



The Oil Battle

Explaining the Fight for a Slowing Market



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Conclusion and Reasons

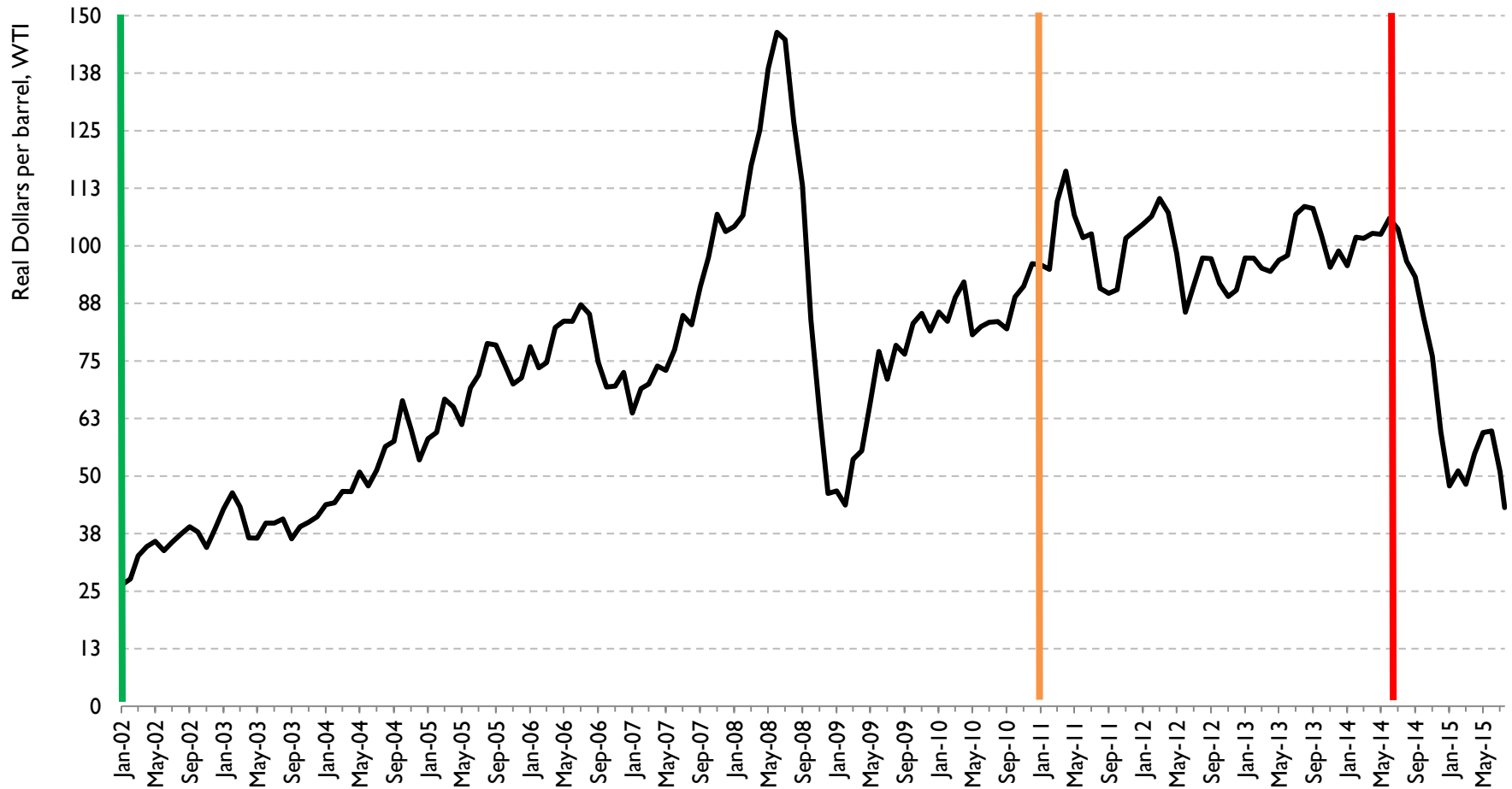
Price will settle at the **marginal price of production of non-conventional crudes in the US**, well below the price averaged 2011 to mid-2014

Conclusion and Reasons

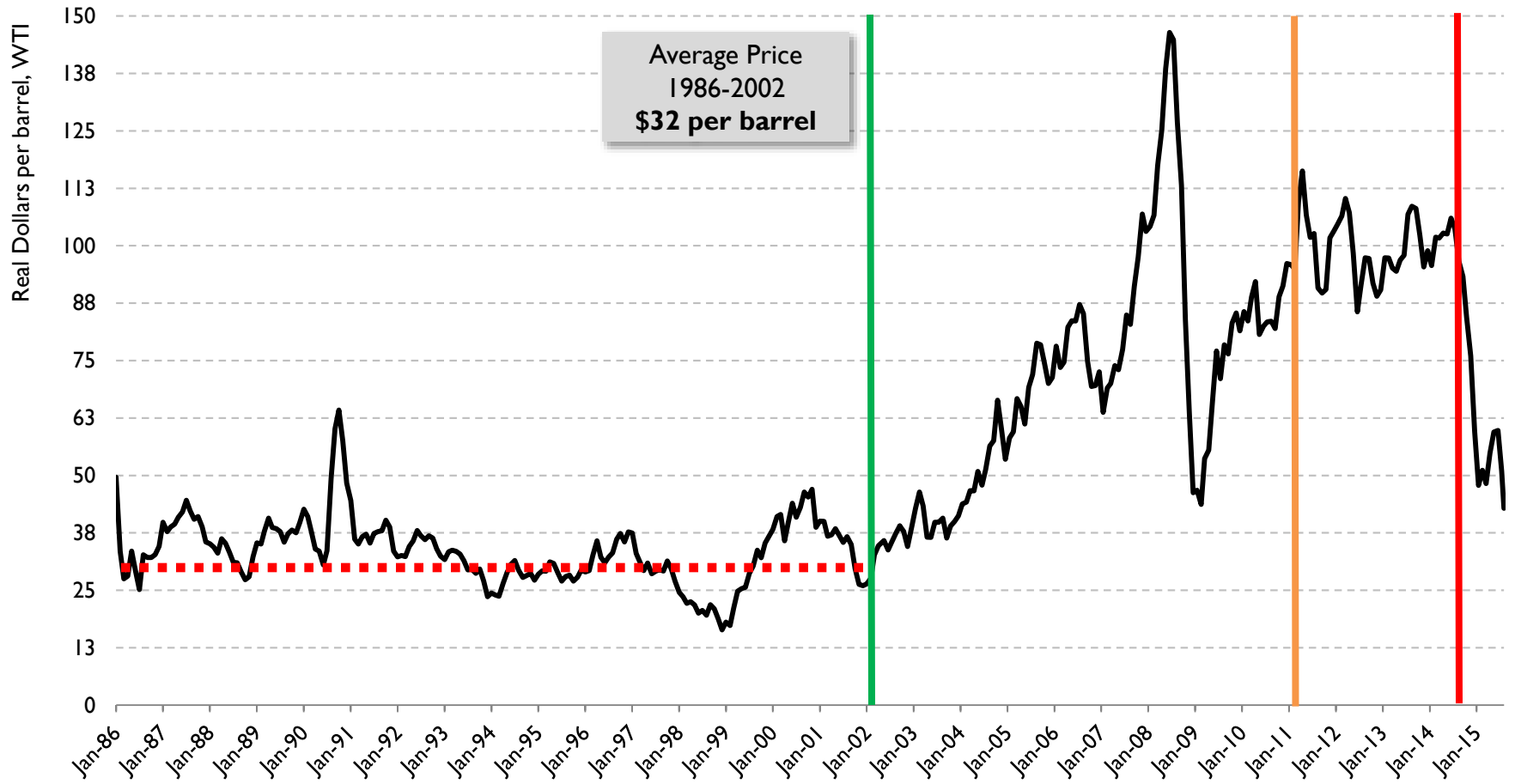
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1. Productivity increasing in non-conventional oil in U.S. basins with huge reserves
2. Saudi Arabia increases production
3. Countries such as Libya and Iran with shut-in capacity will increase production as soon as those factors disappear
4. Other large producers (Iraq) are increasing production to regain market share.

