



Has the ME's cost competitiveness in steel seen a structural improvement?



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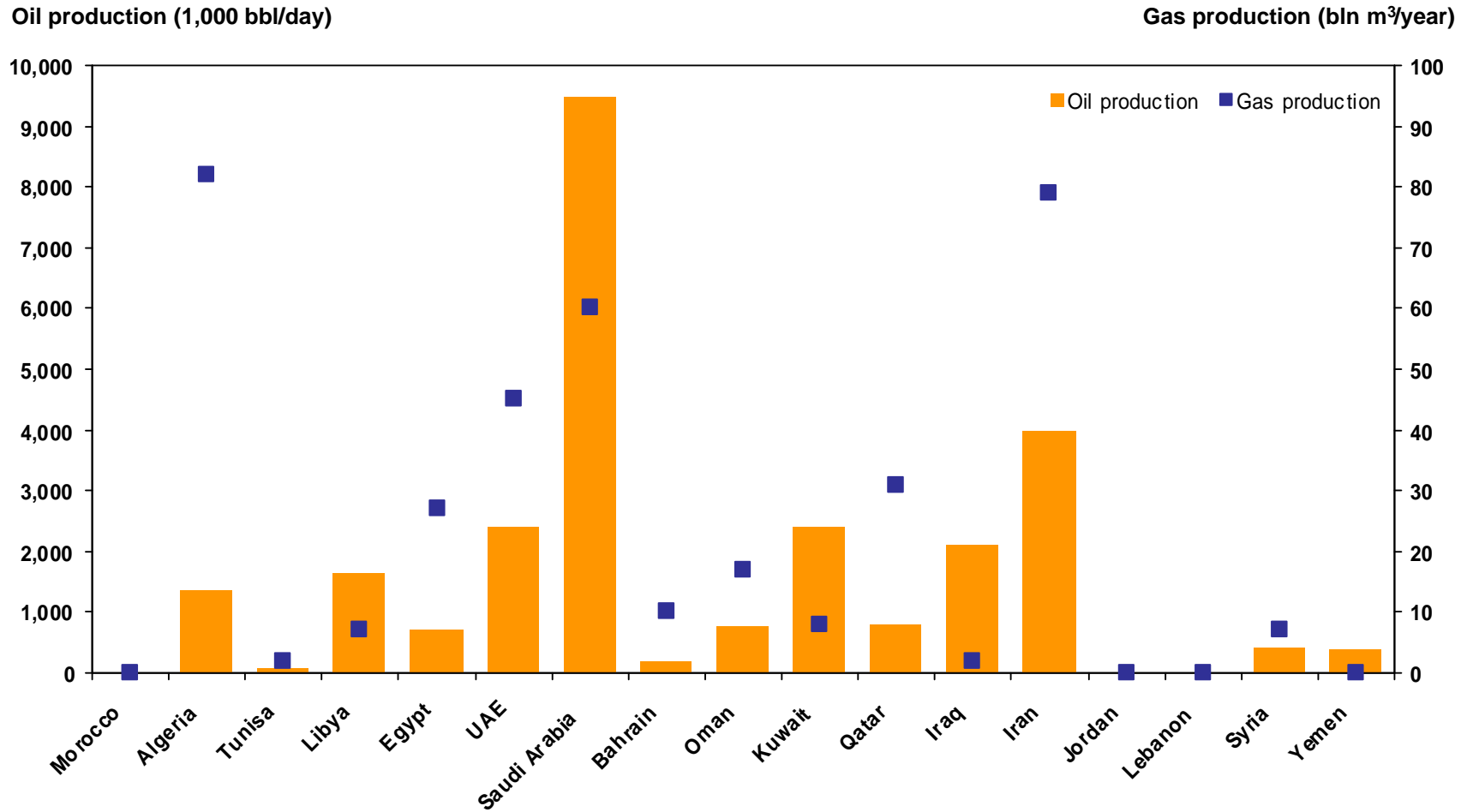
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About SteelConsult International

- SteelConsult International is a consultancy specialized in the iron & steel industry and its markets.
- From our offices in Amsterdam, The Netherlands, we work for clients around the world, incl. steel mills, distributors, processors, traders, consumers, banks, government institutions and suppliers to the steel industry.
- Our consultants have a background in the iron & steel sector, providing a firm base of experience and an extensive contact network across the industry.
- Our first working language is English, but we can also work with you in French, German, Dutch, and Spanish. Read more about us on www.steelconsult.com!

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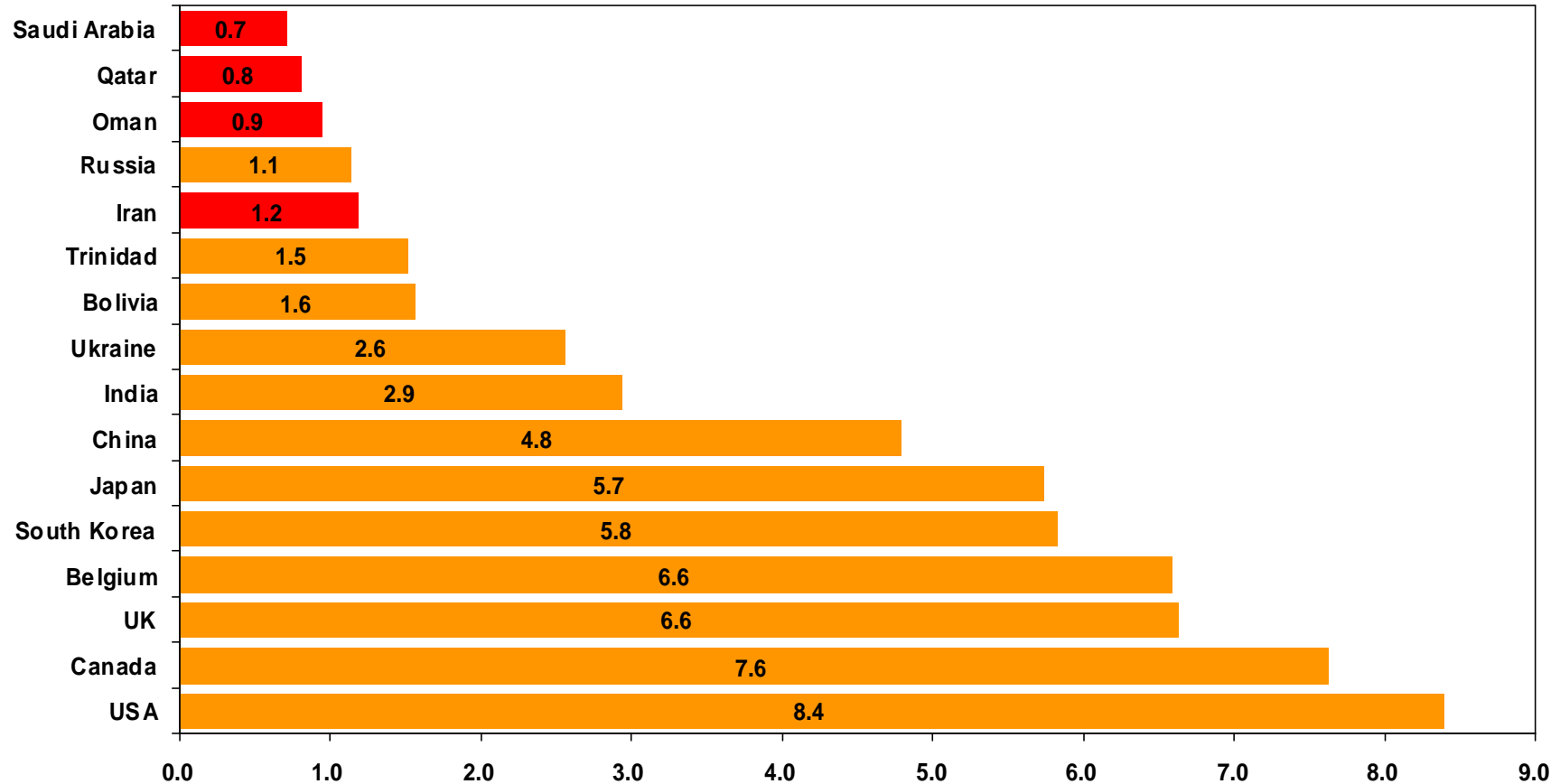
Many countries in the ME have a large wealth of oil & gas



