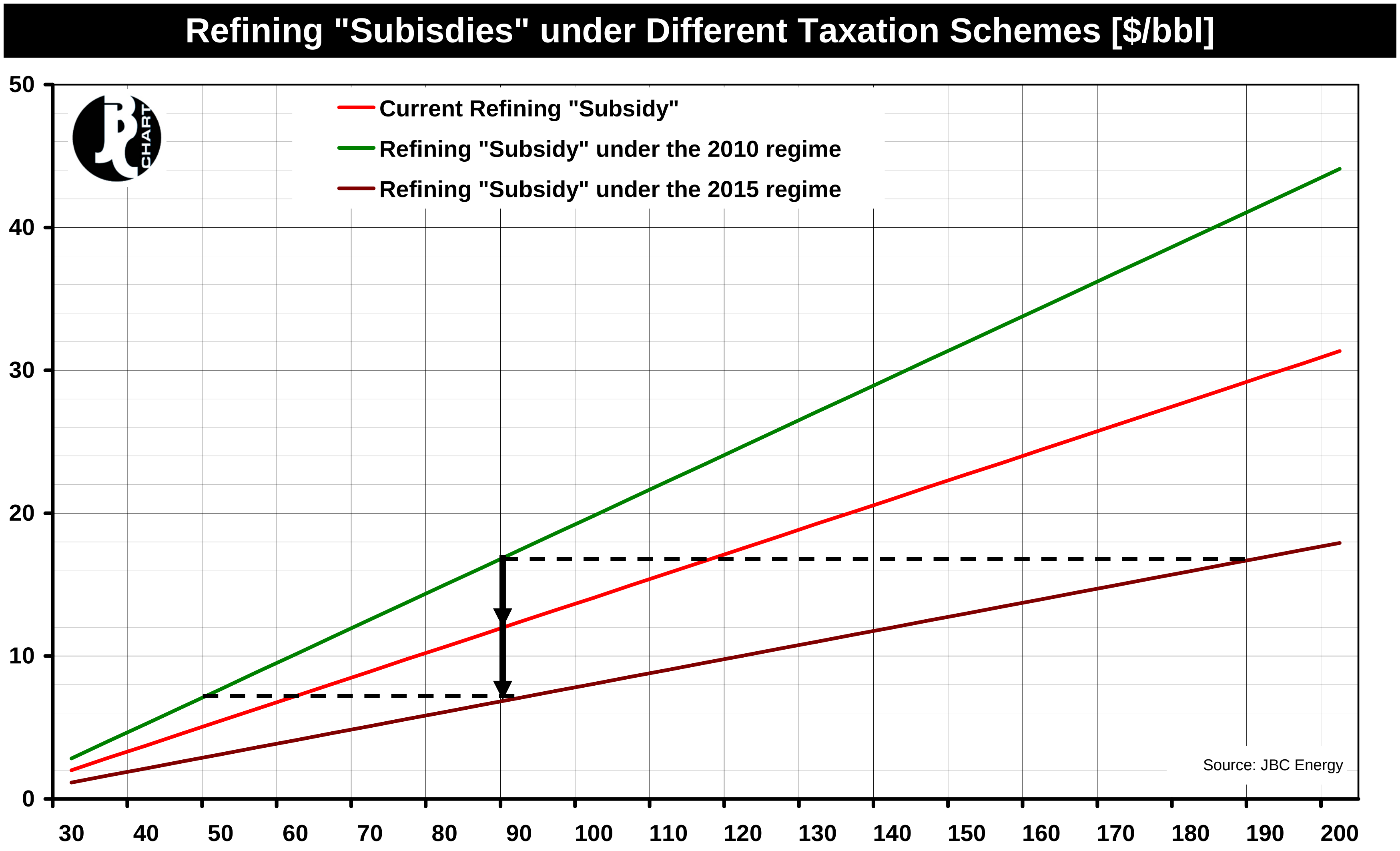
Global Downstream Environment



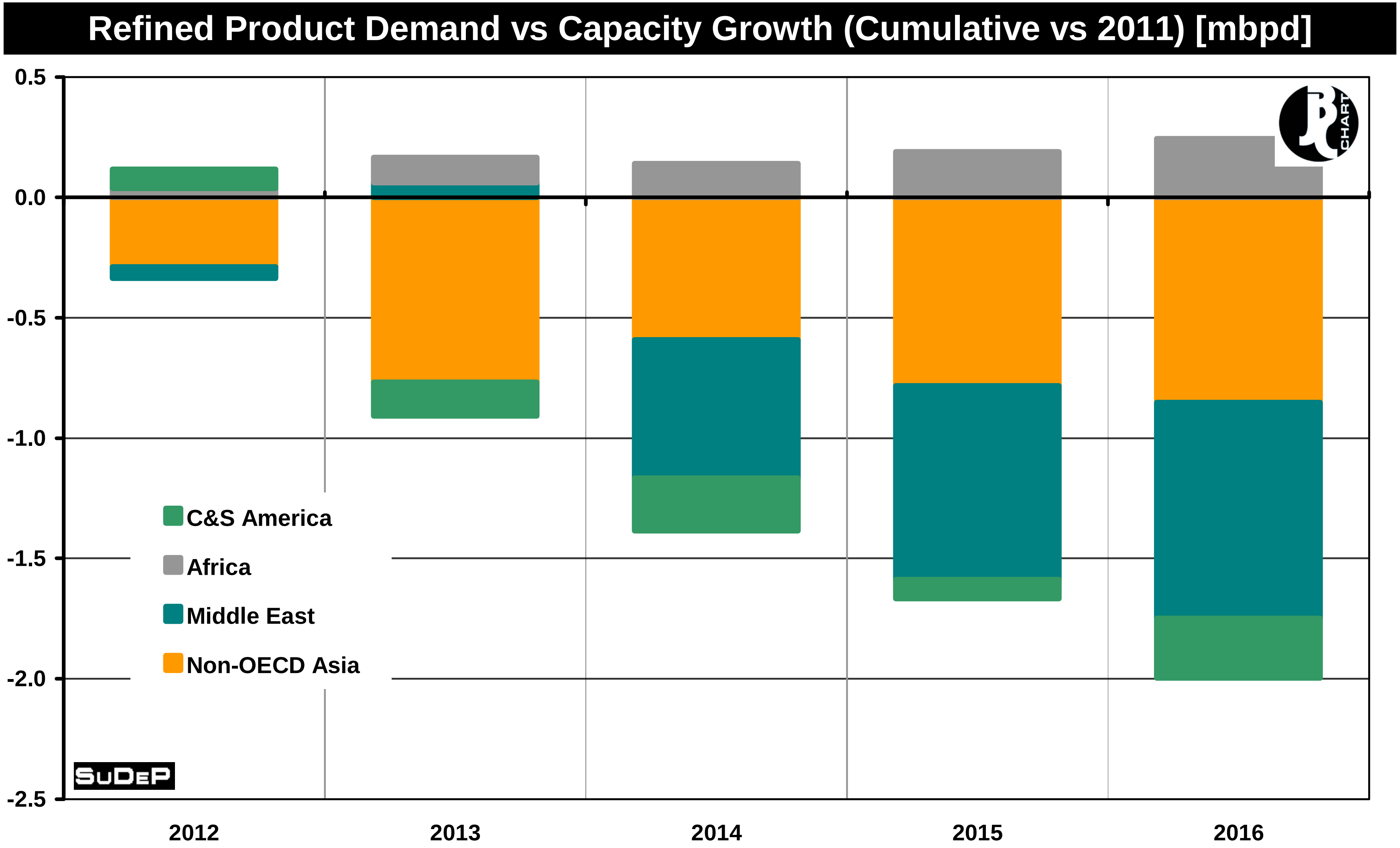
Global Downstream Environment



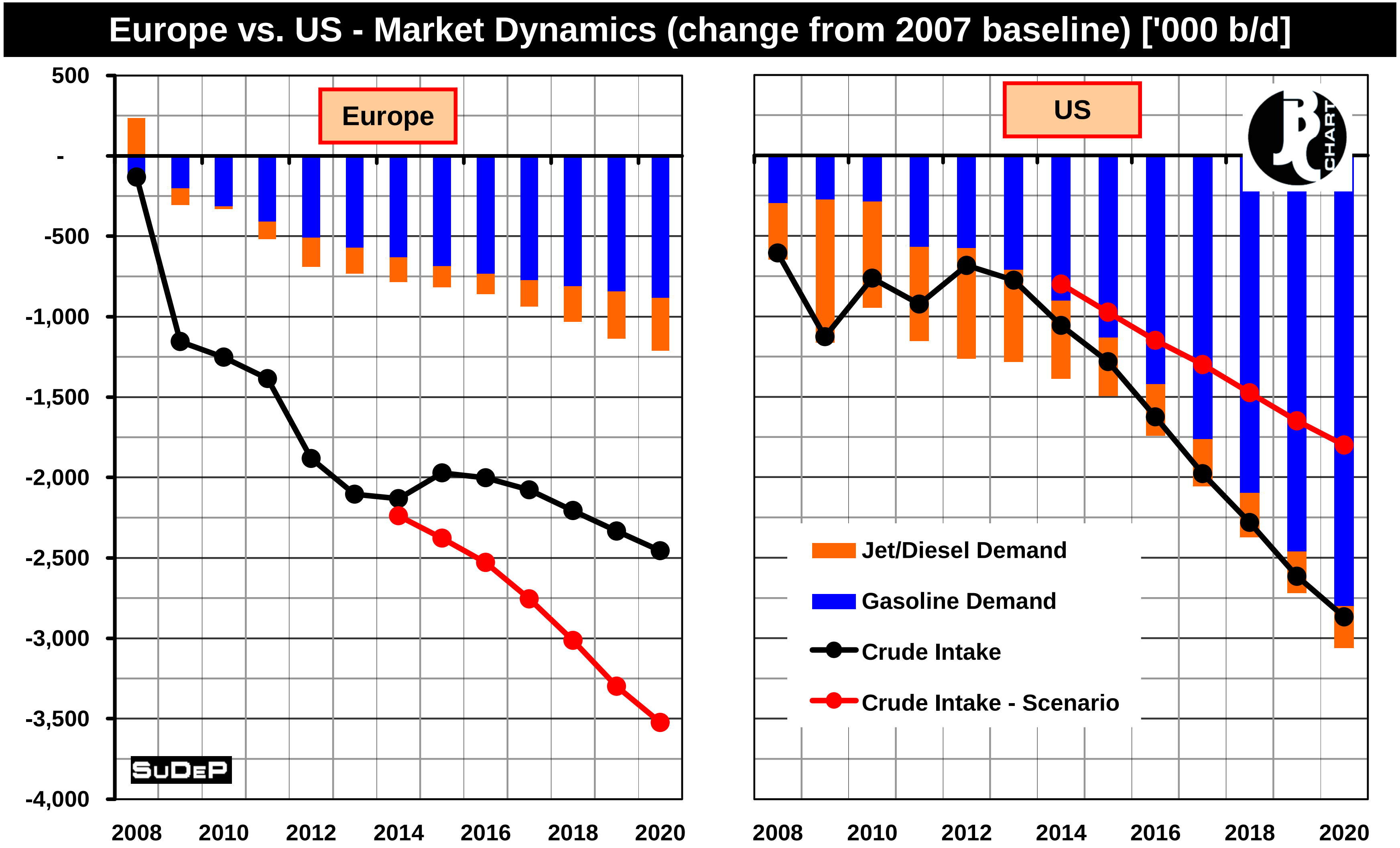