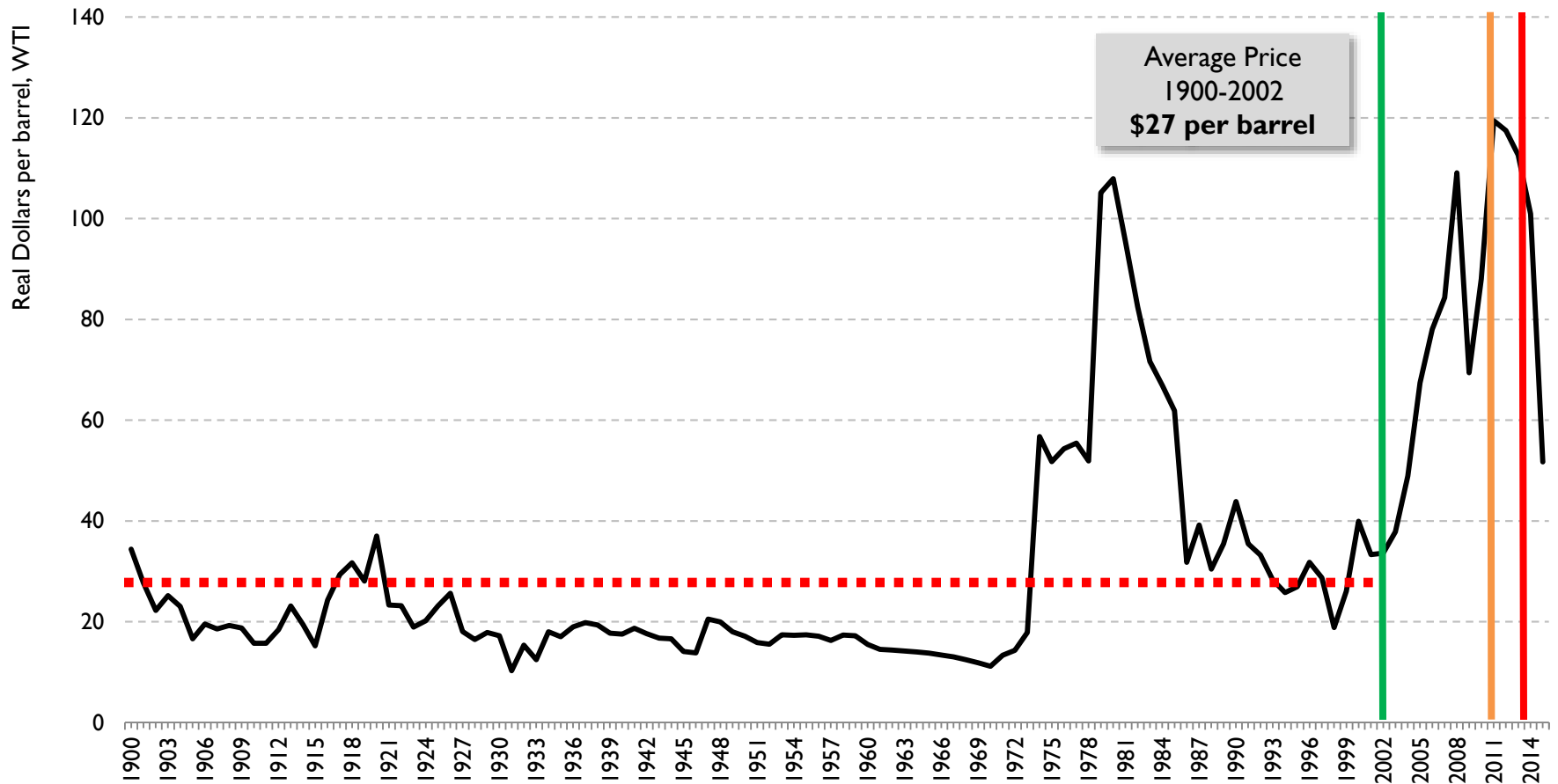
Crude oil price, real - since 2002



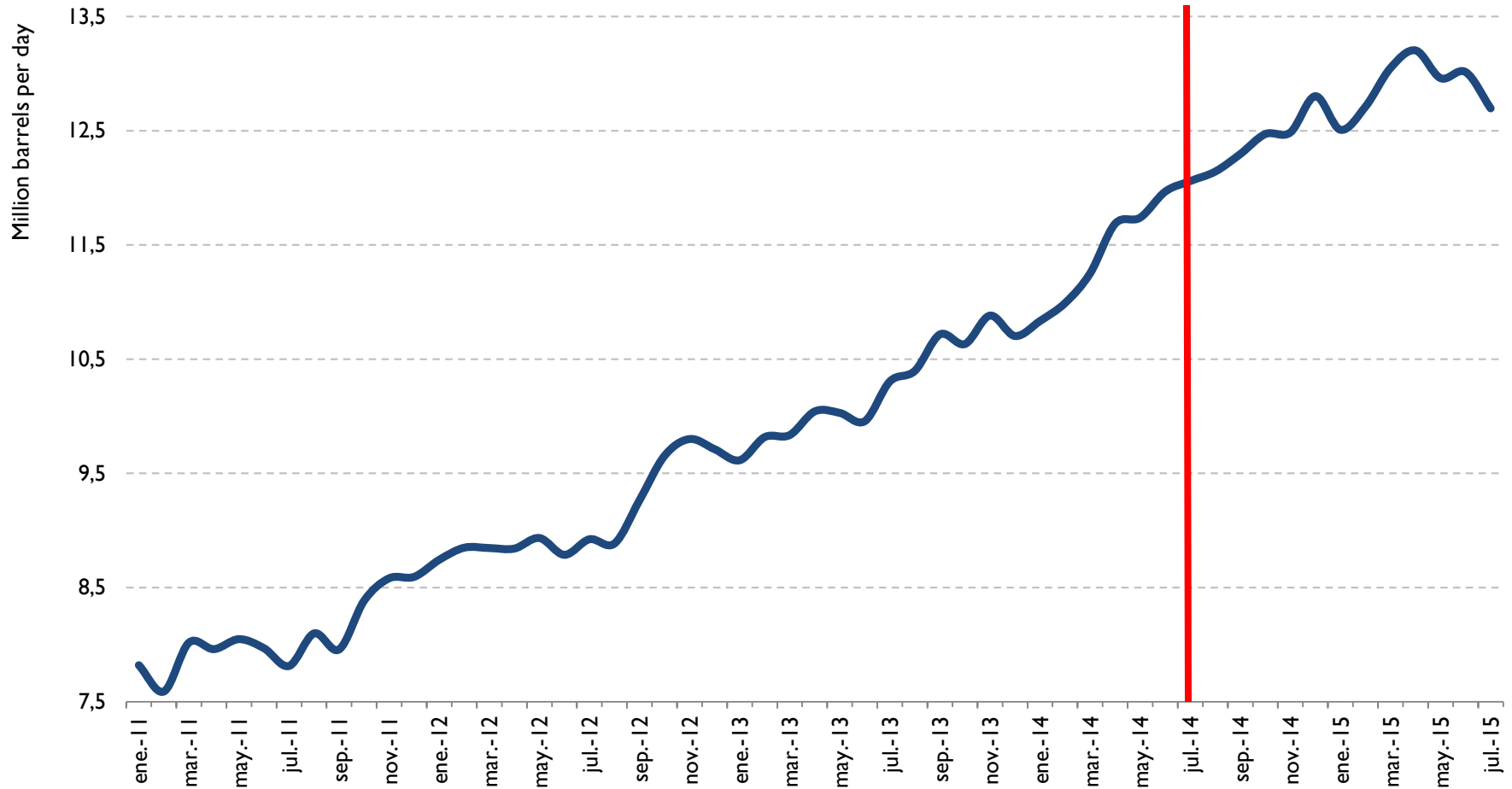
Crude oil price, real - since 1986



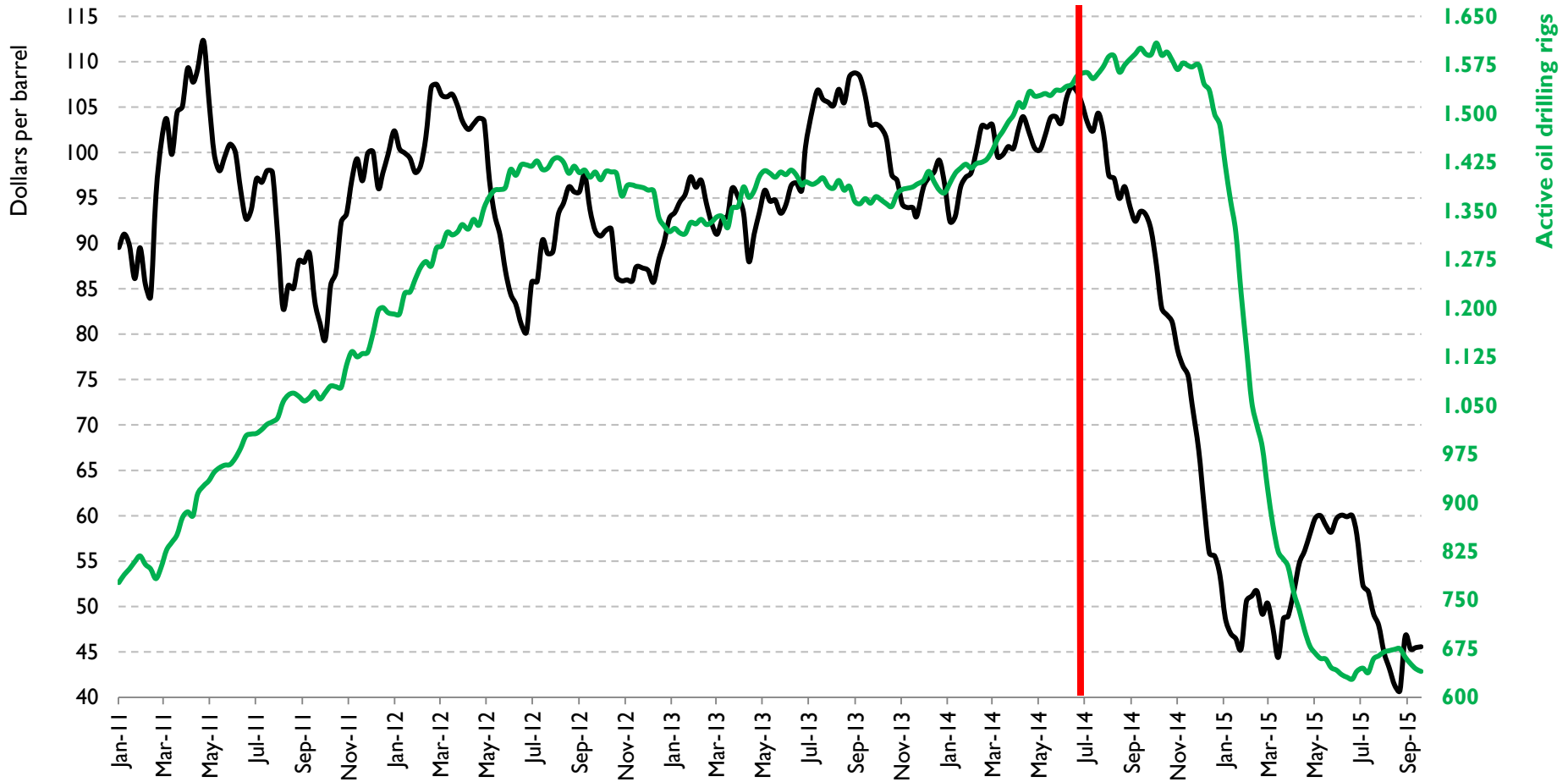
Crude oil price, real - since 1900



Production, USA

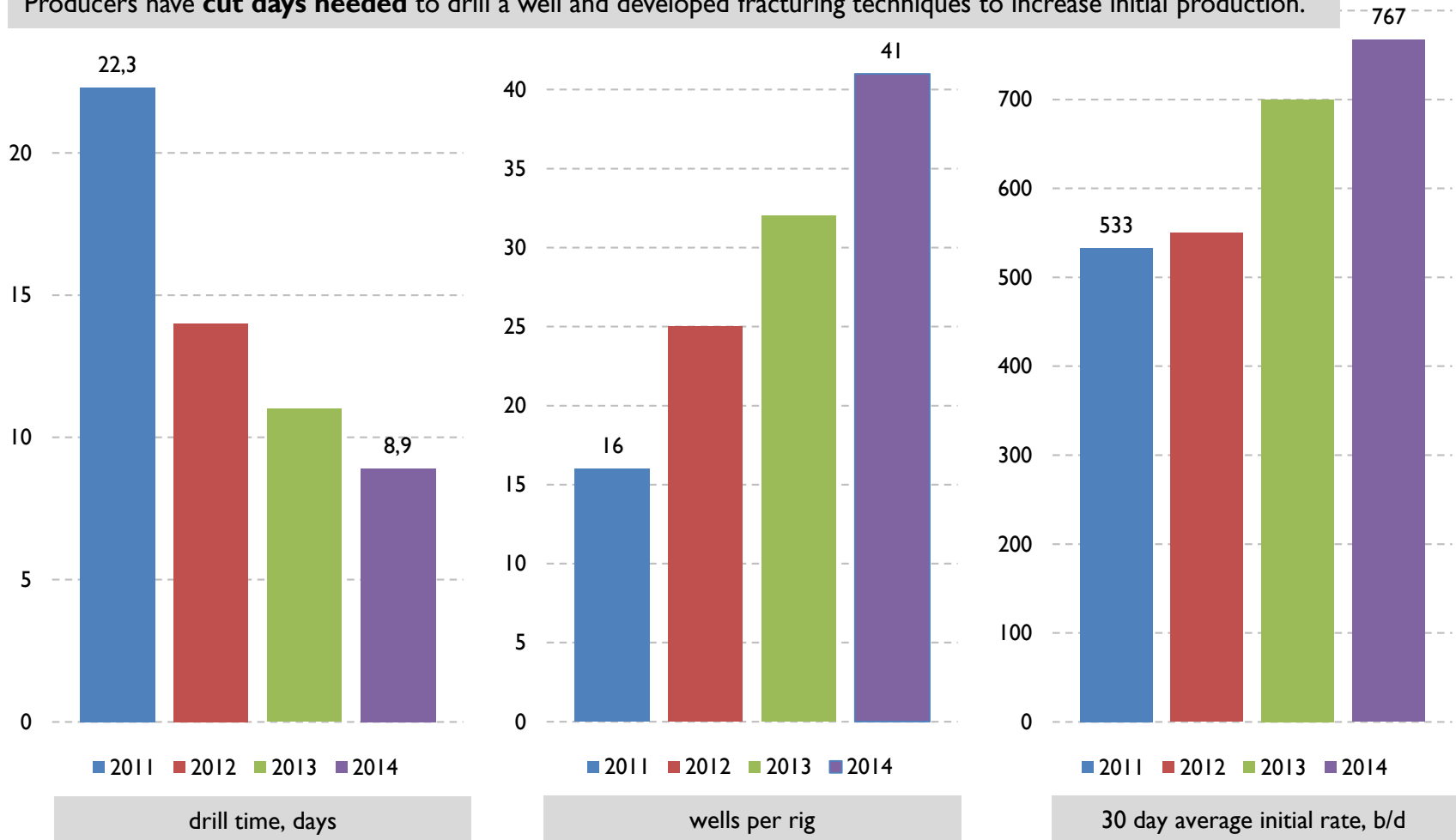


Drilling & Price, USA