Source: CIA

Natural gas prices are much lower than in the emerging markets of China and India and the mature markets of Japan, Europe and North America

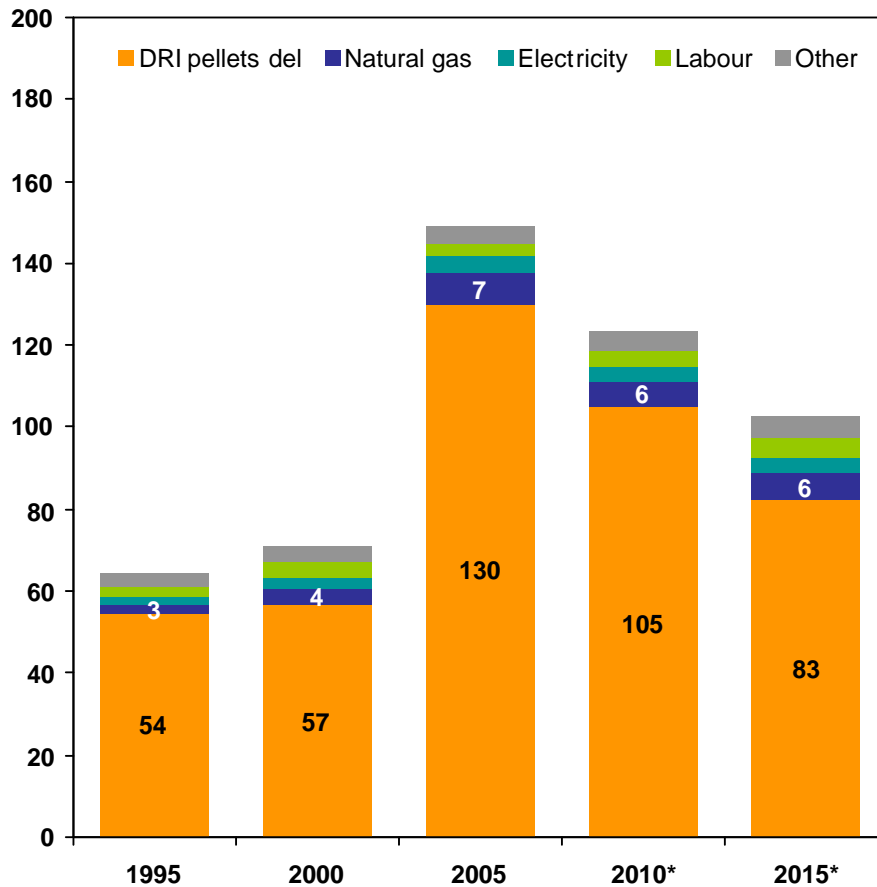
Natural gas cost by country 2005 (US\$/GJ)



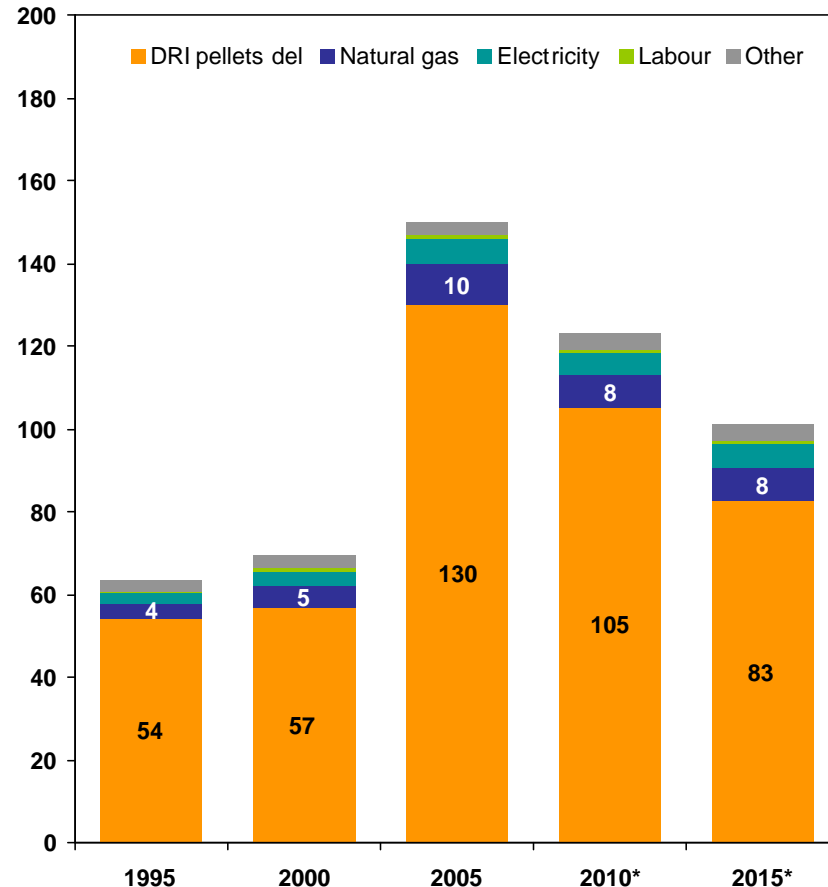
Source: American Chemistry Council

Pushed by higher iron ore and energy prices, ME DRI production costs have doubled between 2000 and 2005. Cost prices are expected to come down in 2010 and 2015, but remain at higher levels than in the past

DRI operational cost price**, GCC (US\$/tonne DRI)



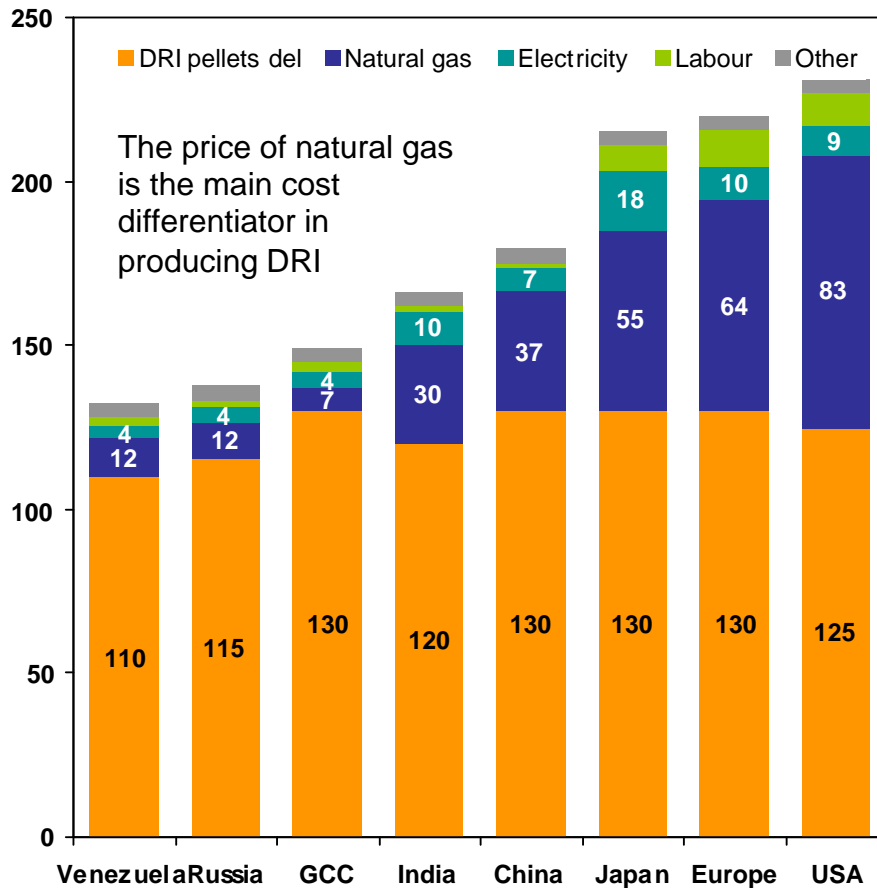
DRI operational cost price**, Egypt (US\$/tonne DRI)