Global Downstream Environment



Global Downstream Environment



US vs. European Refining Sector



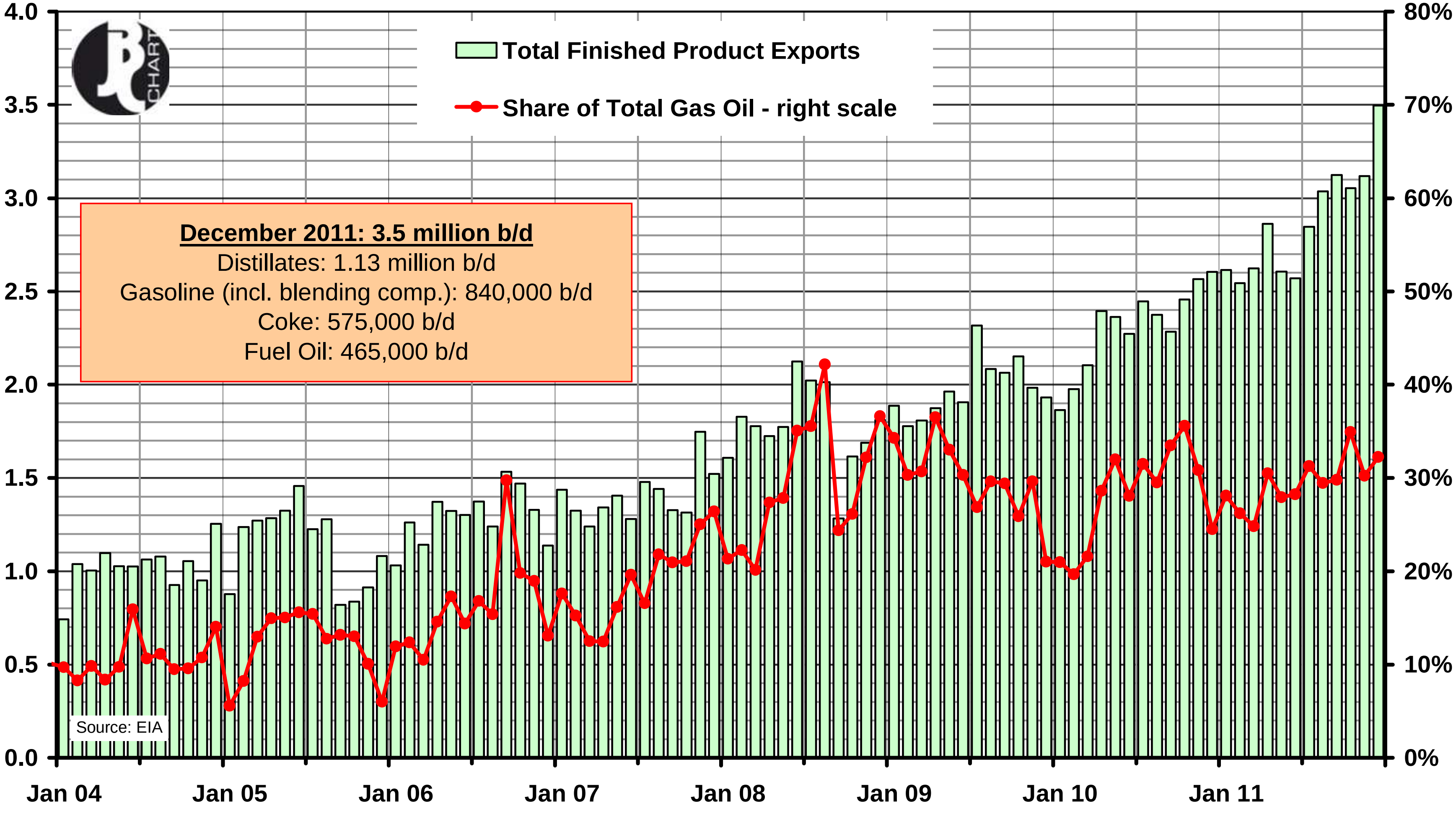
US vs. European Refining Sector

Competitive Advantages of US Refiners:

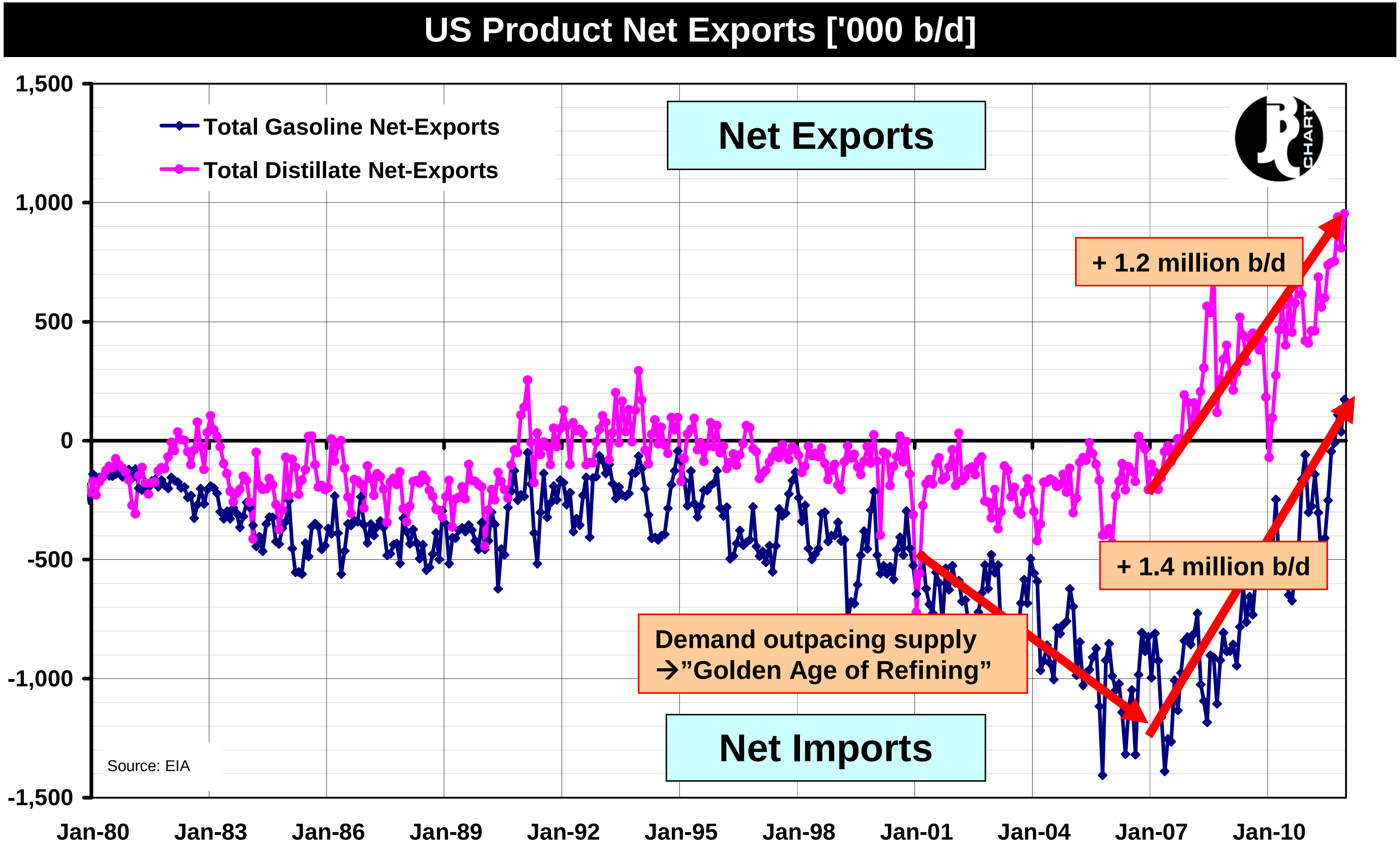
- Cheap feedstocks
  - Average 2011 crude procurement costs about $10 per barrel below Dated Brent
  - Some grades recently sold at up to $50 per barrel below international market prices
  - Natural gas about 75% cheaper than in Europe
- Large, highly complex and integrated refining powerhouse in Padd-3/Gulf Coast
- Much less stringent emission regulation than in Europe
- Flexible reaction to market signals
  - Strong throughput and yield adjustments
  - Together with weekly market data and active RBOB futures trading, gasoline cracks are regularly supported
- Access to nearby growing market in Latin America

US vs. European Refining Sector

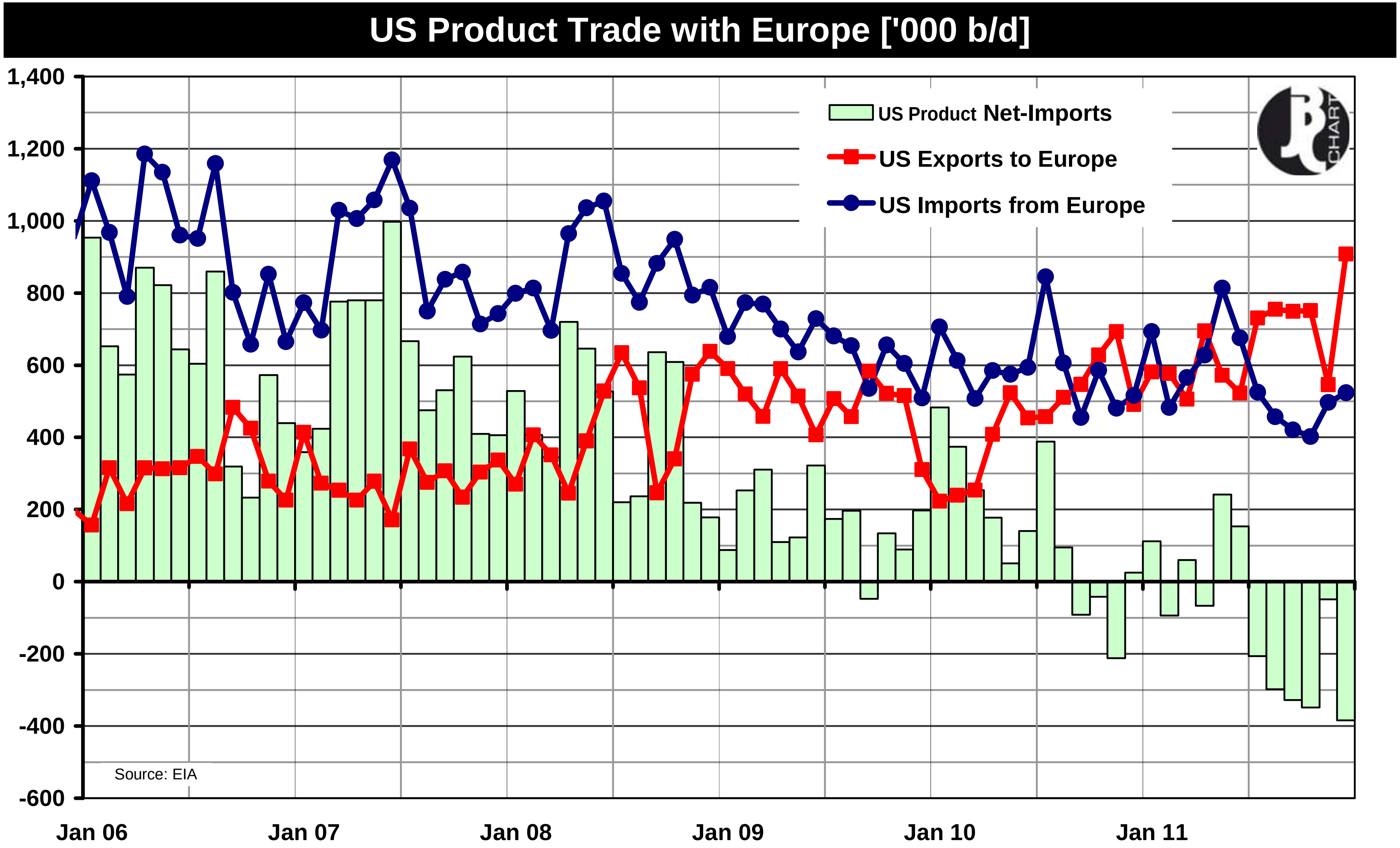
US Product Exports [million b/d]