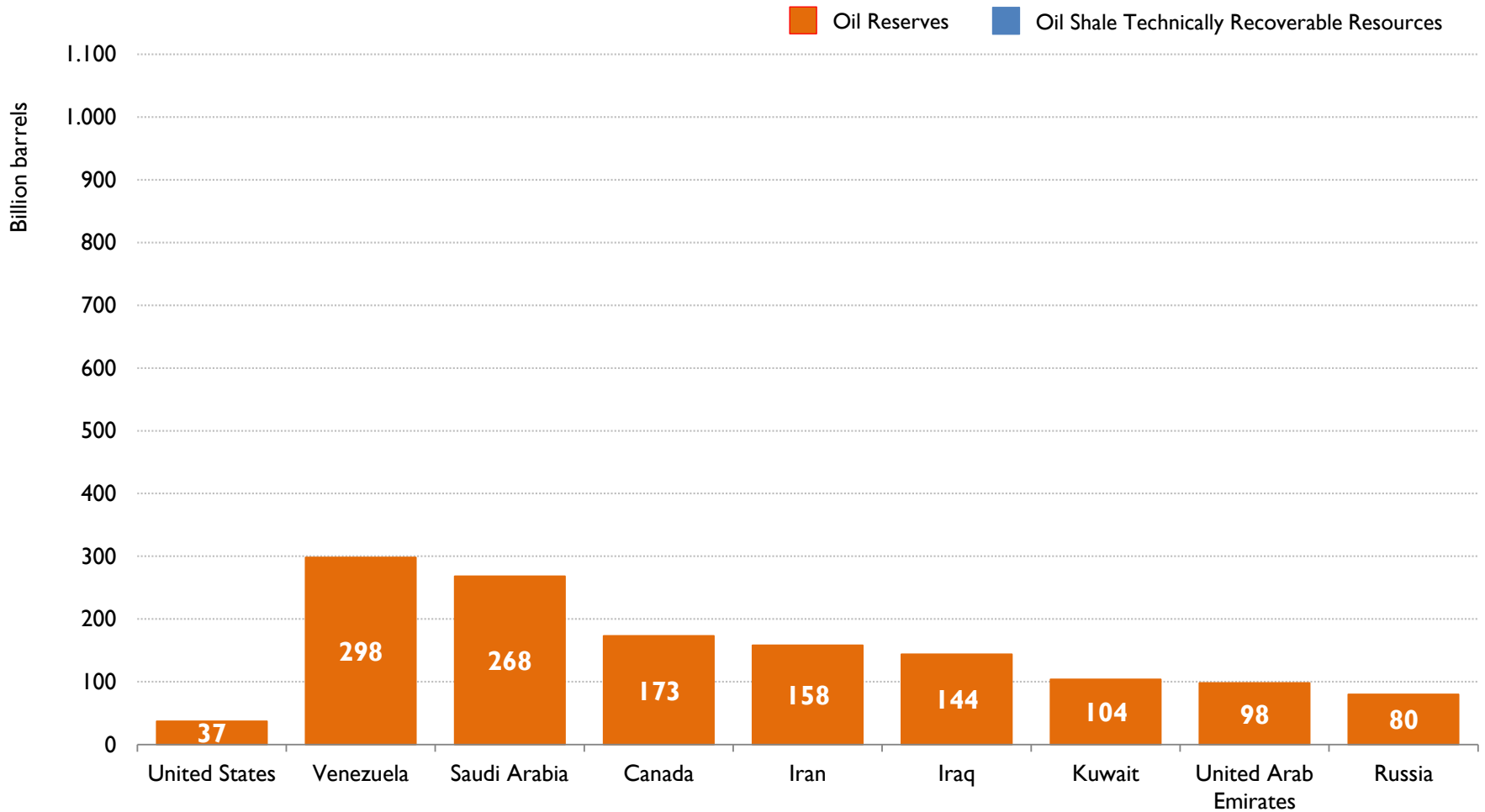


Shale productivity, Eagle Ford

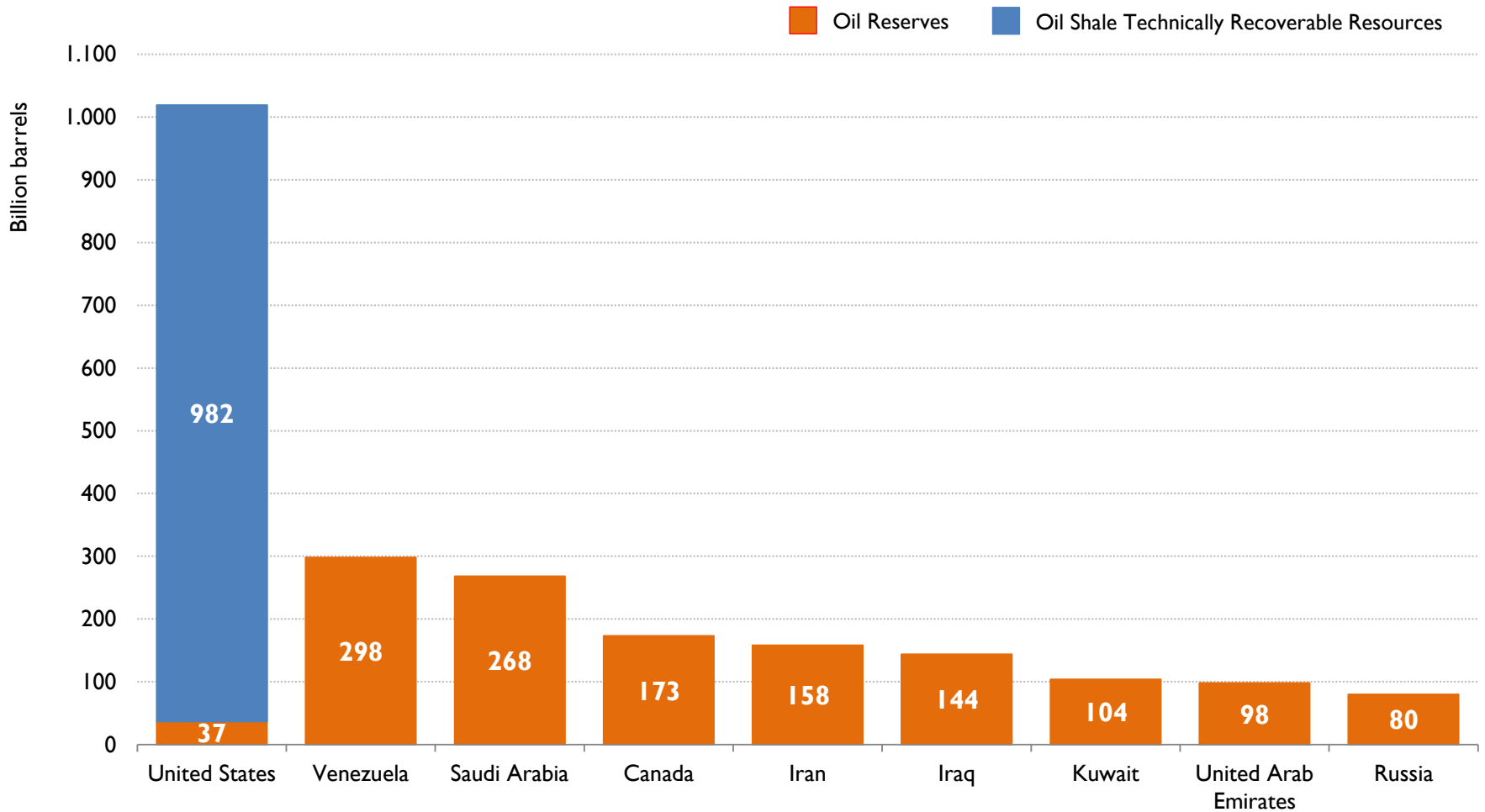
Growth in US production result of important **gains in productivity** in shale formations as **technology matures**. Producers have **cut days needed** to drill a well and developed fracturing techniques to increase initial production.