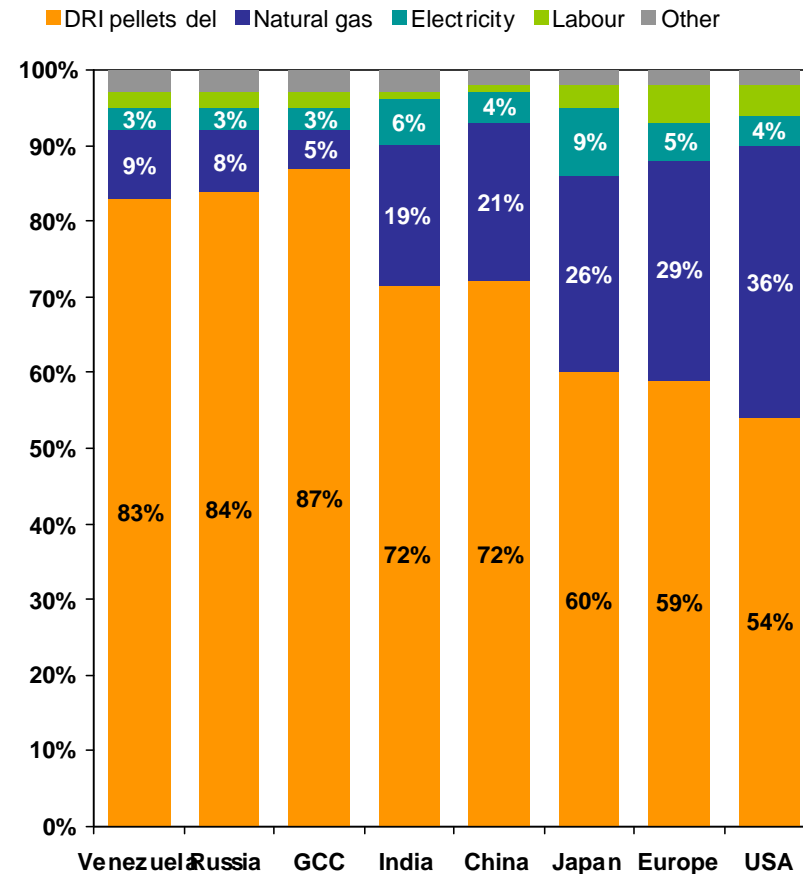
Source: SBB, MB, local specialists, SteelConsult analysis
 Note: **excl. overhead and capital costs, incl. maintenance
 Assumed 100% fed by pellets Capacity 500k tpy facility

However, despite its raw material disadvantage, the GCC's energy benefit makes it one of the world's most competitive regions for producing DRI. Costs are some US\$80/t lower than in the USA.

DRI operational cost price by country/region, 2005 (US\$/tonne DRI)



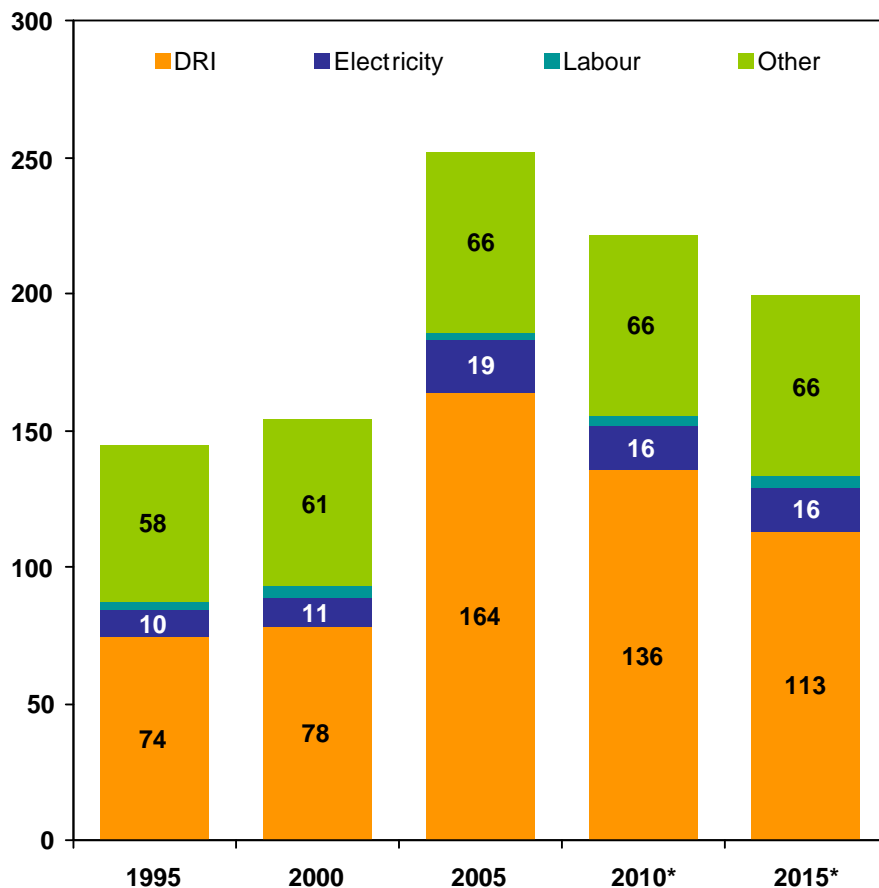
DRI operational cost price by country/region, 2005 (%)



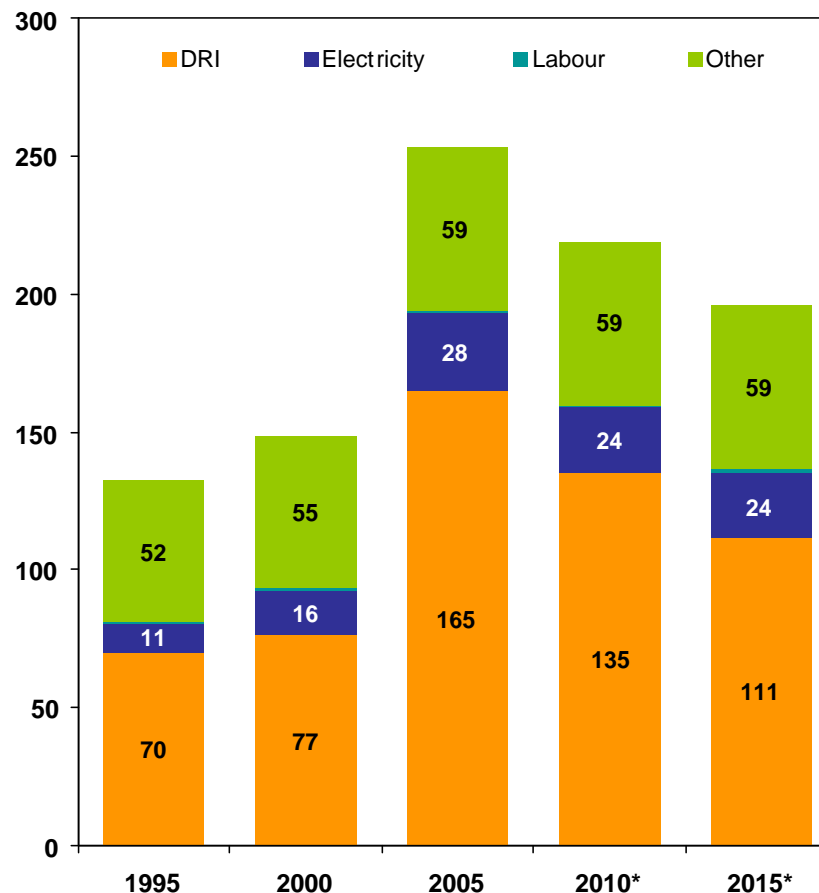
Source: SBB, MB, local specialists, SteelConsult analysis
 Note: **excl. overhead and capital costs, incl. maintenance
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Like for DRI, EAF steelmaking costs have also increased in the ME...