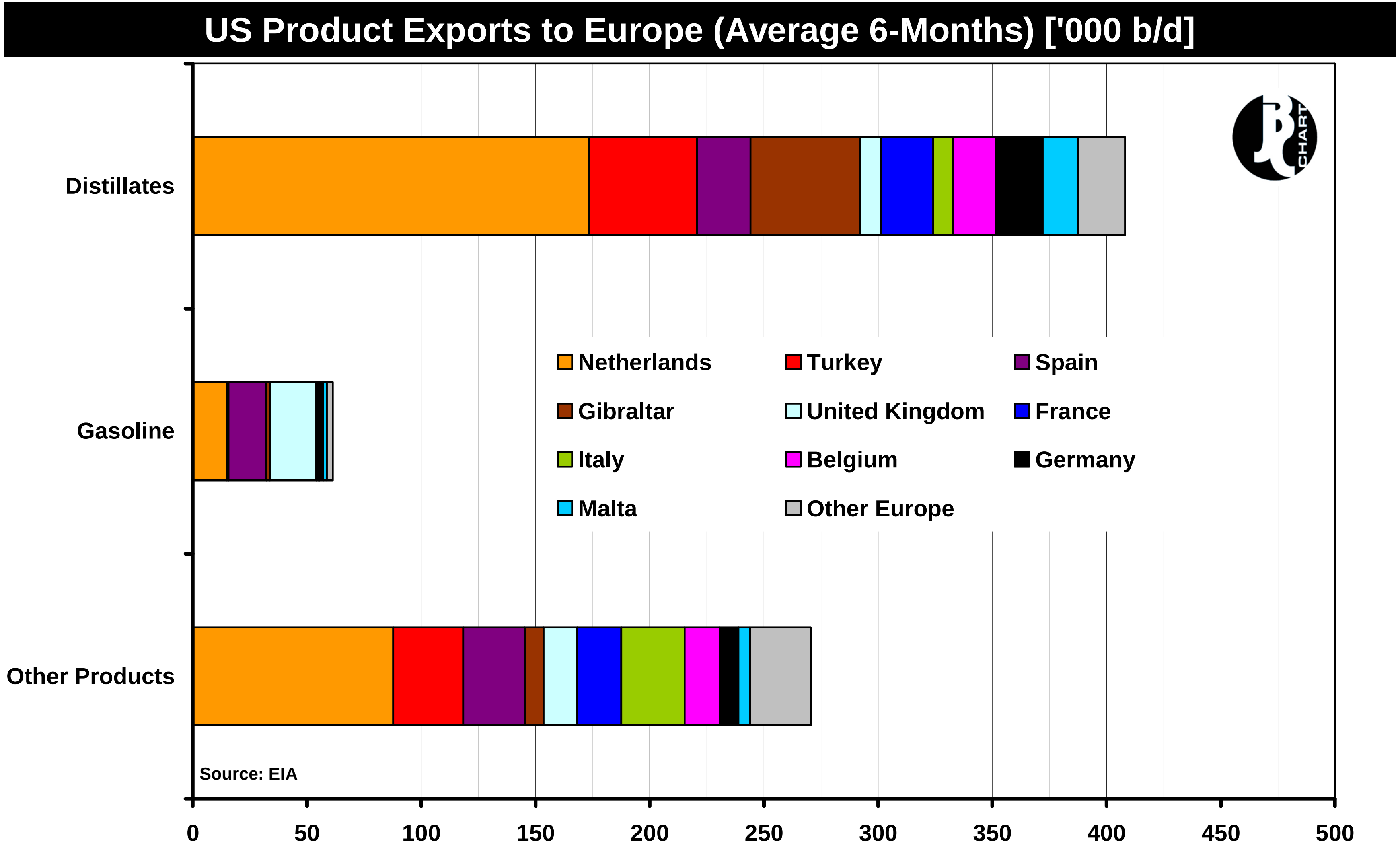
US vs. European Refining Sector



US vs. European Refining Sector



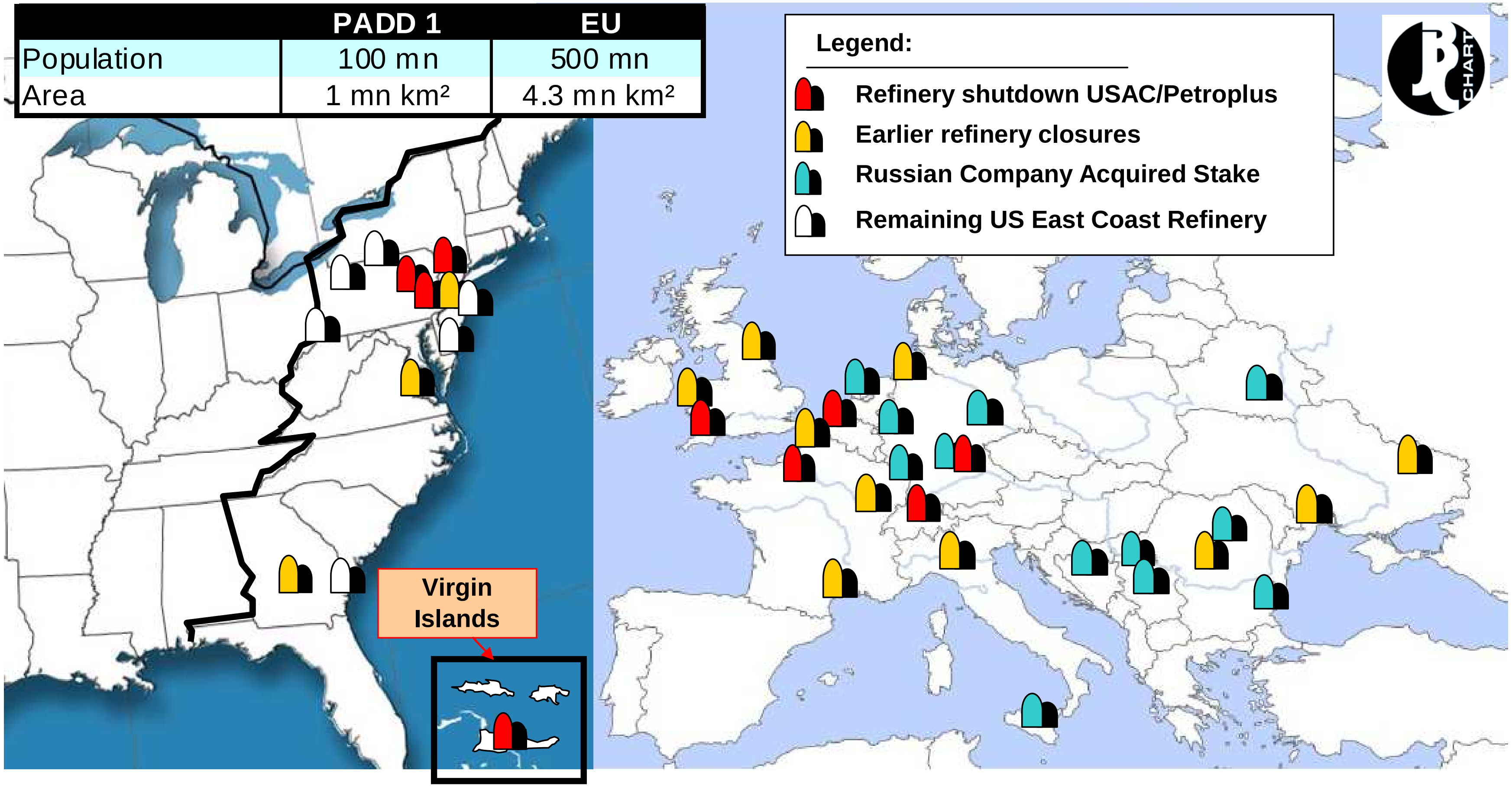
US vs. European Refining Sector



PADD 1 Focus

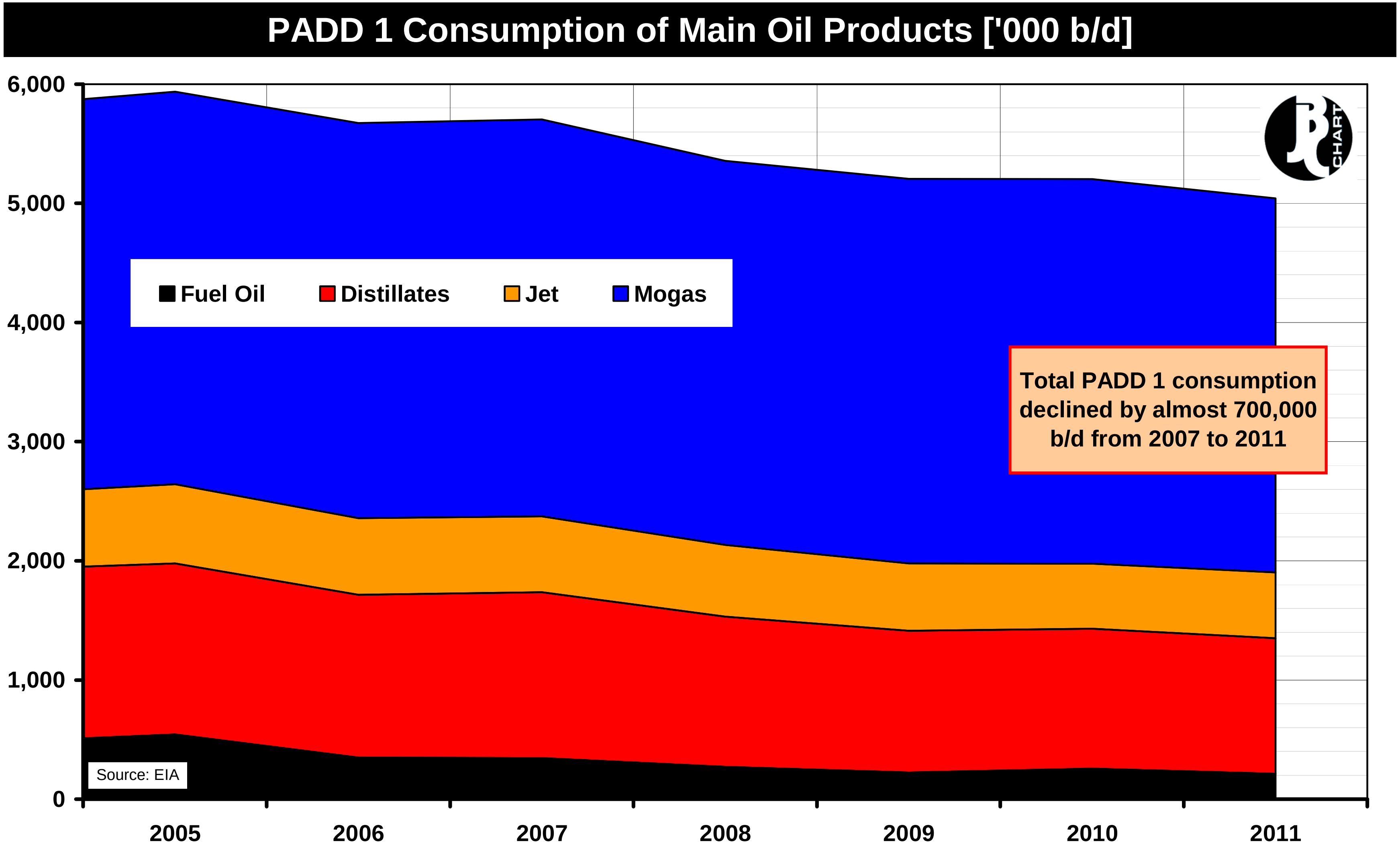
Refinery Landscape PADD 1 and Europe

	PADD 1	EU
Population	100 mn	500 mn
Area	1 mn km²	4.3 mn km²