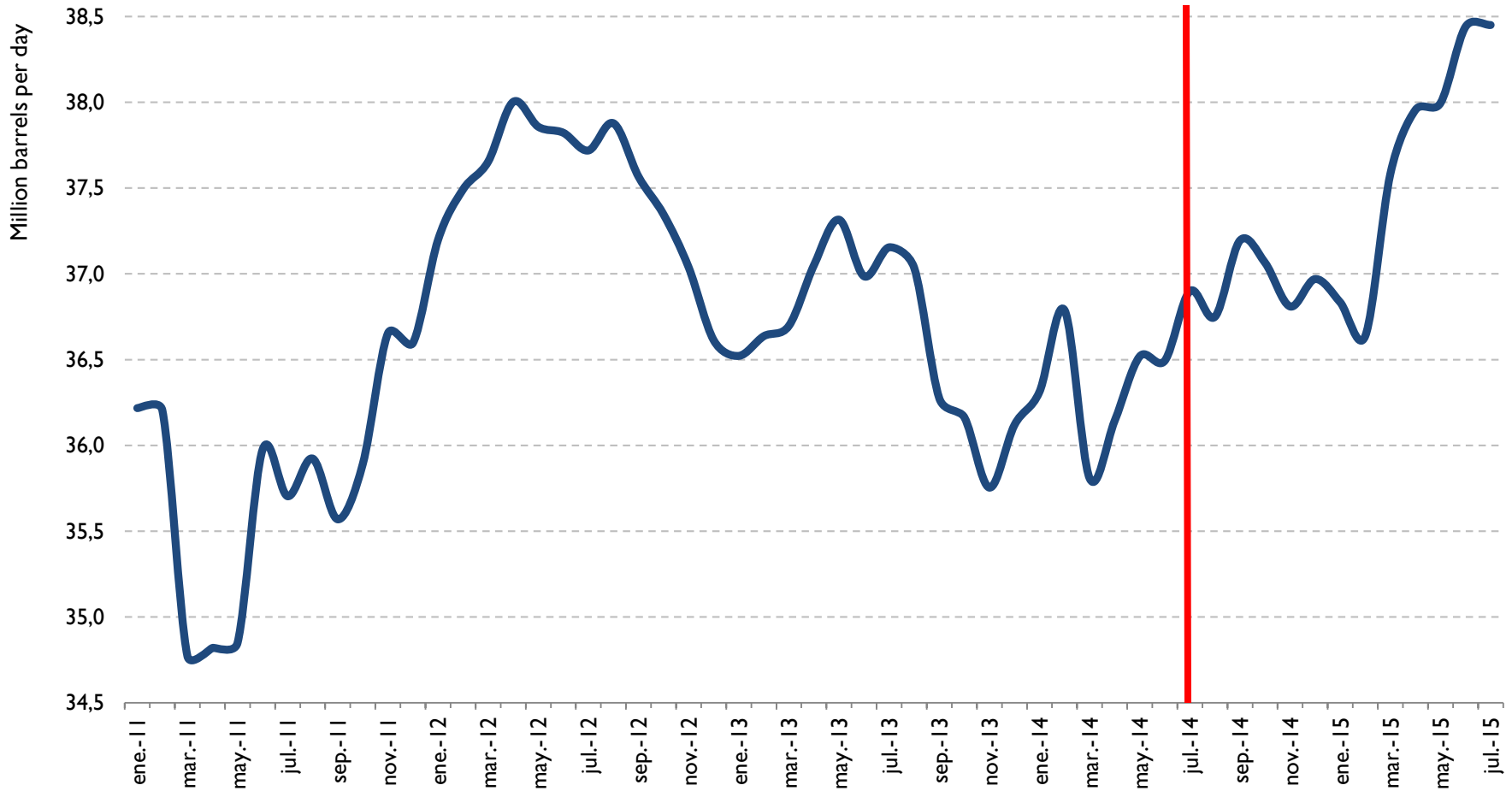
Shale reserves



Shale reserves



Production, OPEC



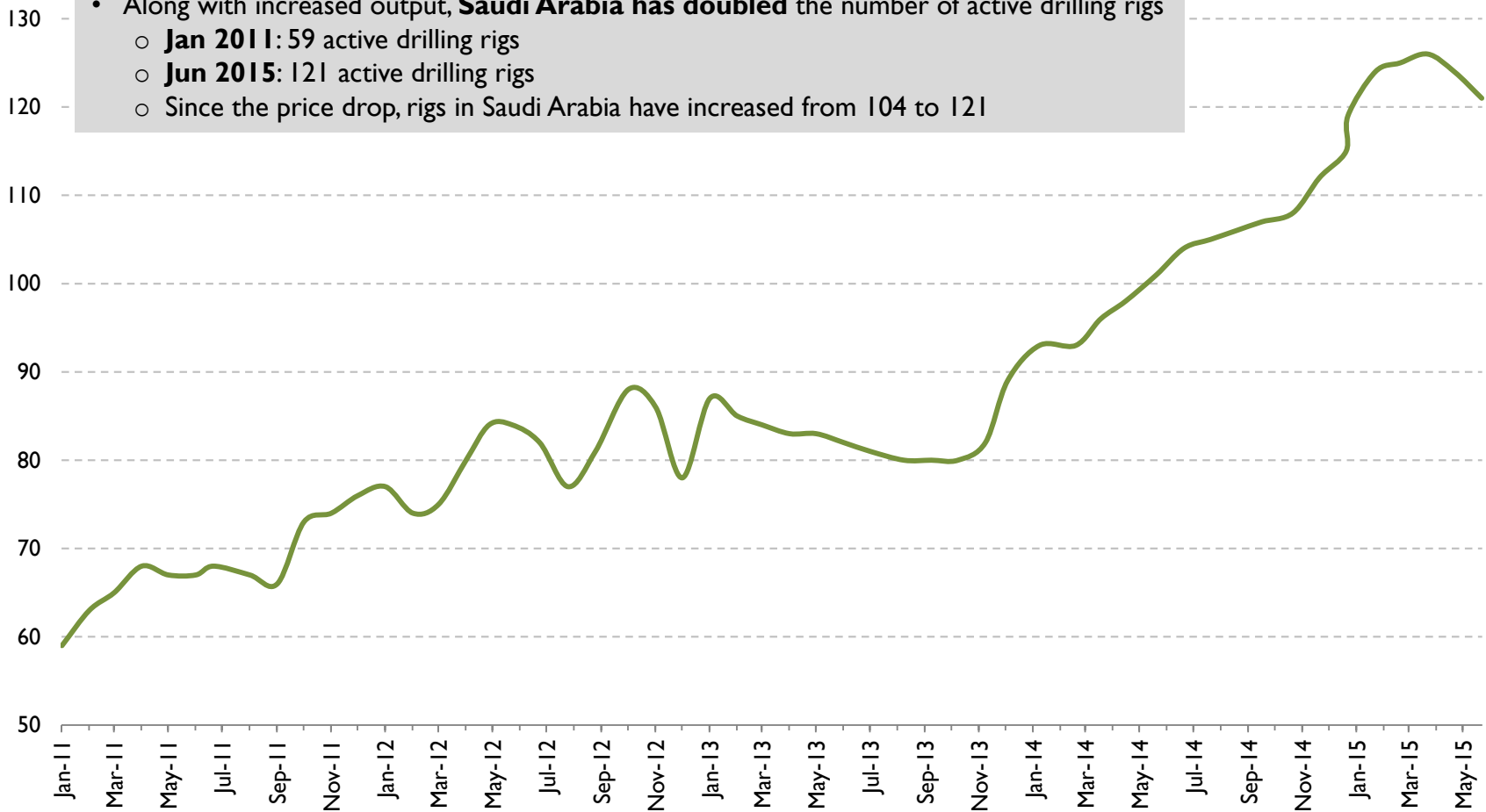
Production, Saudi Arabia



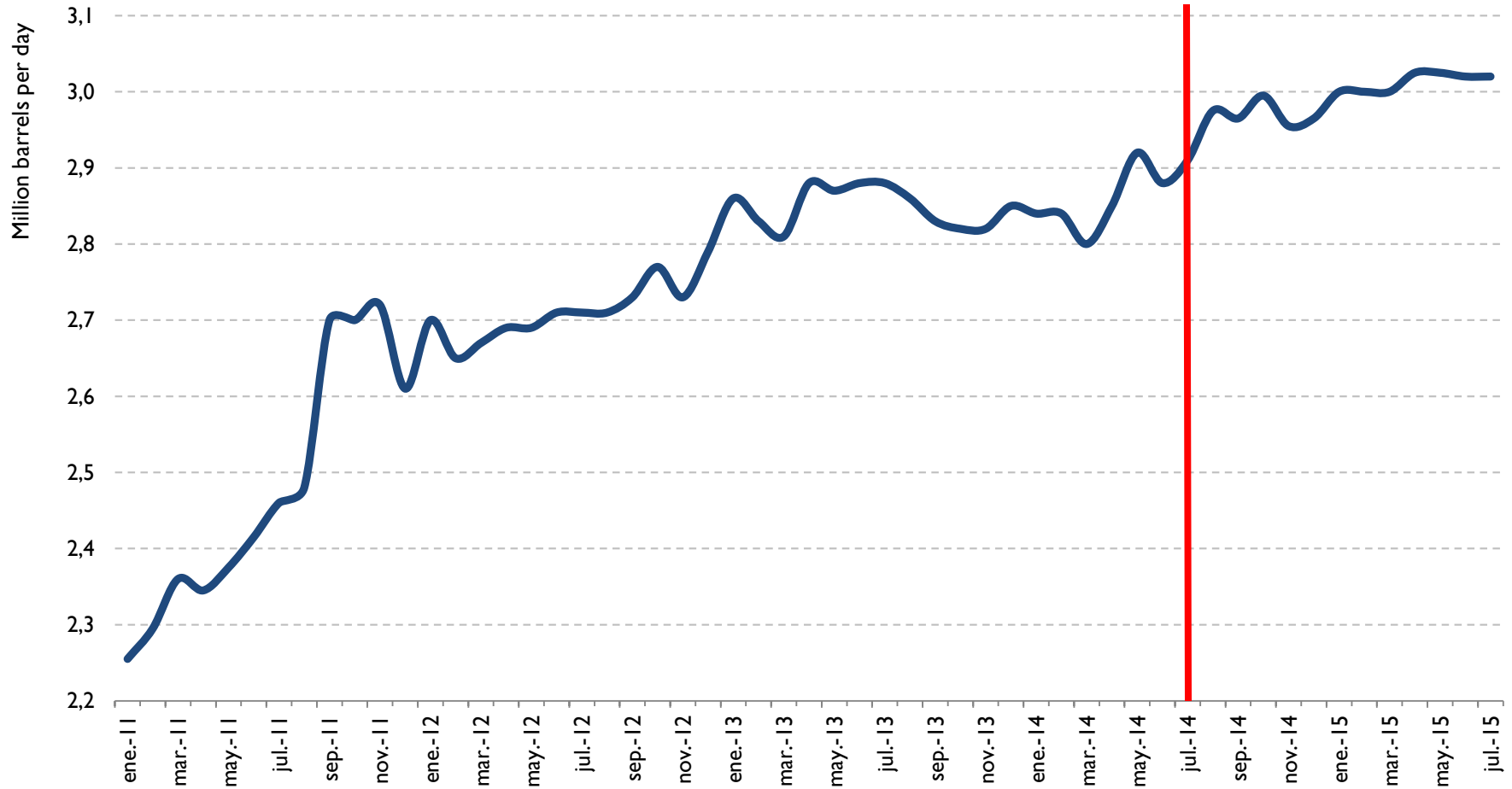
Drilling rigs, Saudi Arabia

- Along with increased output, **Saudi Arabia has doubled** the number of active drilling rigs
 - **Jan 2011**: 59 active drilling rigs
 - **Jun 2015**: 121 active drilling rigs
 - Since the price drop, rigs in Saudi Arabia have increased from 104 to 121