EAF operational cost price**, GCC (US\$/tonne liquid steel)



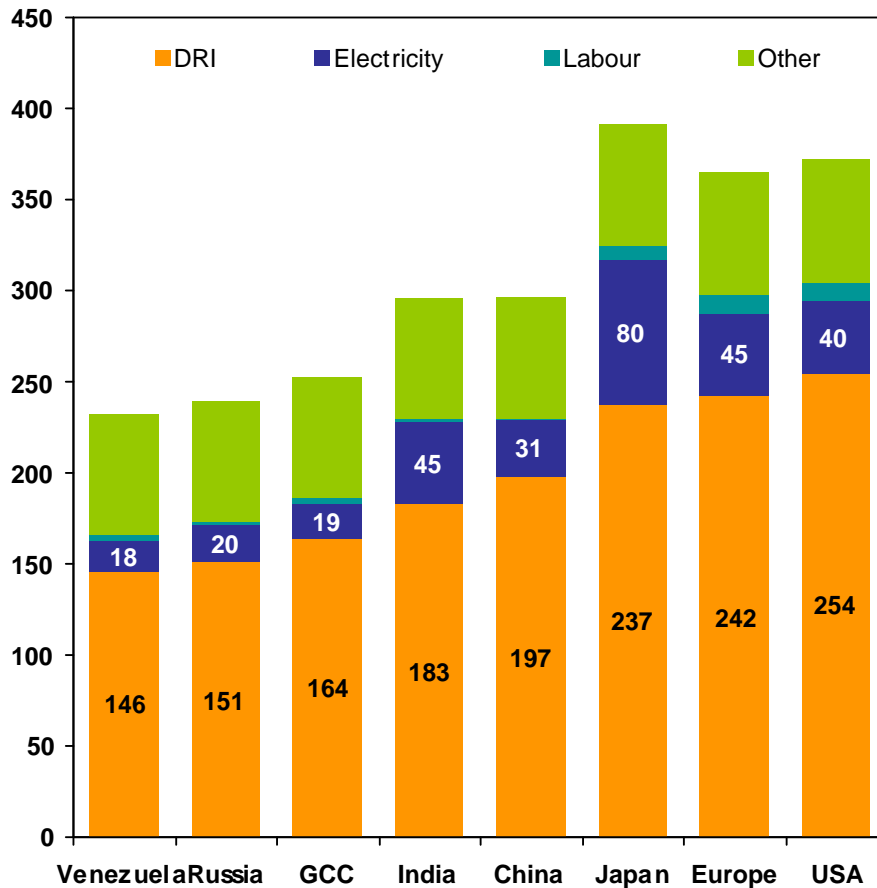
EAF operational cost price**, Egypt (US\$/tonne liquid steel)



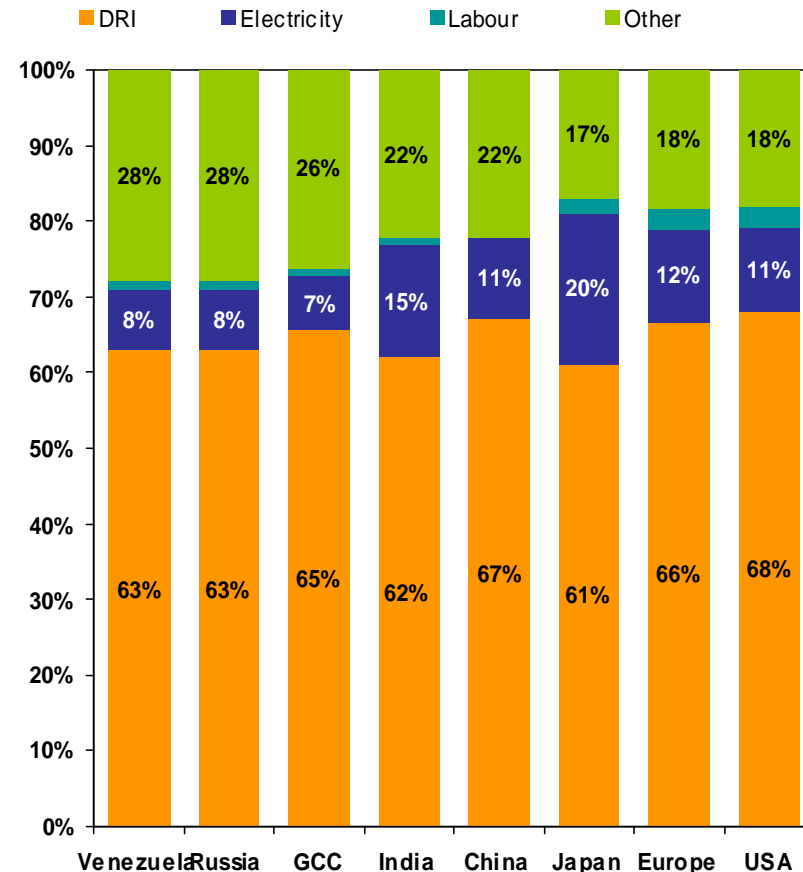
Source: SBB, MB, local specialists, SteelConsult analysis
 Note: **excl. overhead and capital costs, incl. maintenance
 Assumed 100% fed by pellets Capacity 500k tpy facility

In EAF steelmaking, the ME cost advantage over India, China and the developed parts of the world is even more pronounced than for DRI. However, Venezuela and Russia are even more cost competitive

EAF operational cost price by country/region, 2005 (US\$/tonne steel)



EAF operational cost price by country/region, 2005 (%)