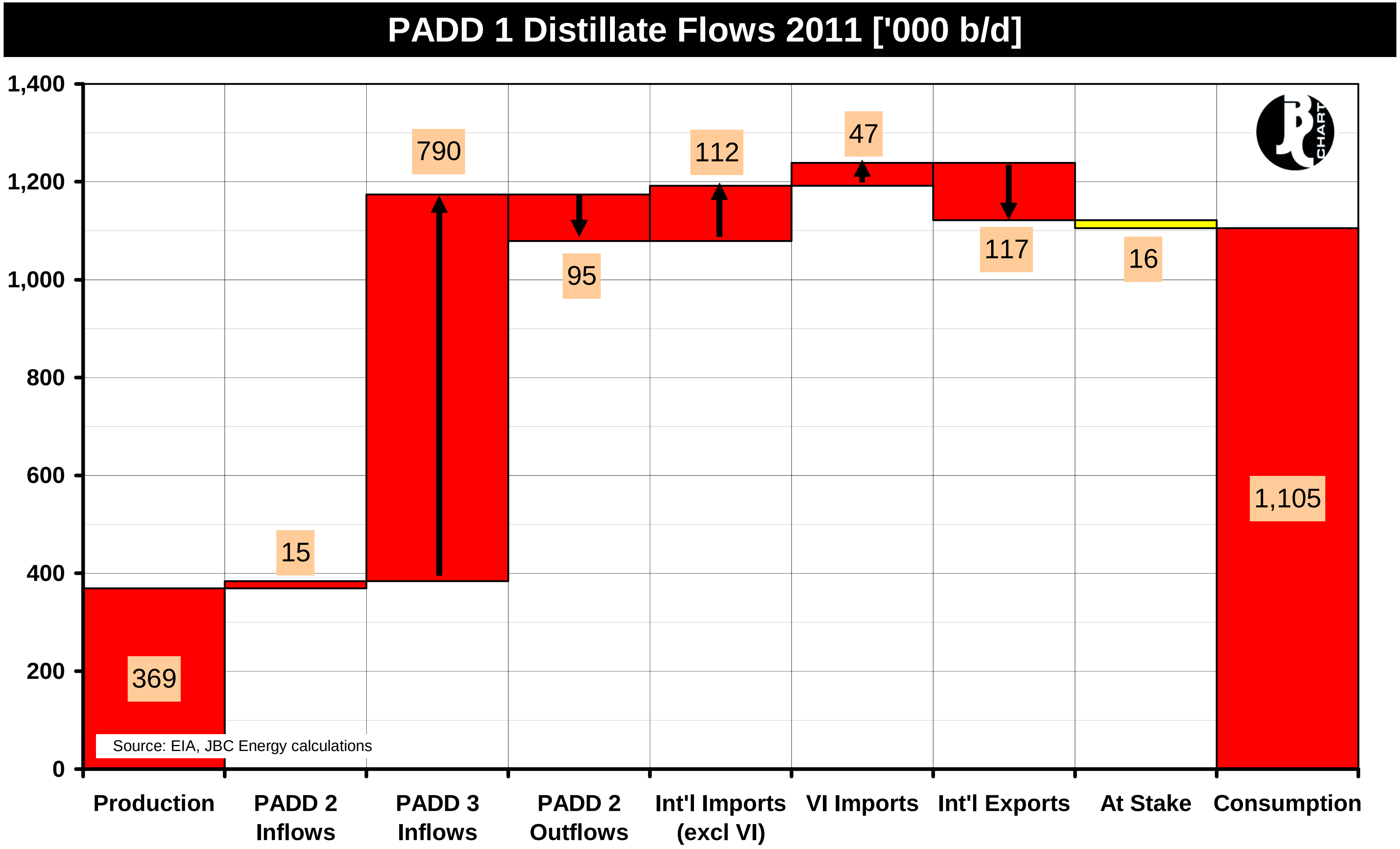


Source: JBC Energy

PADD 1 Focus

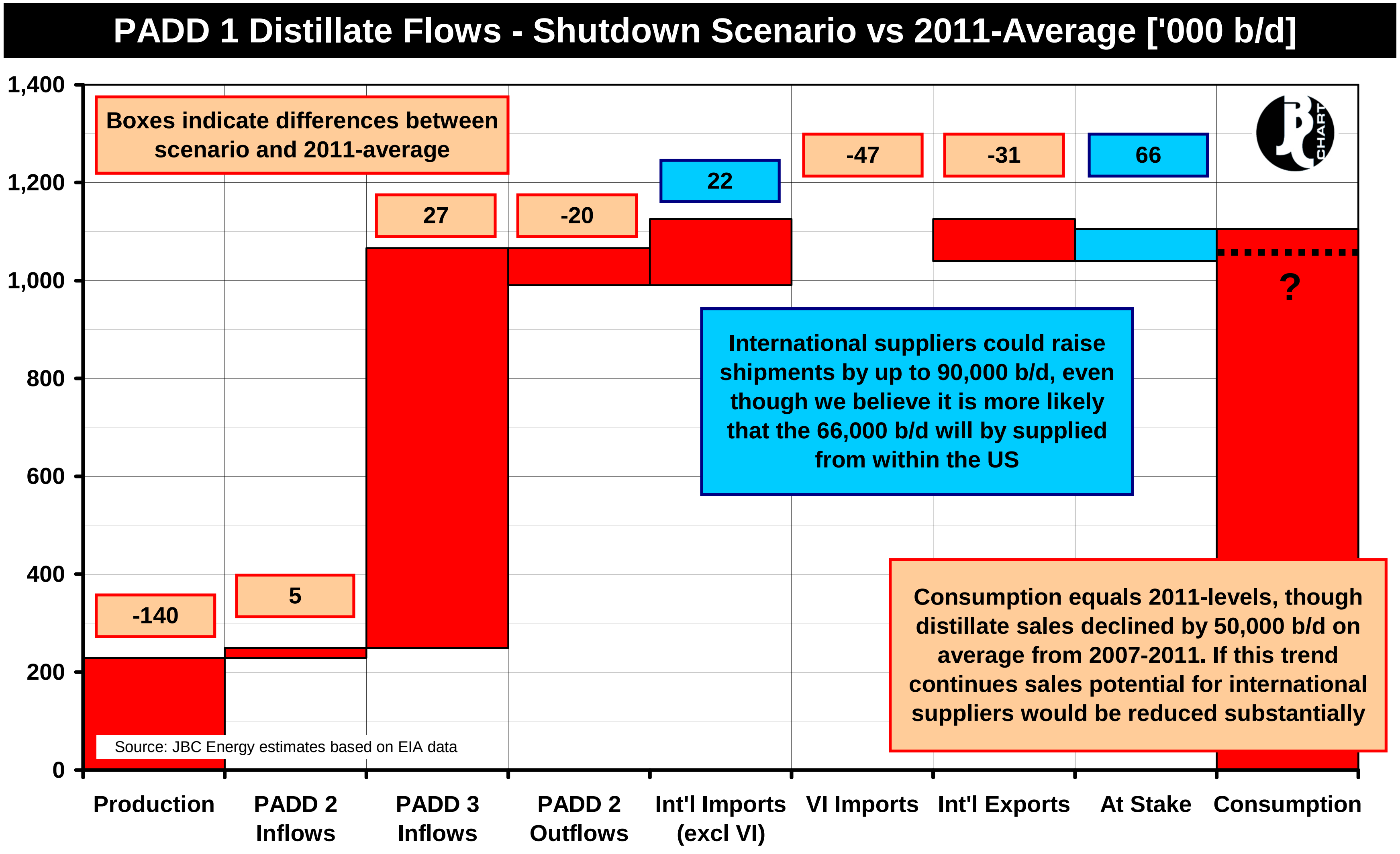

PADD 1 Consumption of Main Oil Products ['000 b/d]
6,000
5,000
4,000
3,000
2,000
1,000
0
2005
2006
2007
2008
2009
2010
2011
Fuel Oil
Distillates
Jet
Mogas
Total PADD 1 consumption declined by almost 700,000 b/d from 2007 to 2011