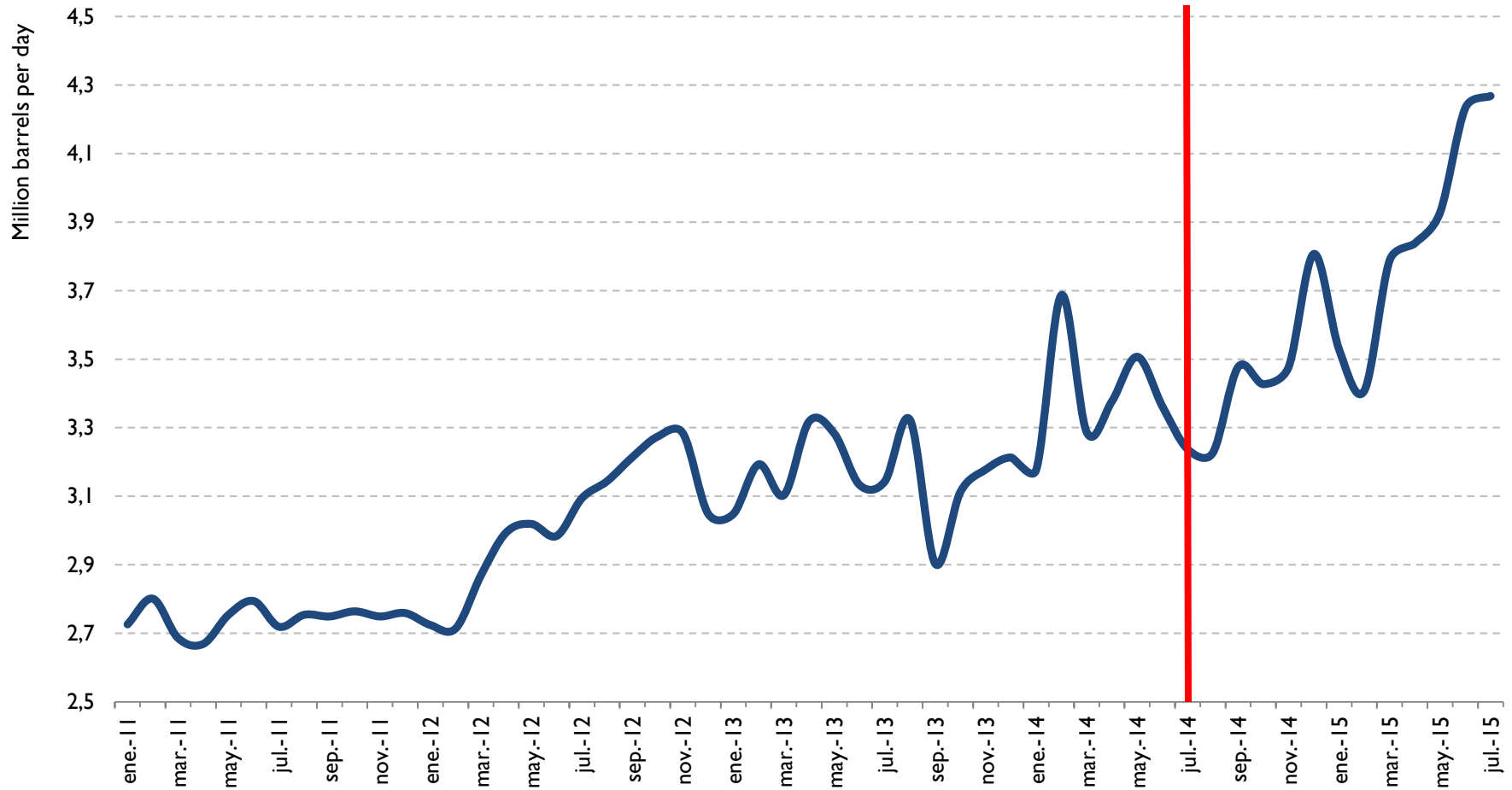
Active Drilling Rigs



Production, Kuwait



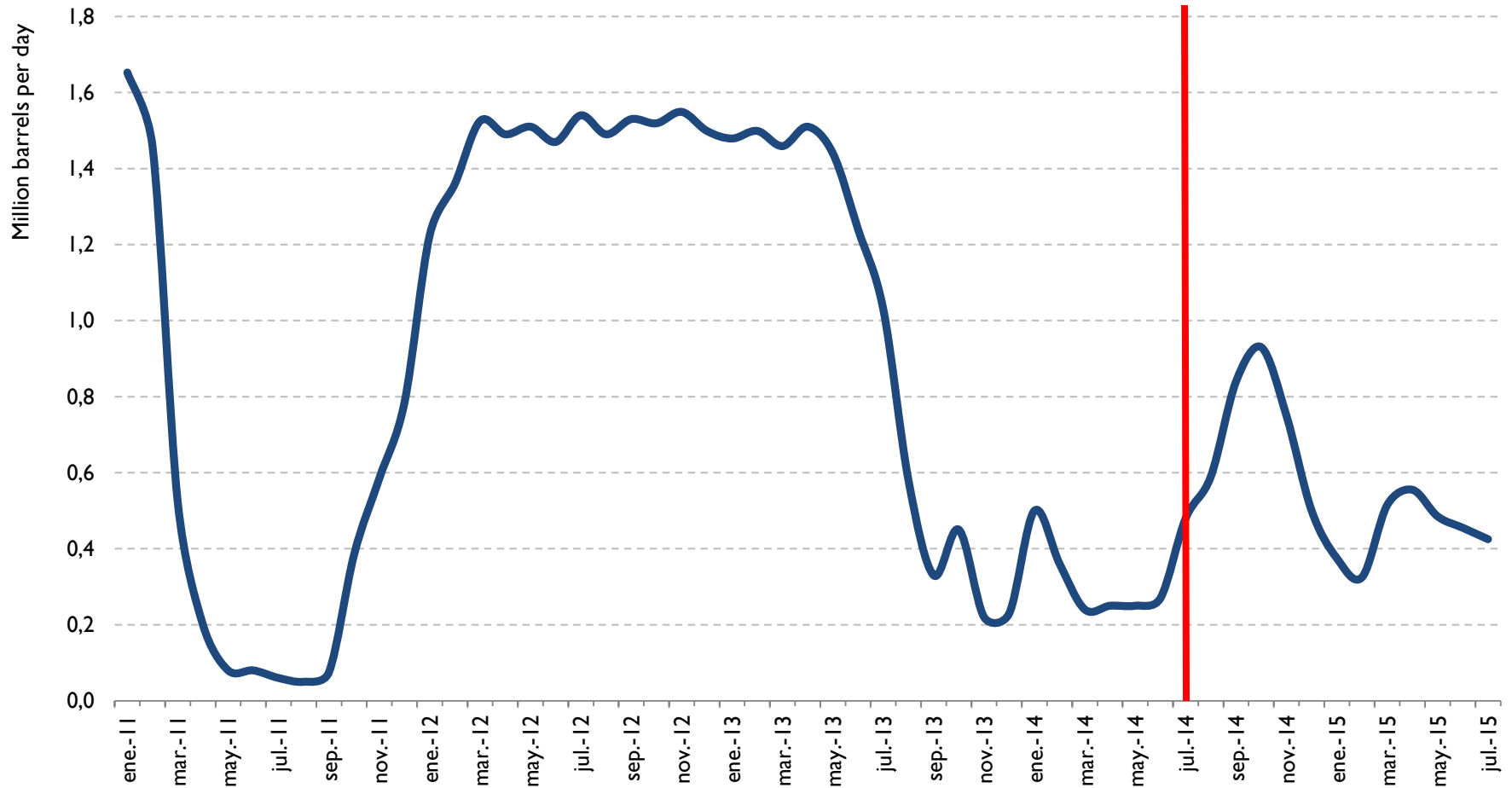
Production, Iraq



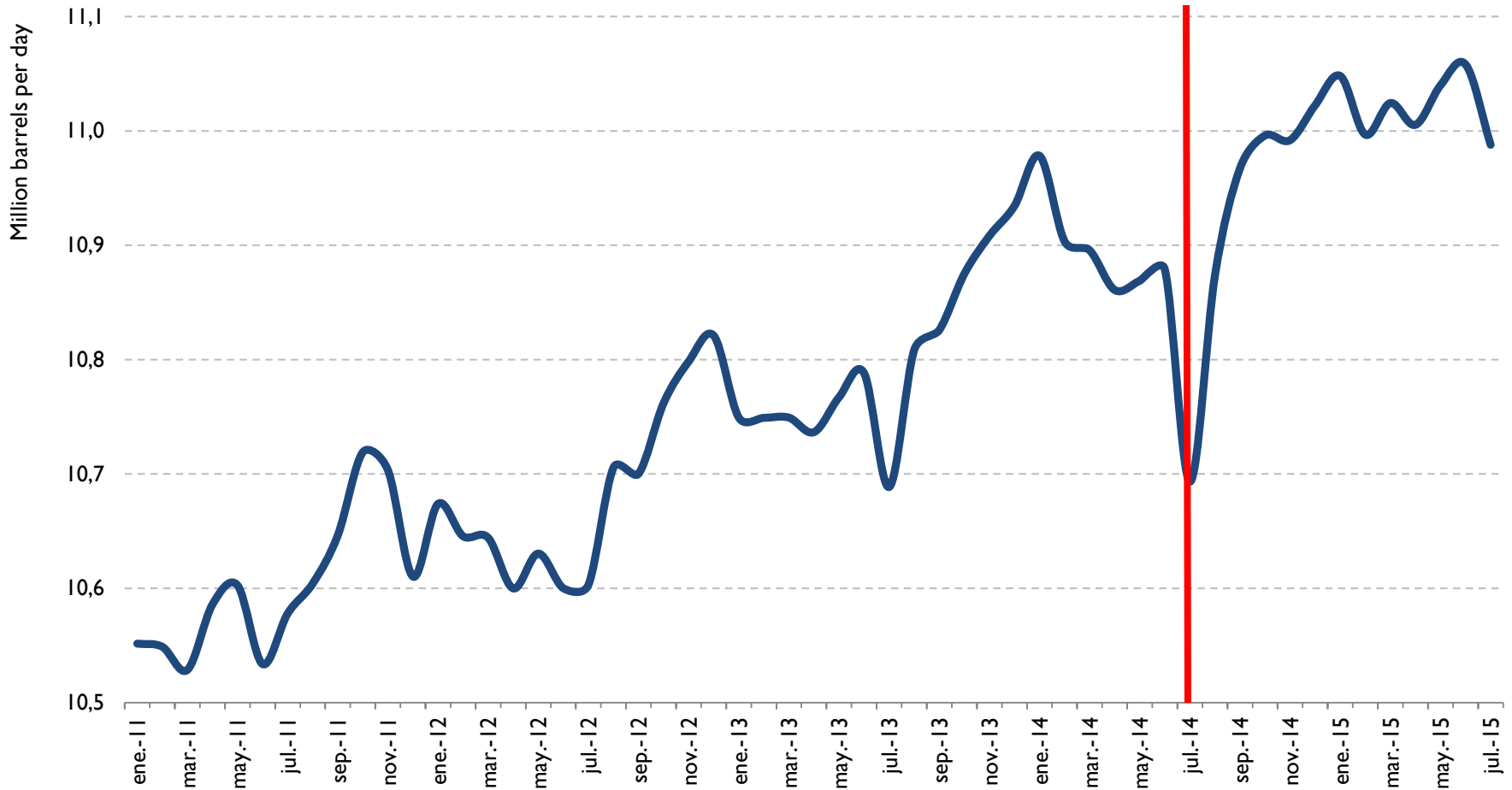
Production, Iran



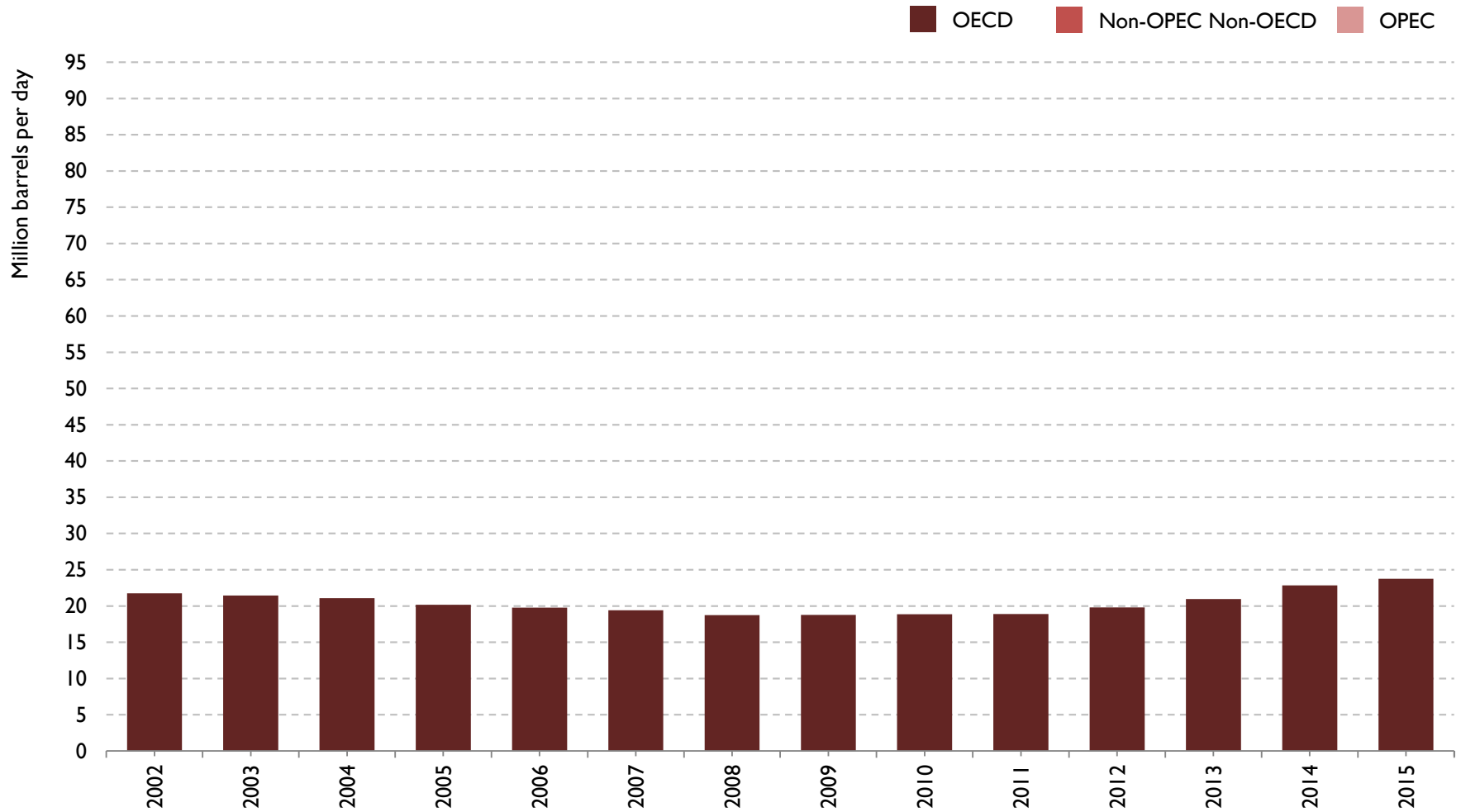