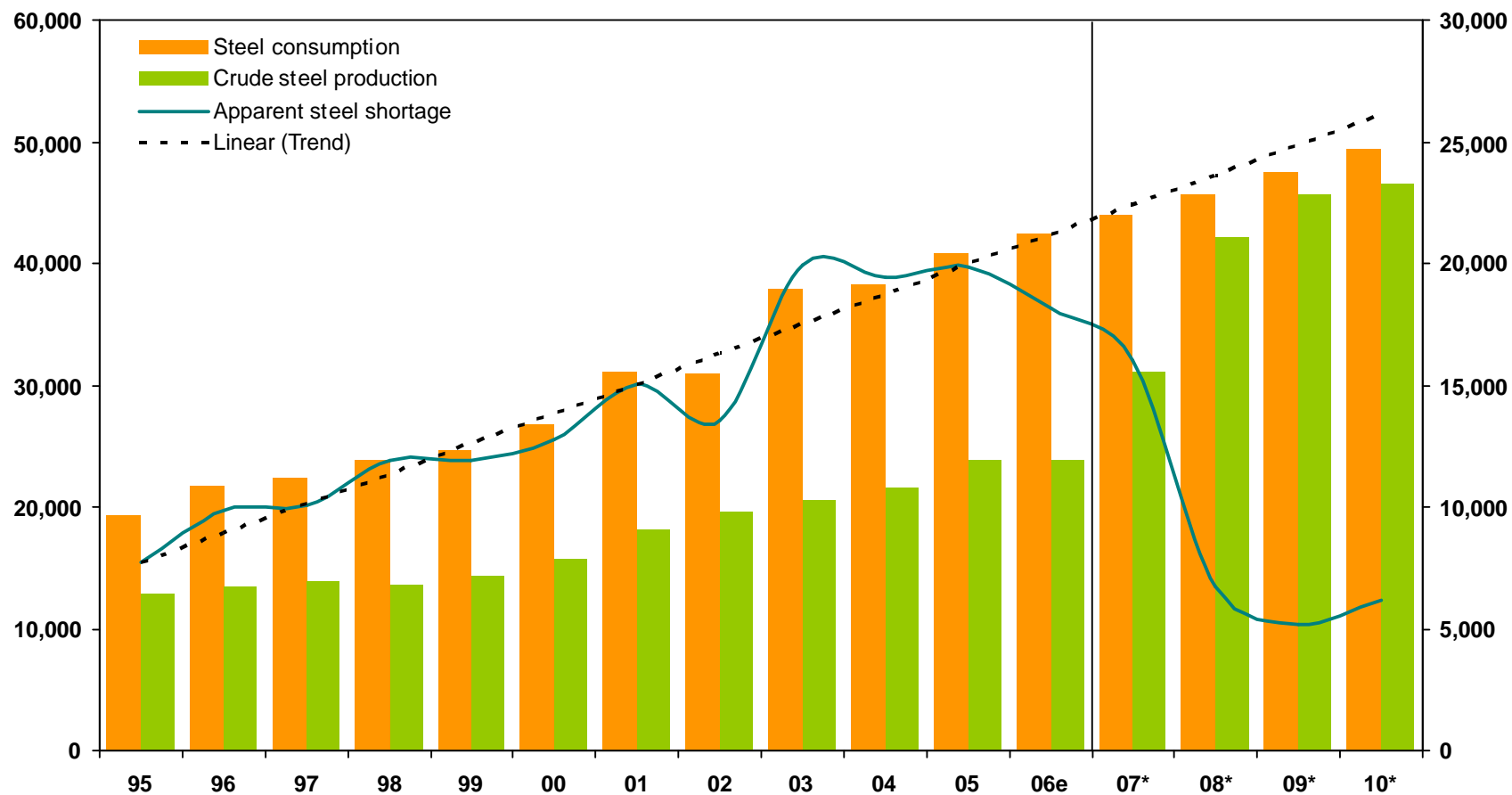


Source: SBB, MB, local specialists, SteelConsult analysis
 Note: **excl. overhead and capital costs, incl. maintenance
 Assumed 100% fed by pellets Capacity 500k tpy facility

Why does the ME account for such a high share of DRI expansions? An important difference with Venezuela and Russia, is that the ME region is still a large net importer of steel