Source: EIA
CHART

PADD 1 Focus



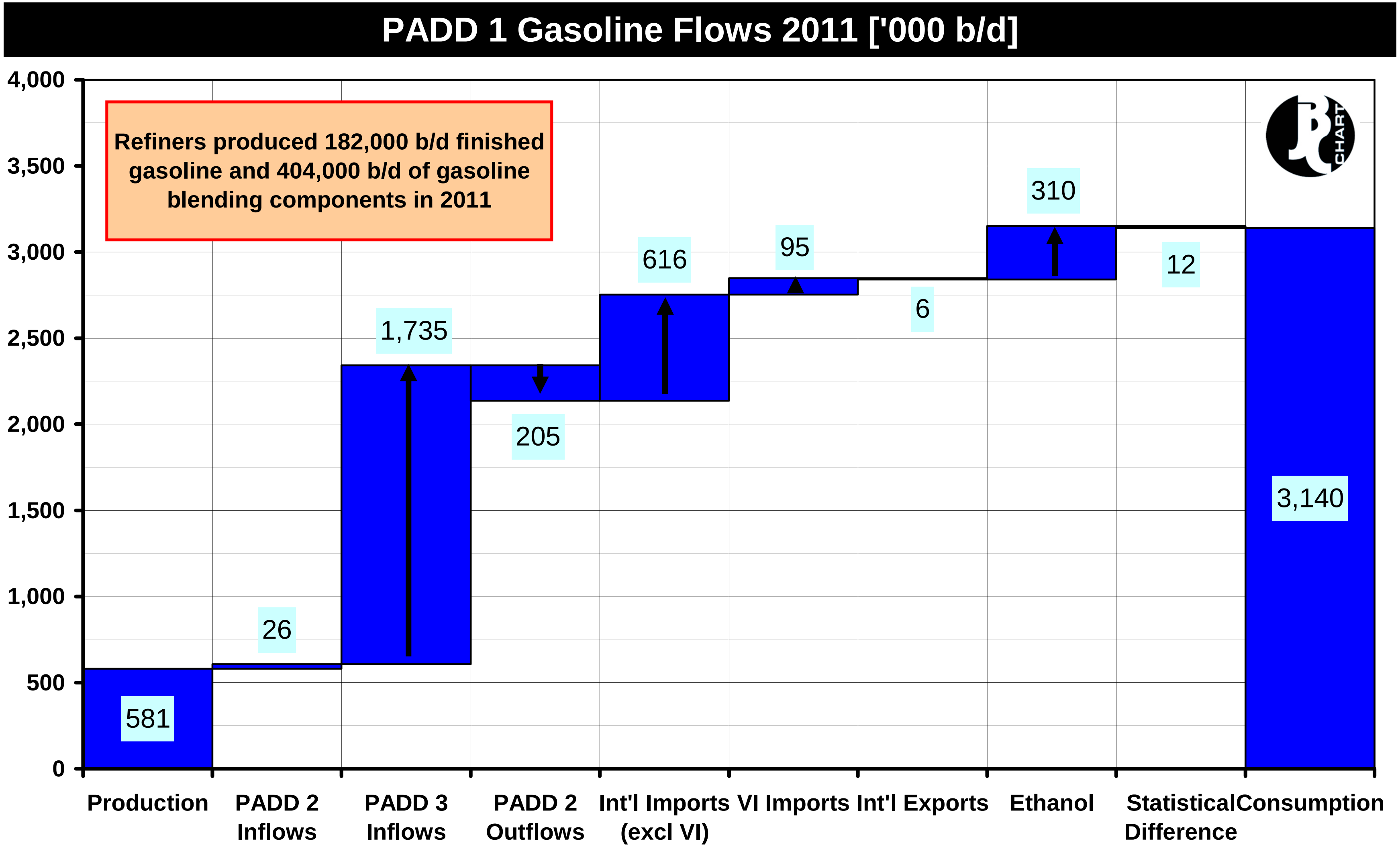
PADD 1 Distillate Flows 2011 ['000 b/d]
1,400
1,200
1,000
800
600
400
200
0
369
15
790
95
112
47
117
16
1,105
Source: EIA, JBC Energy calculations
Production
PADD 2 Inflows
PADD 3 Inflows
PADD 2 Outflows
Int'l Imports (excl VI)
VI Imports
Int'l Exports
At Stake
Consumption