Production, Libya



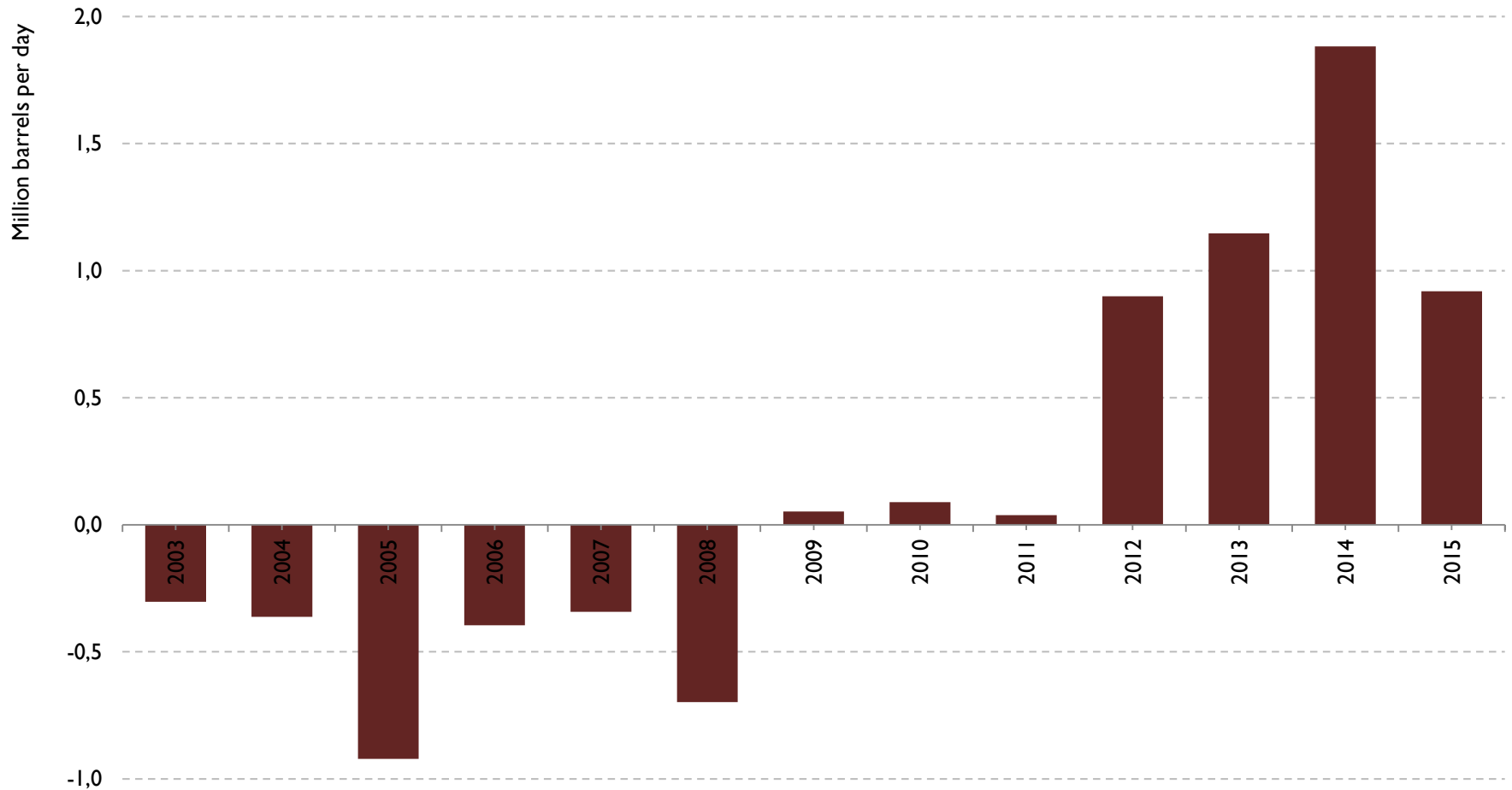
Production, Russia



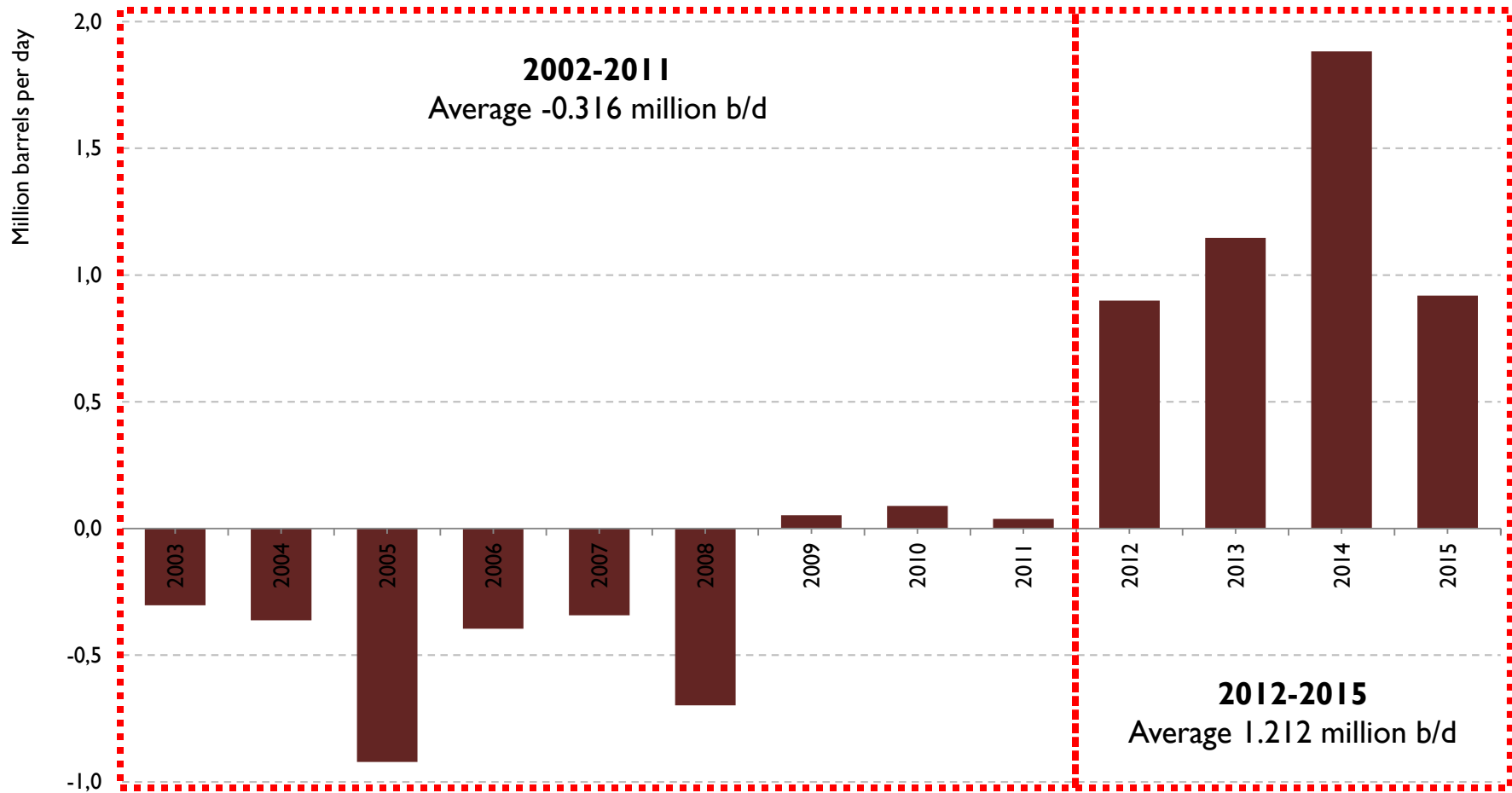
Supply, absolute



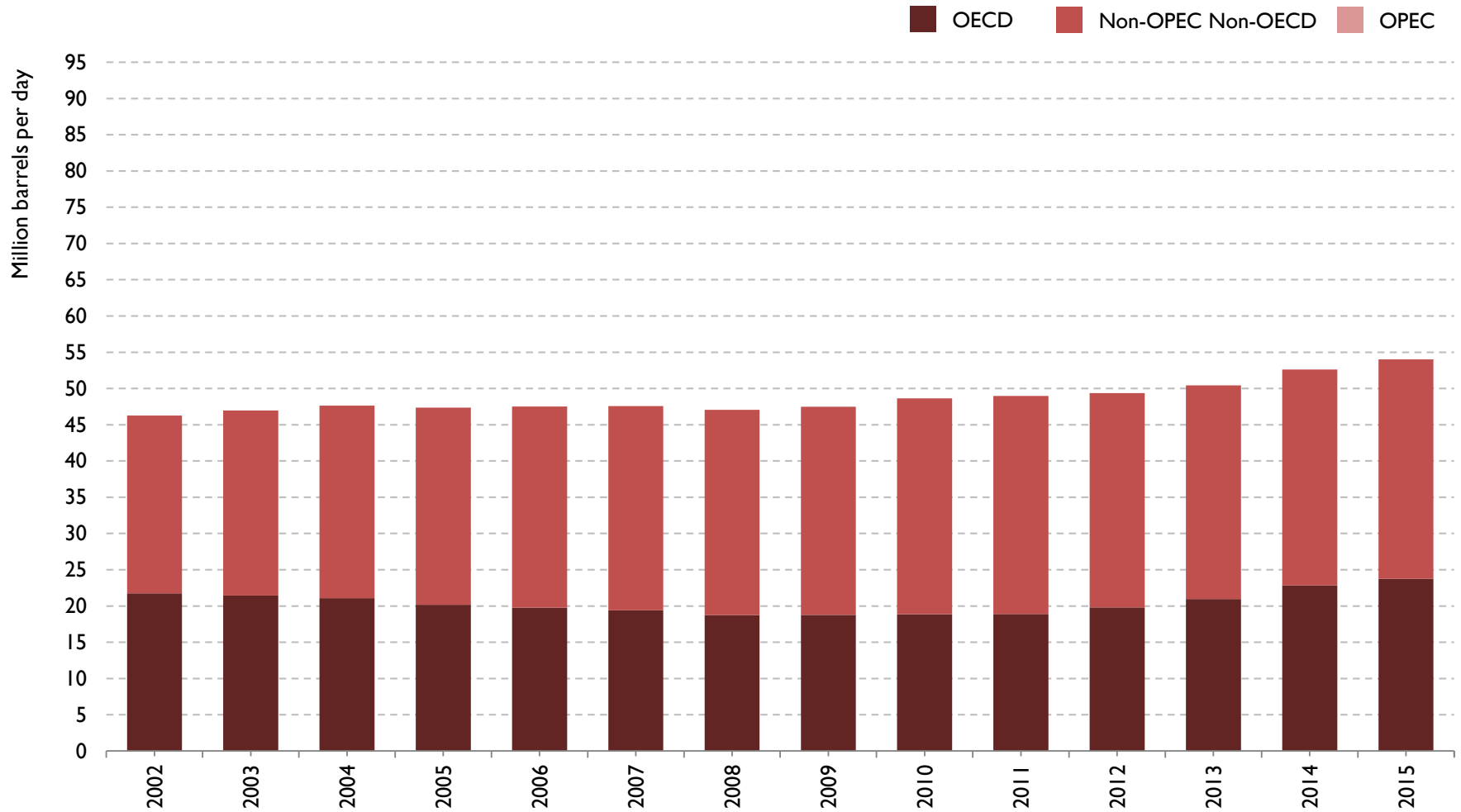
Supply, changes OECD