Production/consumption ME, k tonnes

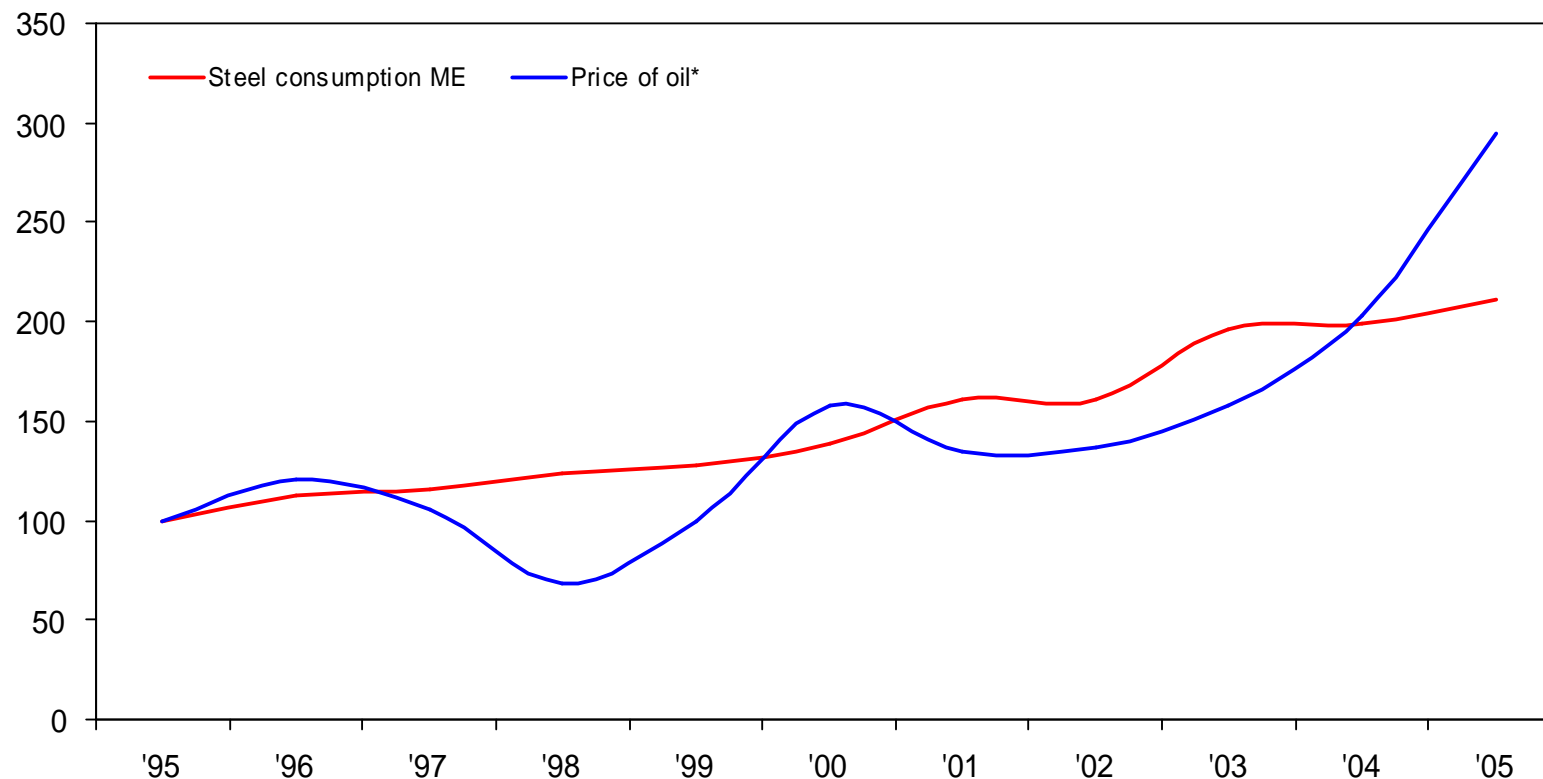
Apparent steel shortage, k tonnes



Source: IISI, MESTEEL, UN Statistics, company websites, local specialists

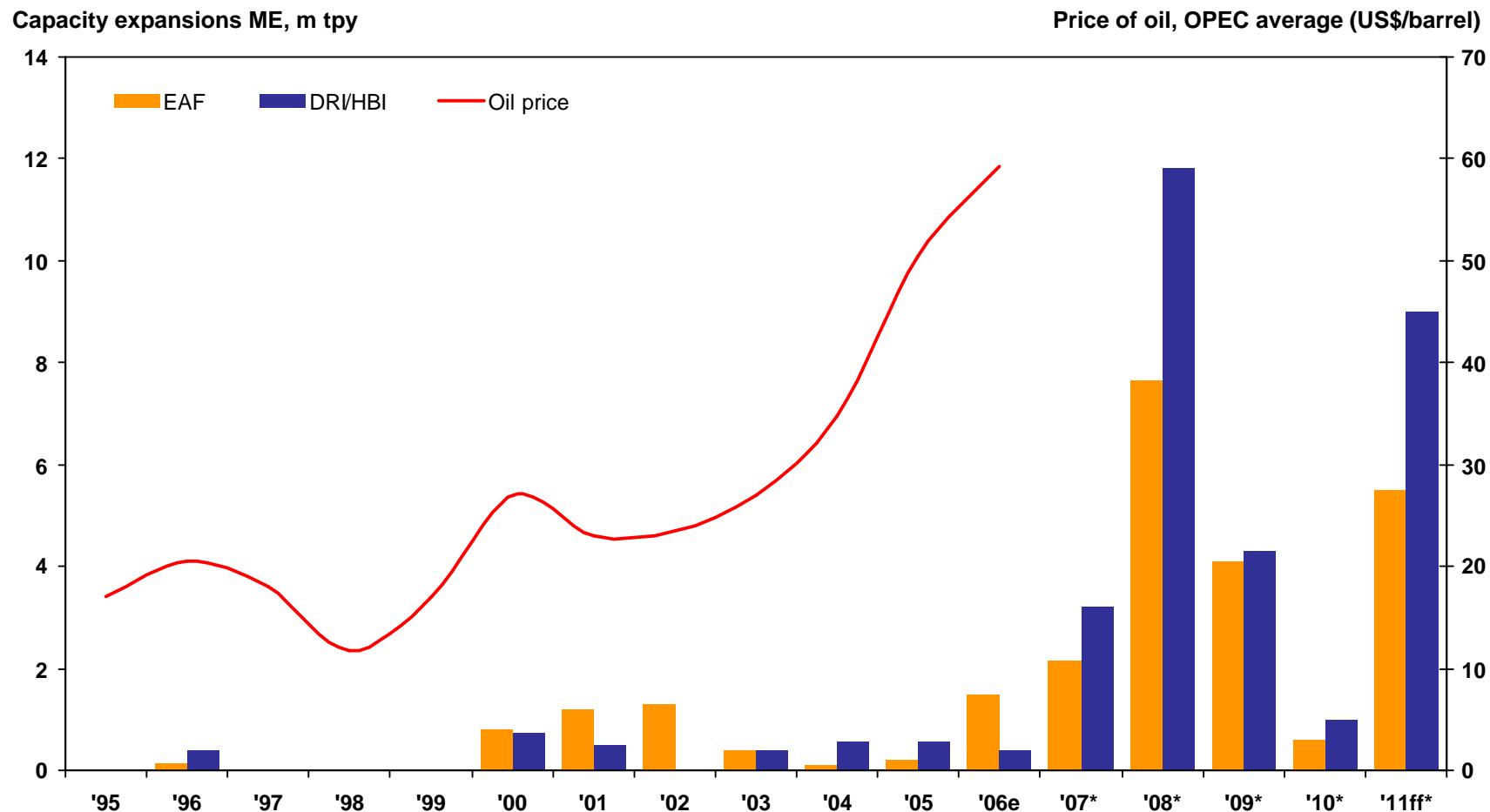
In addition, the price of oil does not only provide a comparative cost advantage to the ME region in producing energy intensive products, but also boosts local consumption of steel, esp. in construction

Index value, 1995 = 100



Source: EIA, EIU, IISI
Notes: *OPEC average (US\$/barrel)

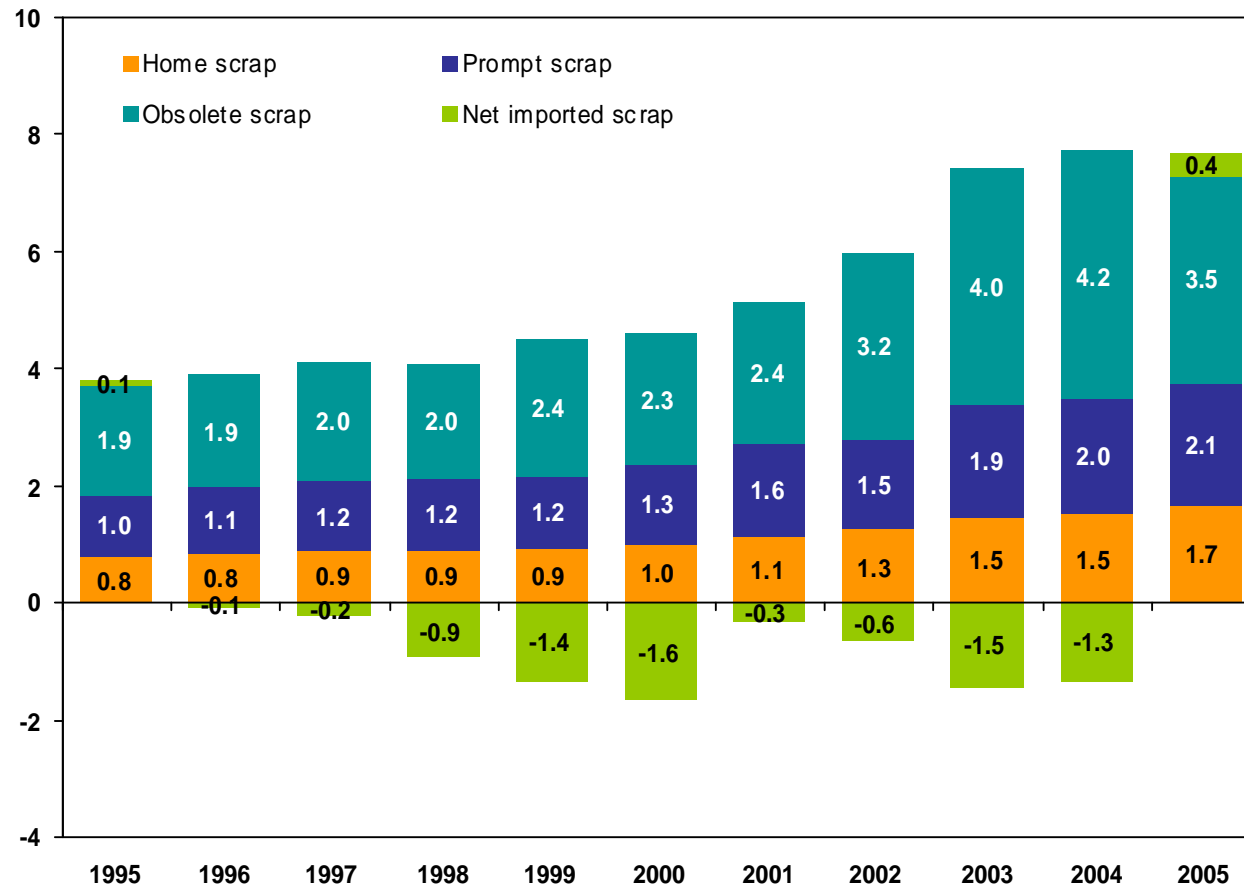
Furthermore, high oil revenues facilitate the finance of new investments, including those in DRI and EAF plants



Source: SBB, MB, company websites, local specialists

Finally, due to its relatively low volume of manufacturing activity, the ME is not as scrap rich as some other parts of the world. The most important source of scrap in the Middle-East is obsolete scrap