PADD 1 Focus

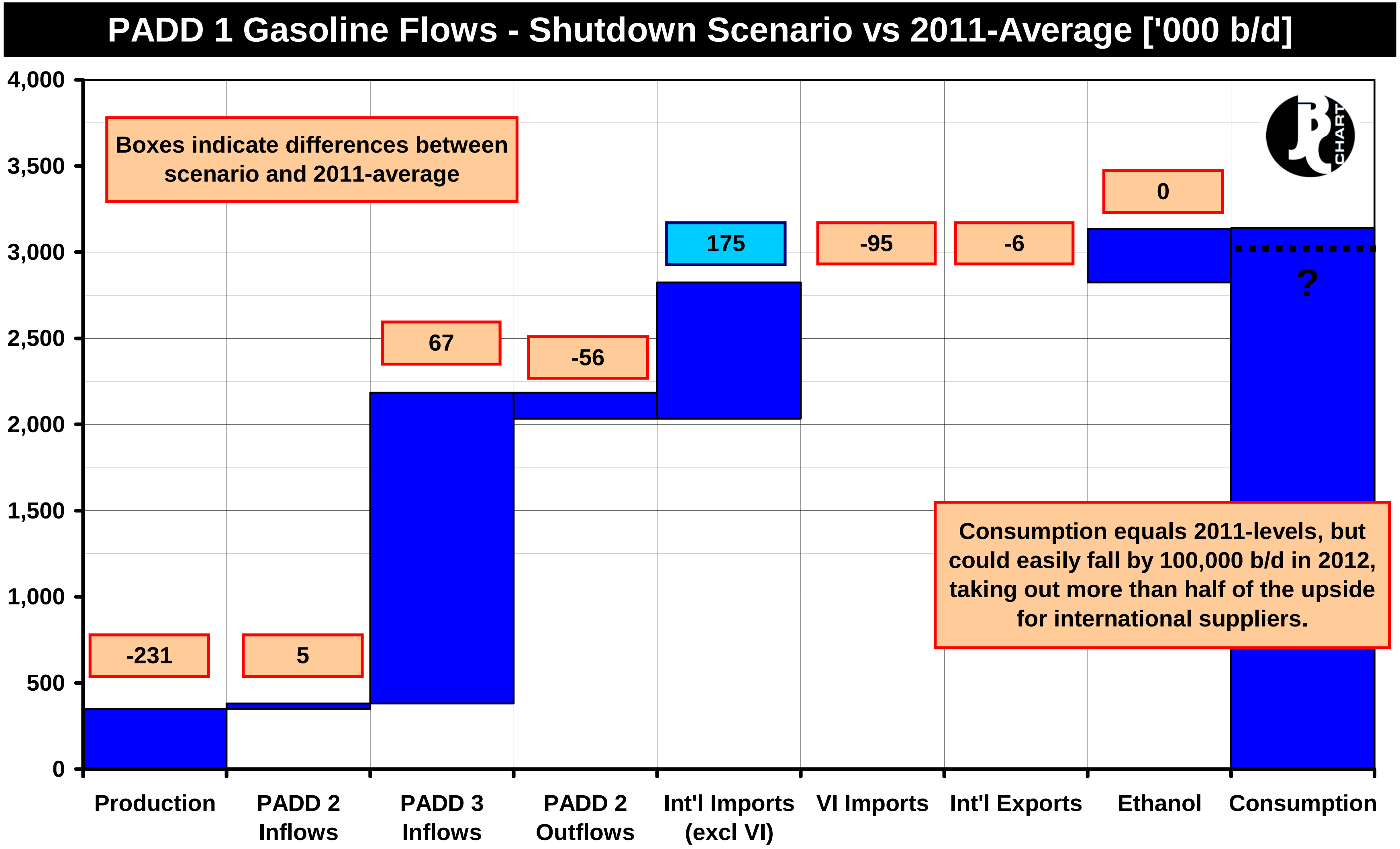


PADD 1 Distillate Flows - Shutdown Scenario vs 2011-Average ['000 b/d]
1,400
1,200
1,000
800
600
400
200
0
Boxes indicate differences between scenario and 2011-average
-140
5
27
-20
22
-47
-31
66
?
International suppliers could raise shipments by up to 90,000 b/d, even though we believe it is more likely that the 66,000 b/d will by supplied from within the US
Consumption equals 2011-levels, though distillate sales declined by 50,000 b/d on average from 2007-2011. If this trend continues sales potential for international suppliers would be reduced substantially
Source: JBC Energy estimates based on EIA data
Production
PADD 2 Inflows
PADD 3 Inflows
PADD 2 Outflows
Int'l Imports (excl VI)
VI Imports
Int'l Exports
At Stake
Consumption

PADD 1 Focus

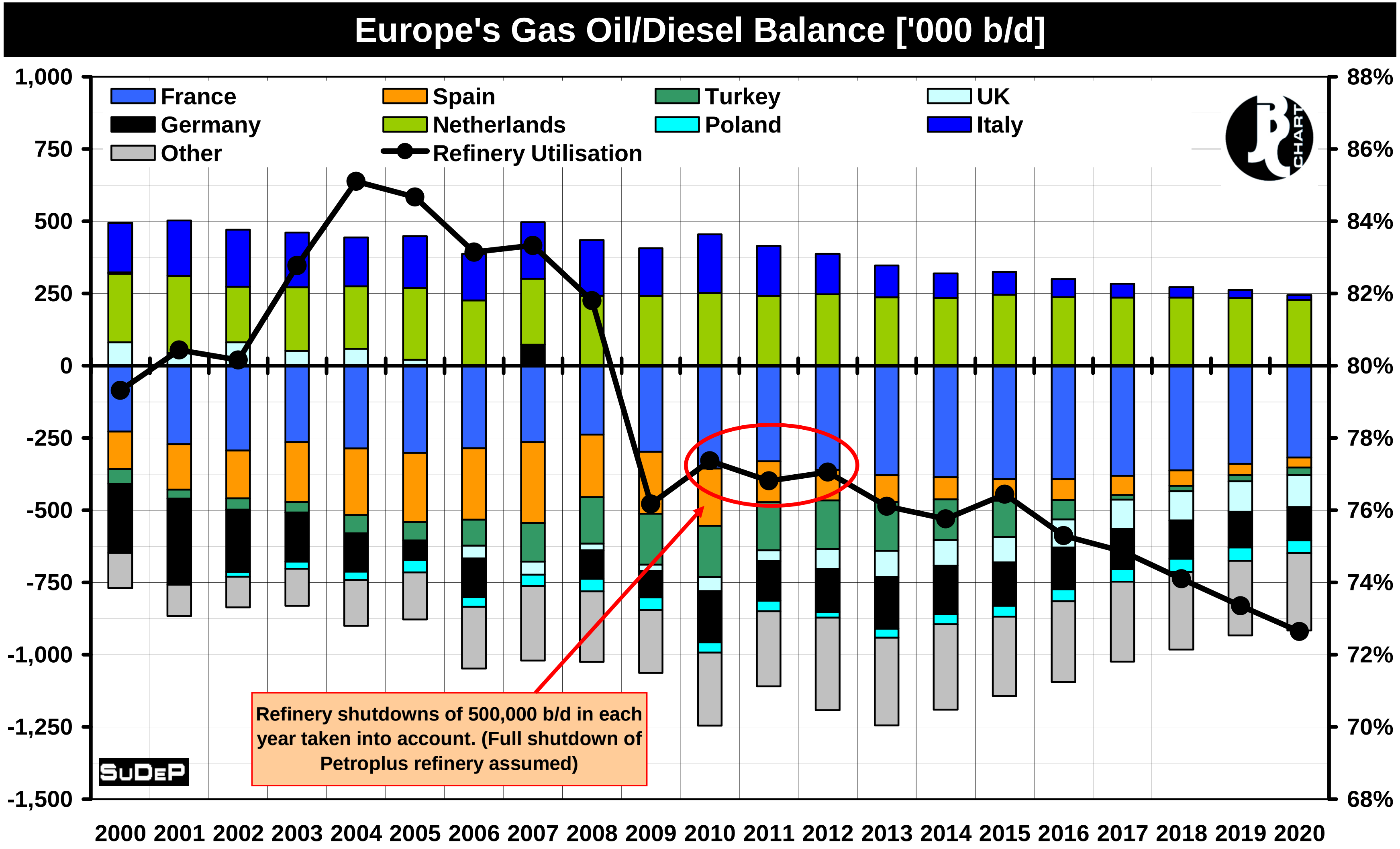

PADD 1 Gasoline Flows 2011 ['000 b/d]
Refiners produced 182,000 b/d finished gasoline and 404,000 b/d of gasoline blending components in 2011
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
581
26
1,735
205
616
95
6
310
12
3,140
Production
PADD 2 Inflows
PADD 3 Inflows
PADD 2 Outflows
Int'l Imports (excl VI)
VI Imports
Int'l Exports
Ethanol
Statistical Difference
Consumption
CHART