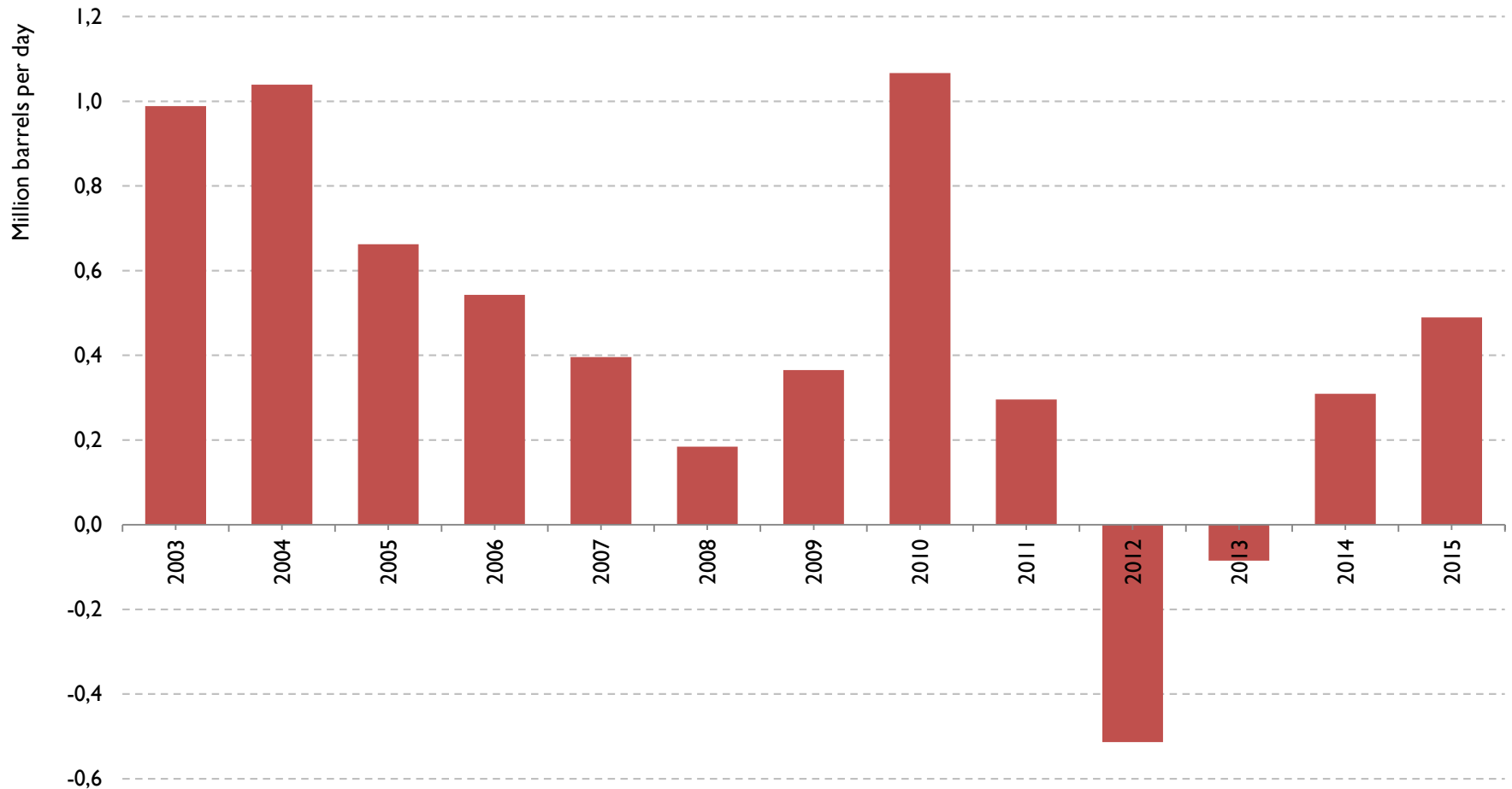
Supply, changes OECD



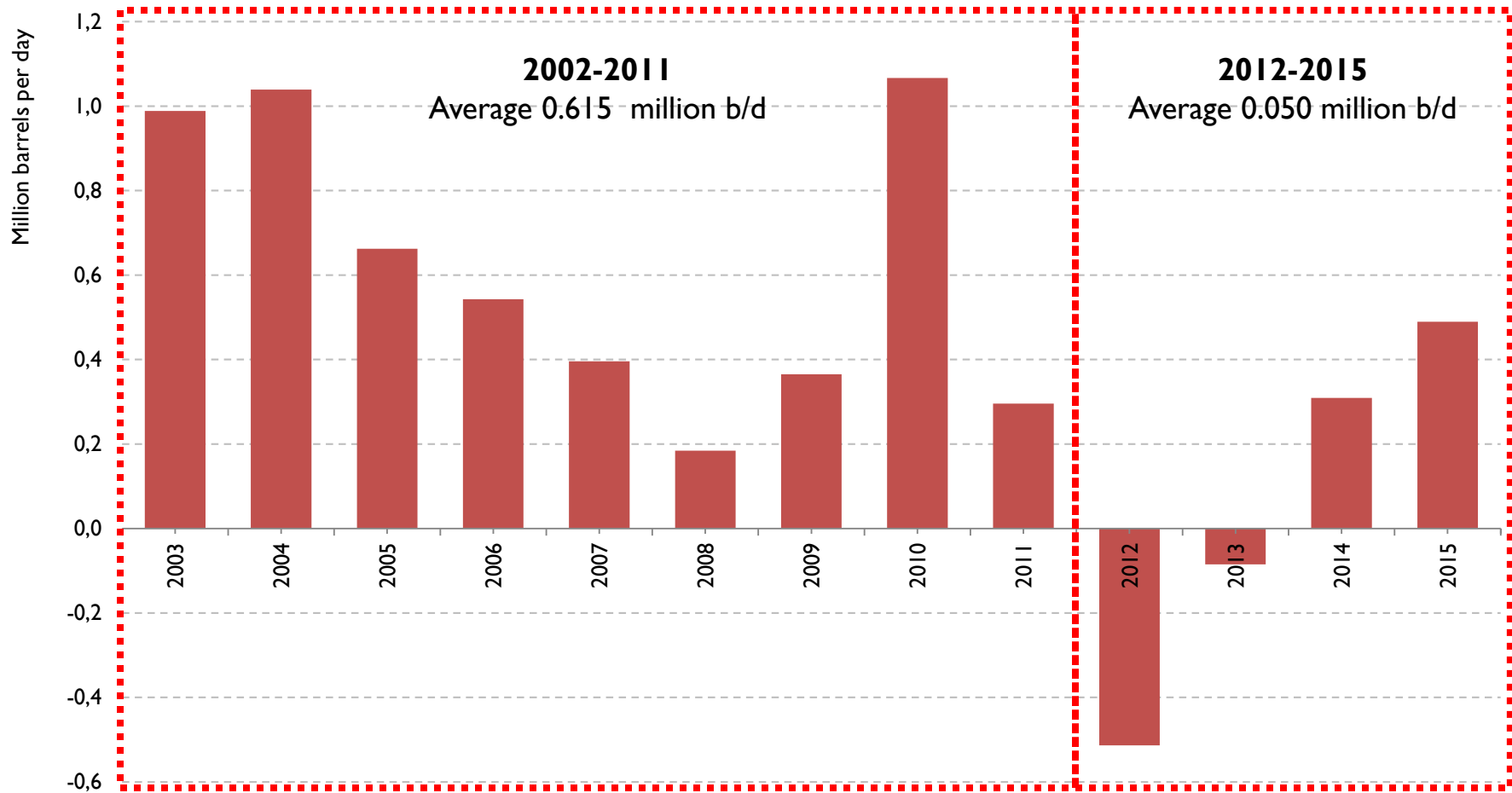
Supply, absolute



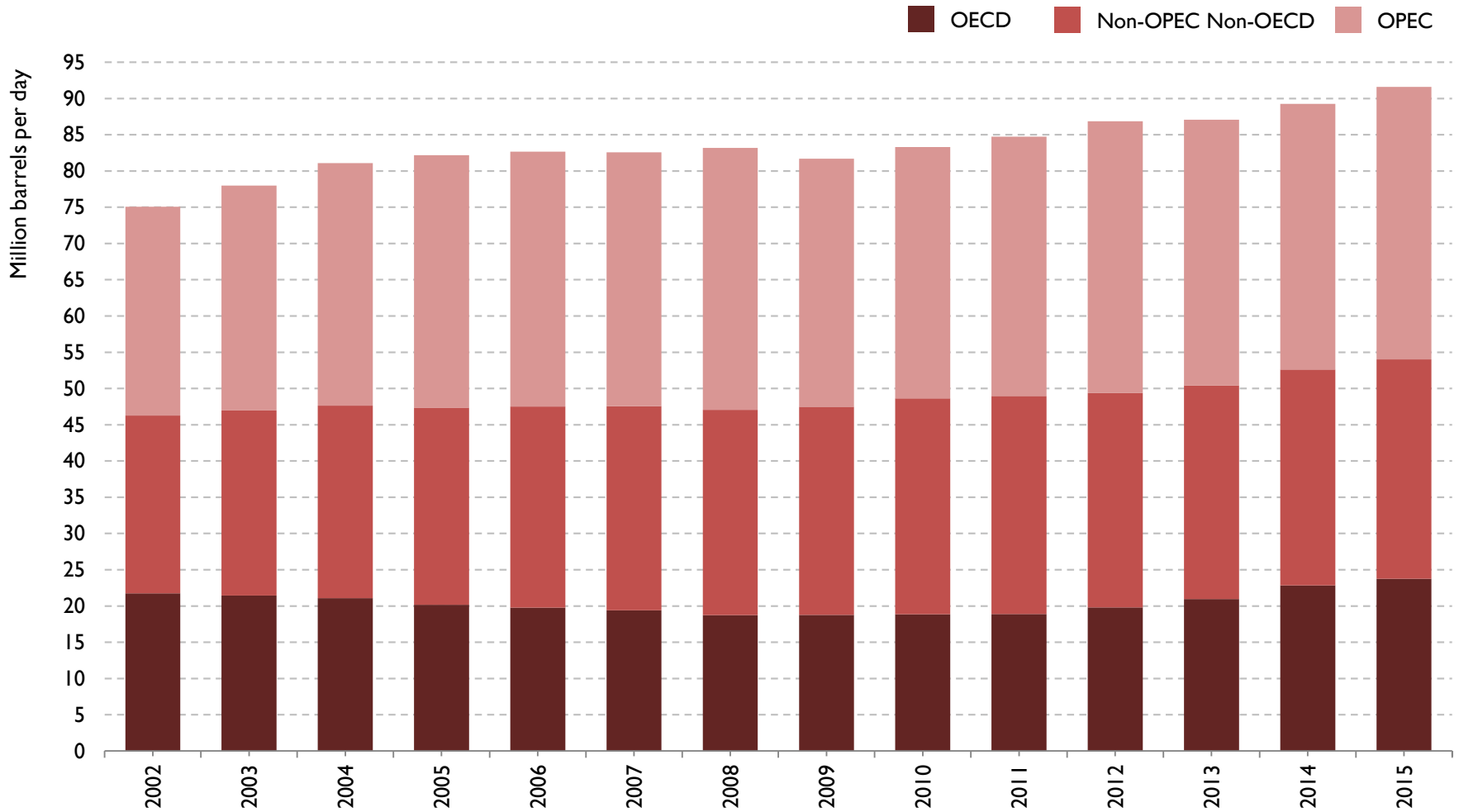
Supply, changes No OPEC/OECD



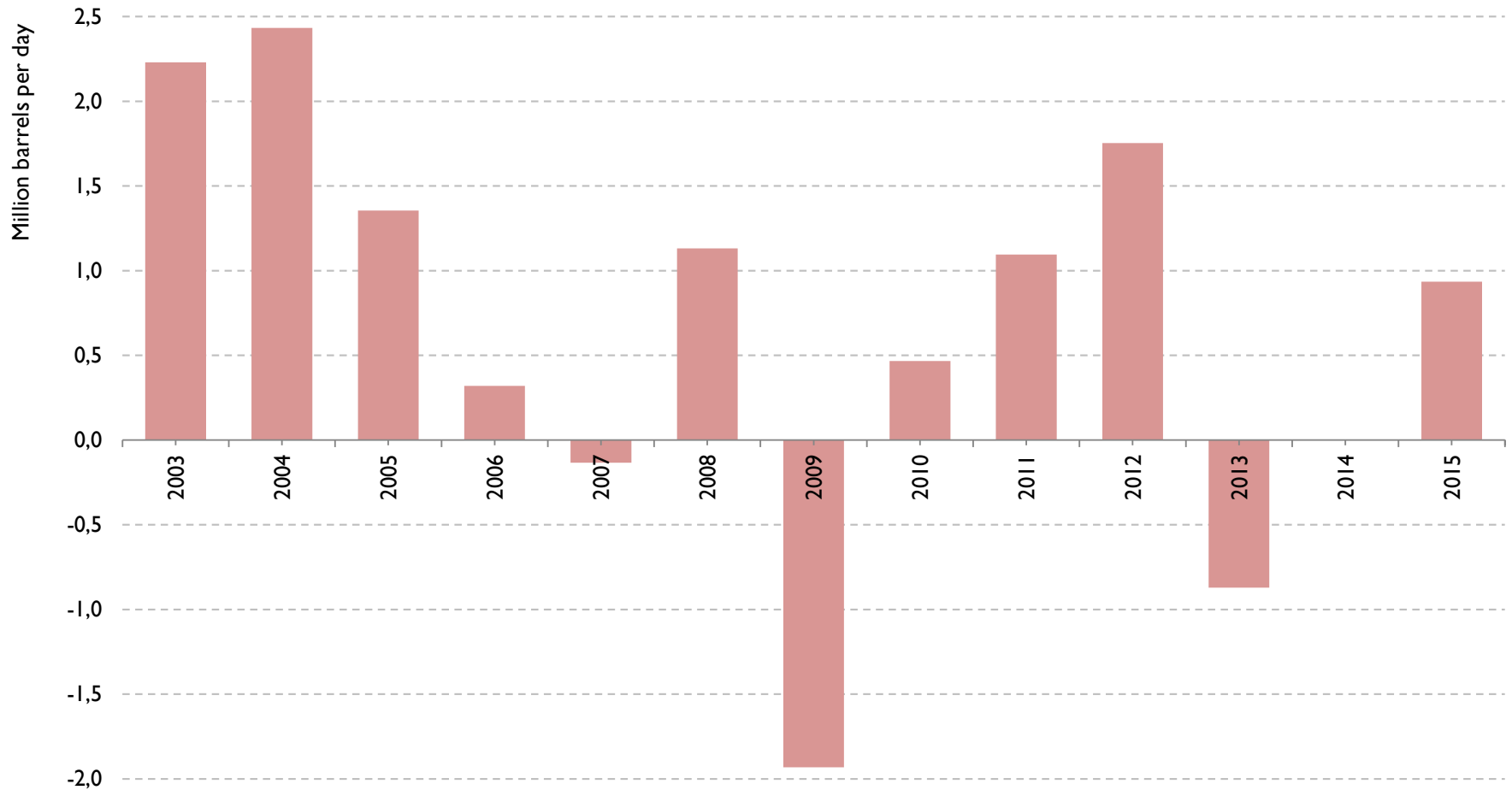