Scrap availability ME by source, m tonnes

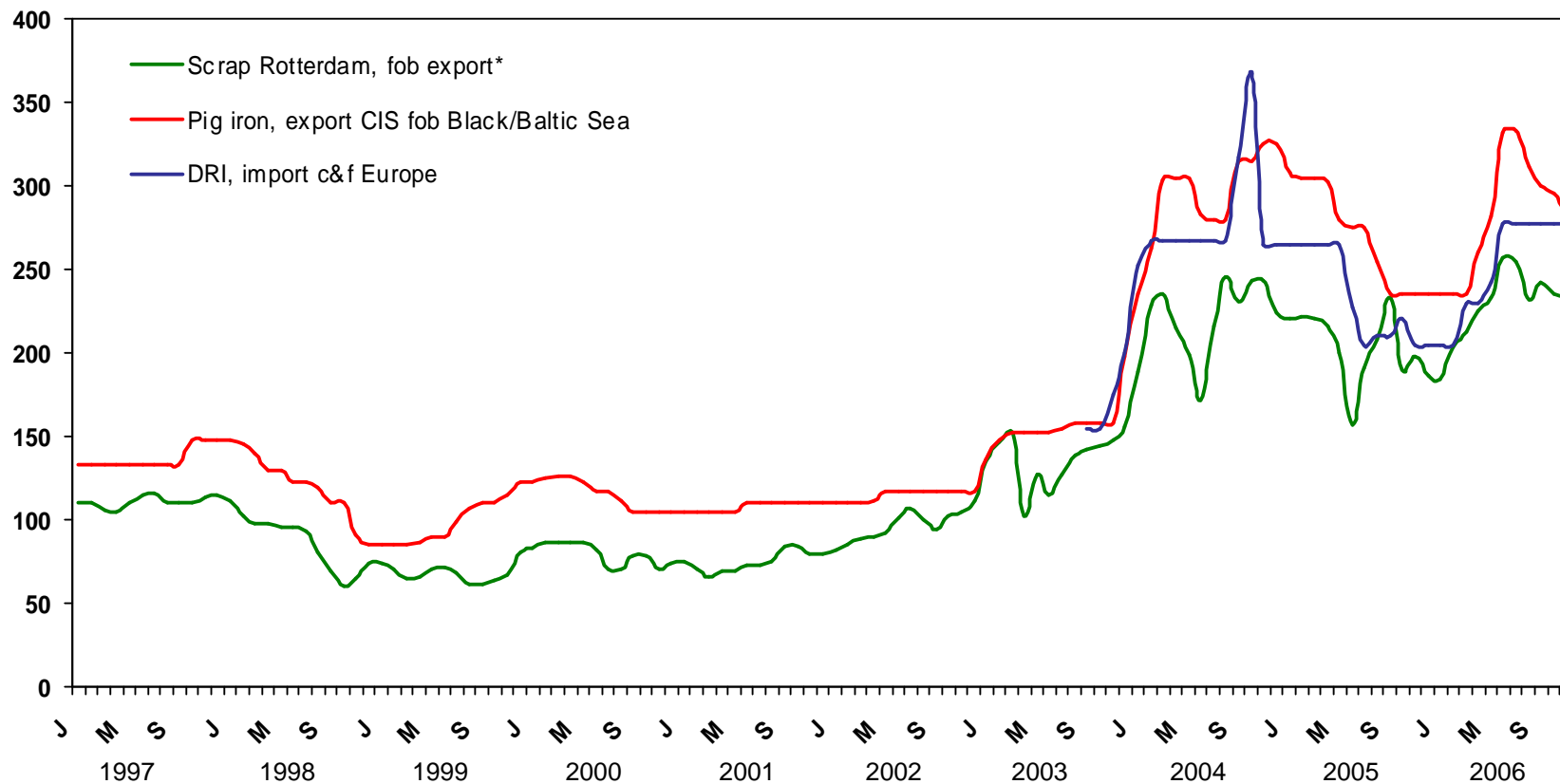


- Home scrap is produced at the mill and instantly recycled.
- Prompt scrap is generated as waste by producers of metal products.
- Obsolete scrap becomes available when used metal products are collected for recycling.
- Metal products have different life cycles, varying from cans (6 months), cars (7 years) to buildings (>20 years).
- Part of past steel consumption is lost and never recycled.

Source: IISI, MB, MESTEEL, UN Statistics, company websites, local specialists

Prices for scrap, pig iron and DRI/HBI are usually aligned. Metallics prices have about doubled since 2003 and have become more volatile

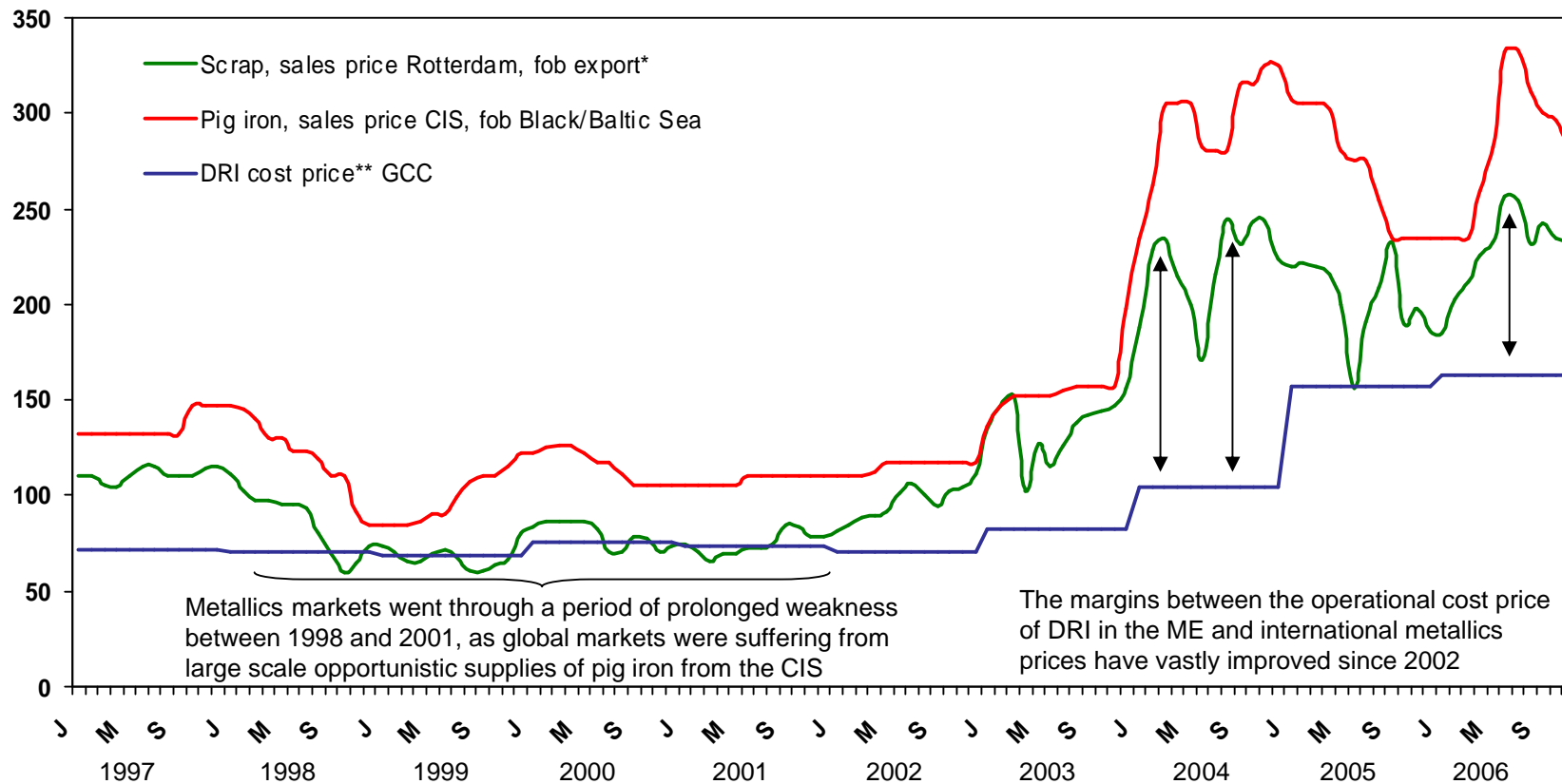
Price, US\$/metric tonne



Source: SBB, MB, Midrex
Note: * 50% HMS#1, 50% HMS#2

The margins between the operational cost price of DRI in the ME and international metallics prices have vastly improved since 2002