PADD 1 Focus

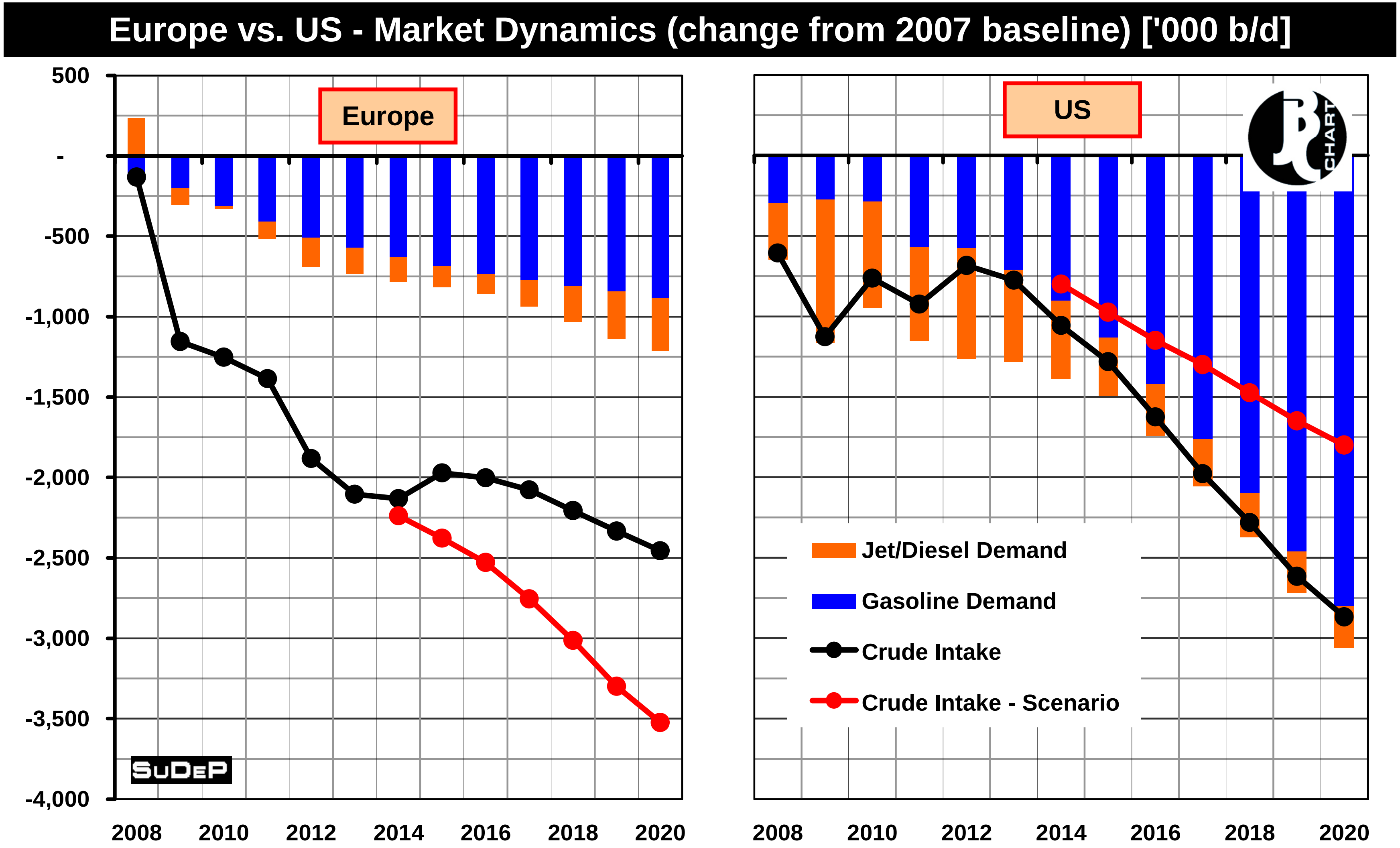


PADD 1 Gasoline Flows - Shutdown Scenario vs 2011-Average ['000 b/d]
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
Boxes indicate differences between scenario and 2011-average
-231
5
67
-56
175
-95
-6
0
?
Consumption equals 2011-levels, but could easily fall by 100,000 b/d in 2012, taking out more than half of the upside for international suppliers.
Production
PADD 2 Inflows
PADD 3 Inflows
PADD 2 Outflows
Int'l Imports (excl VI)
VI Imports
Int'l Exports
Ethanol
Consumption

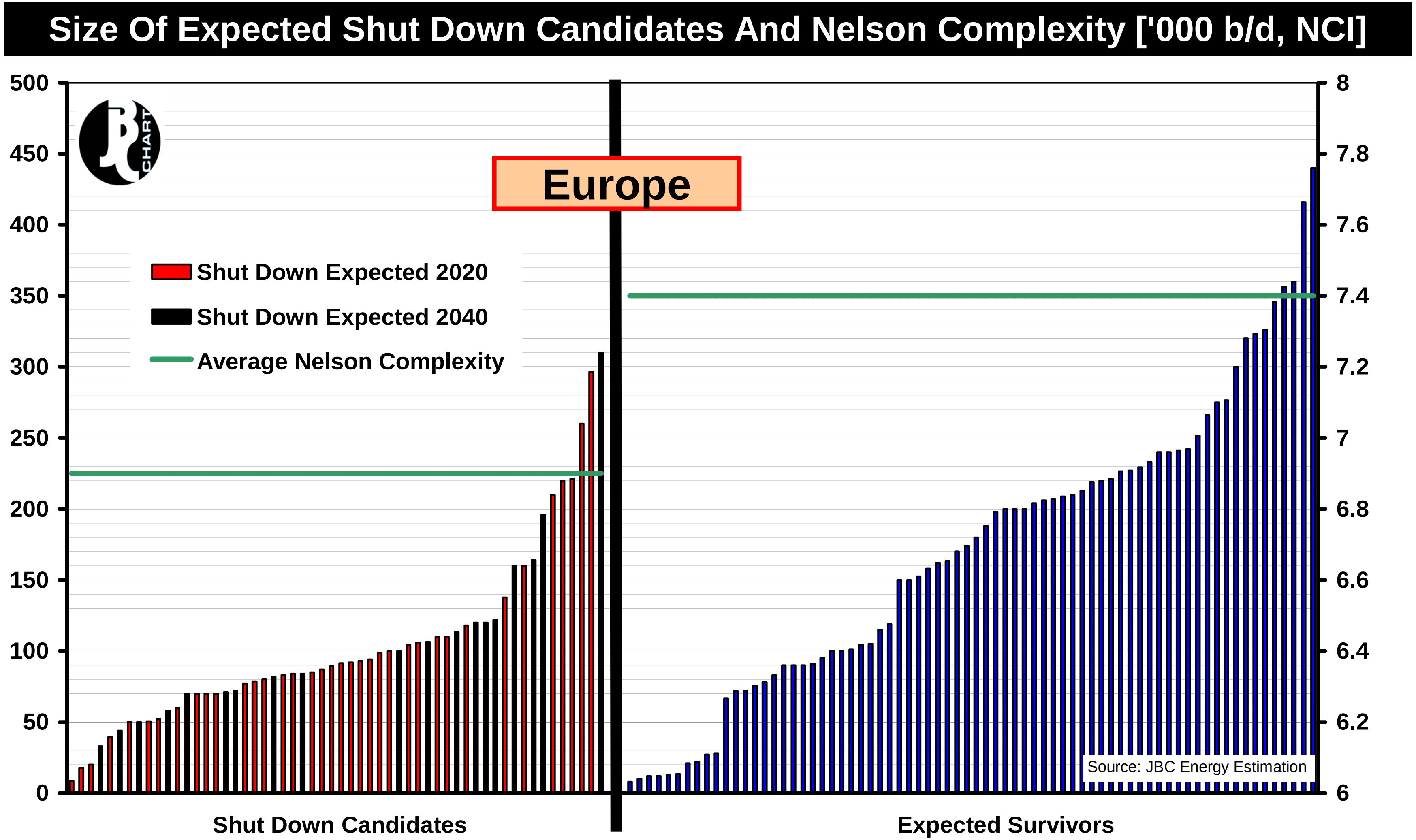
Conclusions



Conclusions



Conclusions



Thank You!

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