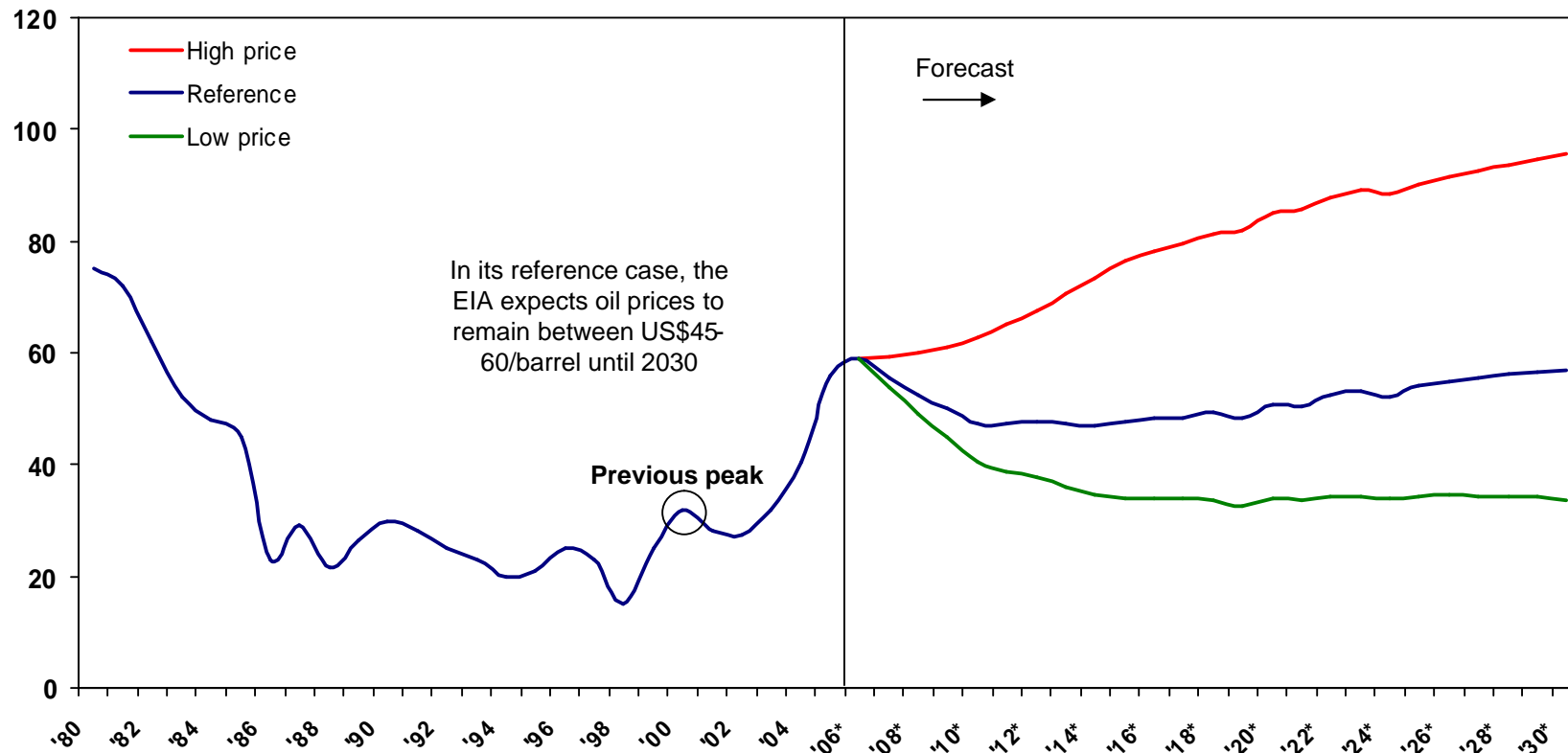
Price, US\$/metric tonne



Source: SBB, MB, local specialists, SteelConsult analysis
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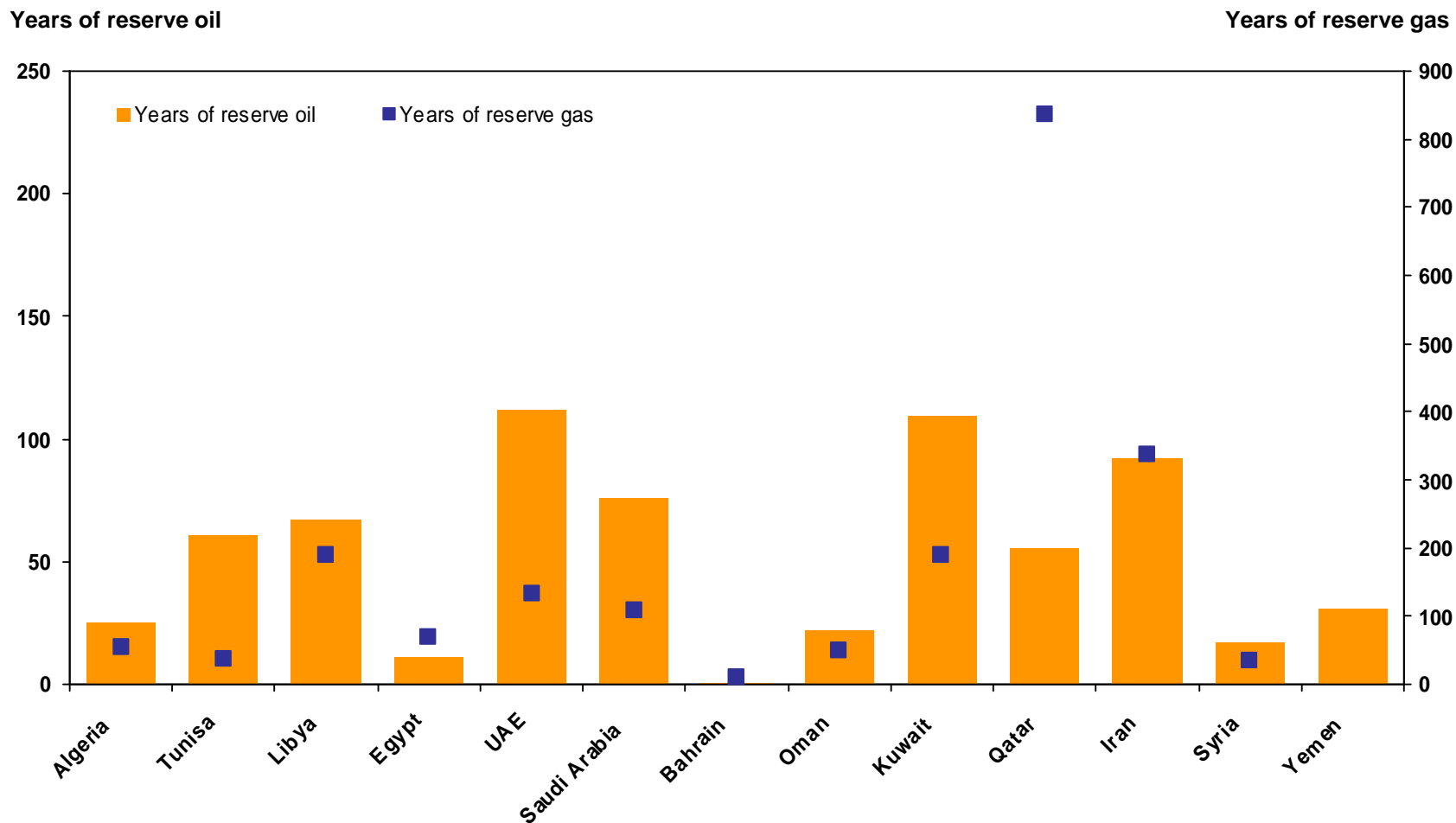
World oil prices have made a step change up. The EIA expects world oil prices to remain between US\$45-60/barrel until 2030. Even in the lowest price scenario, the oil price is expected to remain above the level of the previous peak in 2000

World oil price (real prices in 2004 US\$) in EIA Annual Energy Outlook 2006



Source: Energy Information Agency (US Department of Energy) Annual Energy Outlook 2006

Reserves of oil & gas will last for at least several generations more in many countries in the ME



Source: CIA
 Note: At current production levels

Thank you for your attention!

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