Supply, changes No OPEC/OECD



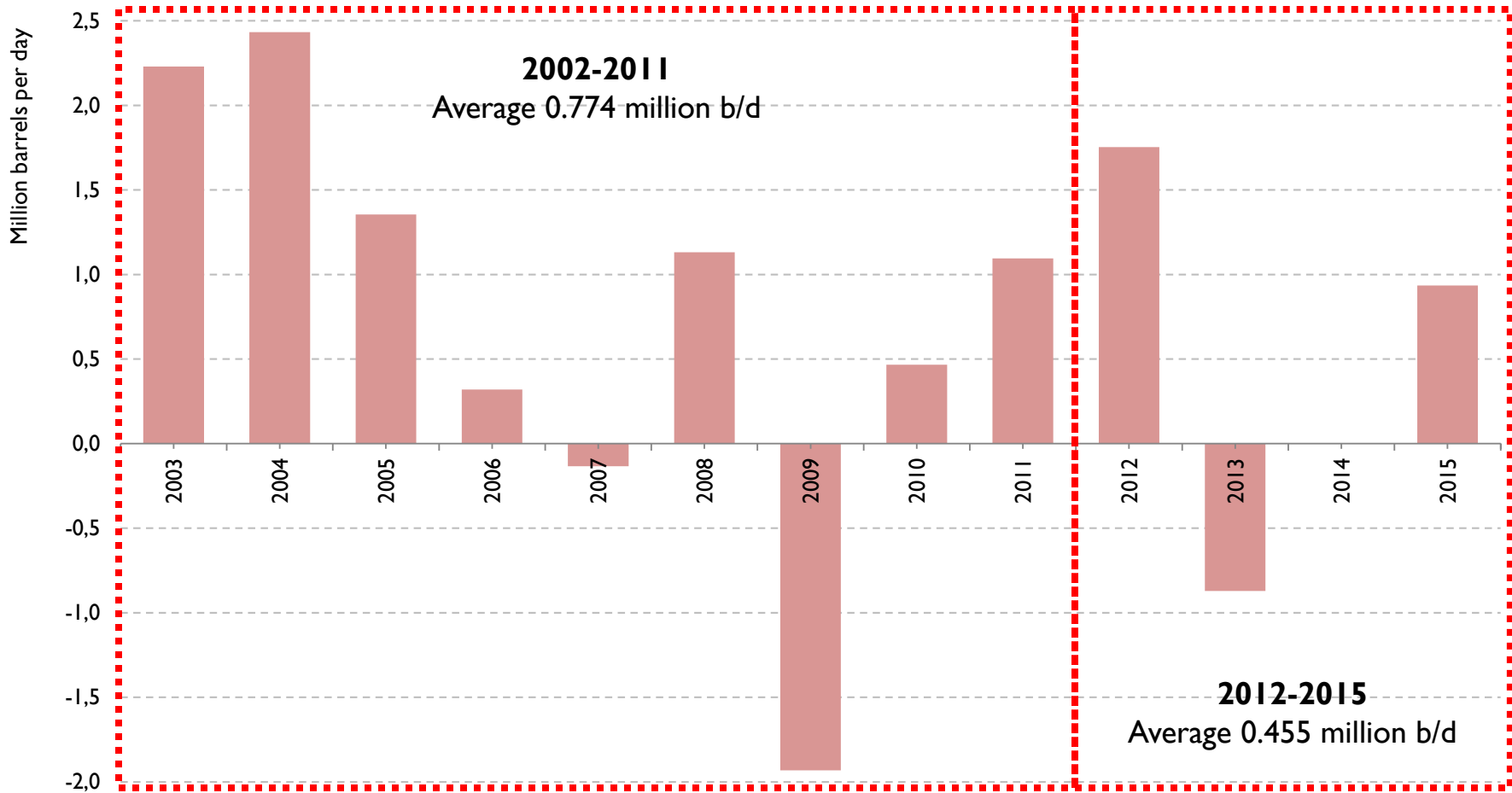
Supply, absolute



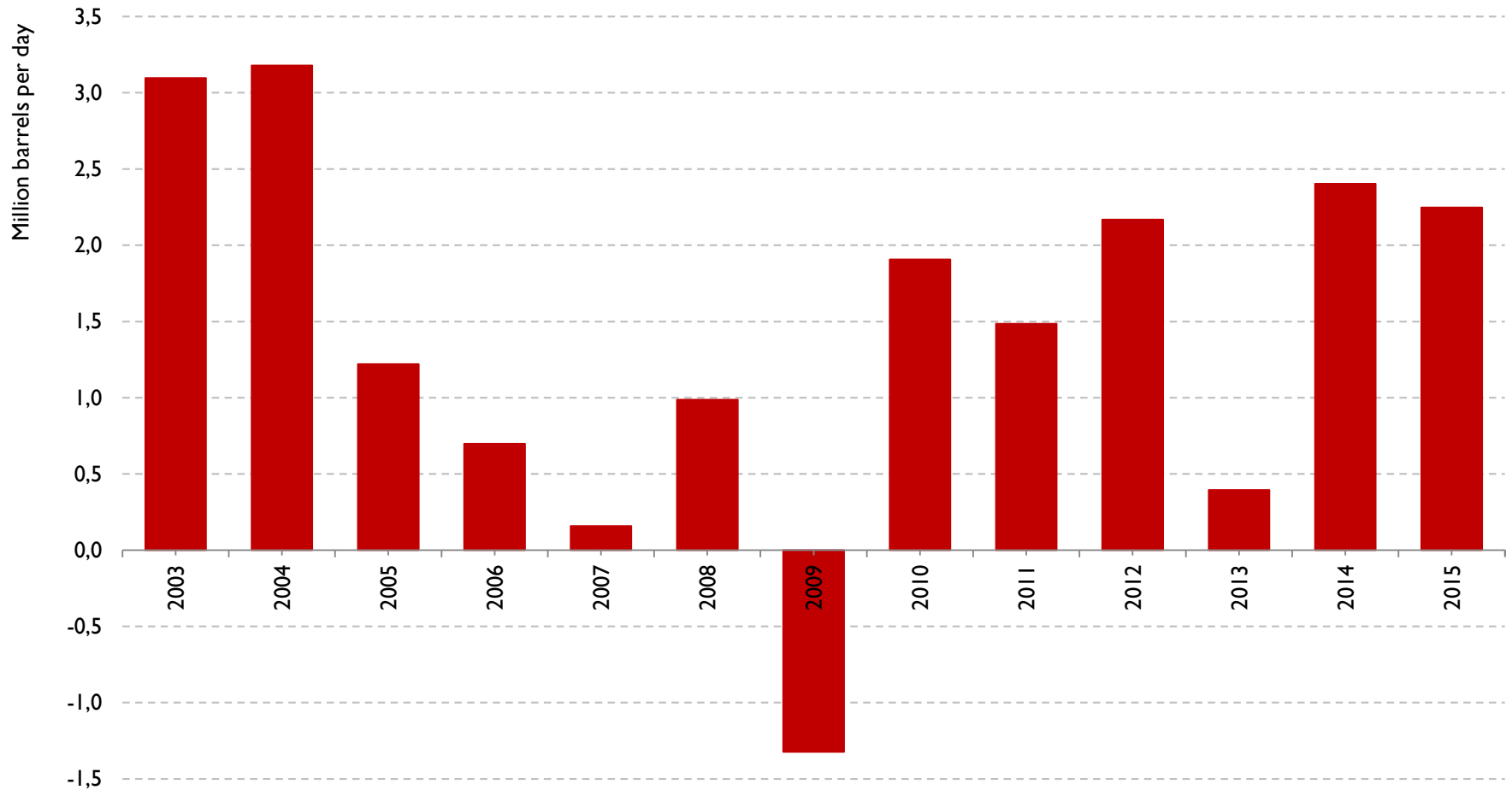
Supply, changes OPEC



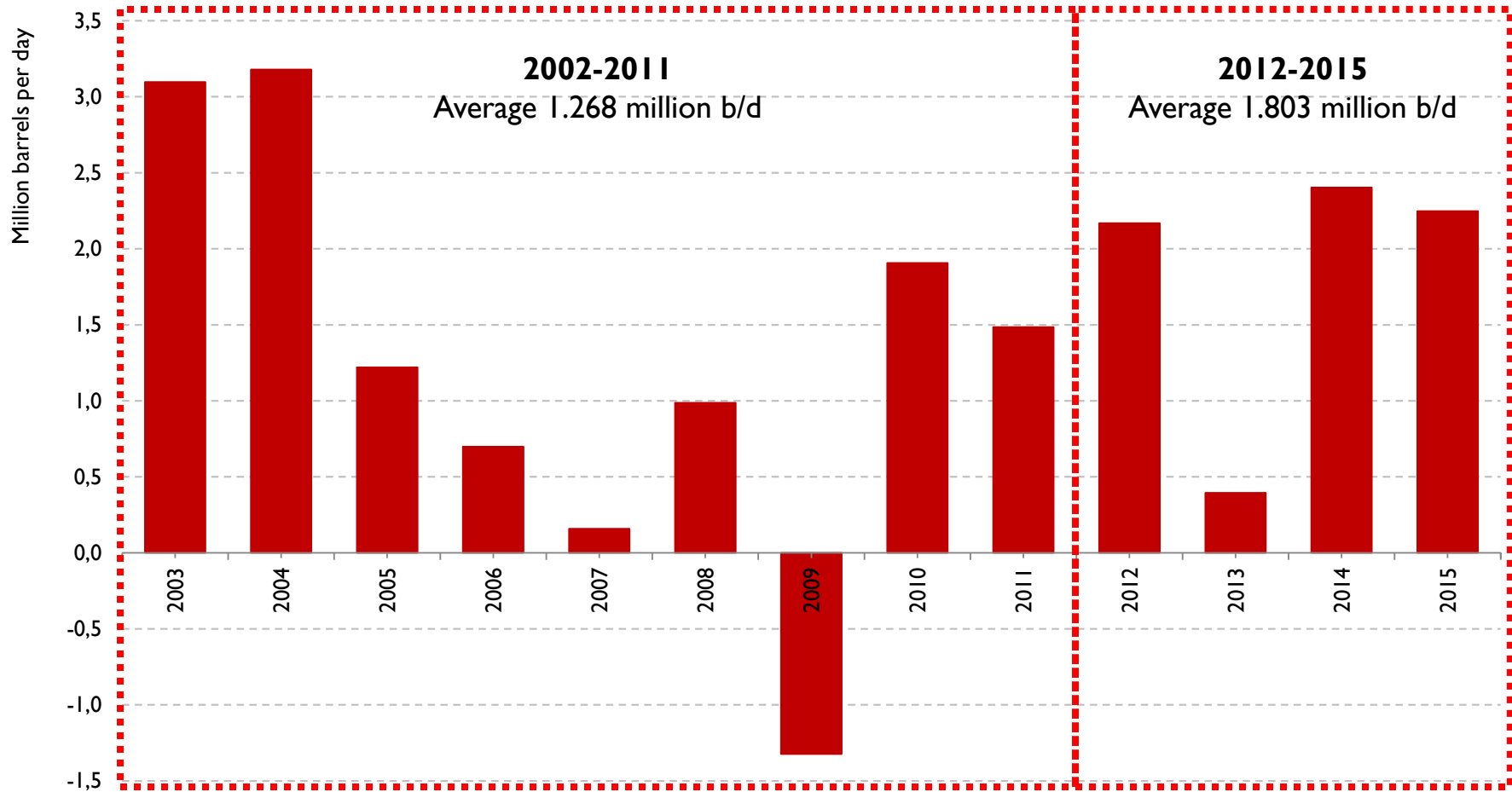
Supply, changes OPEC



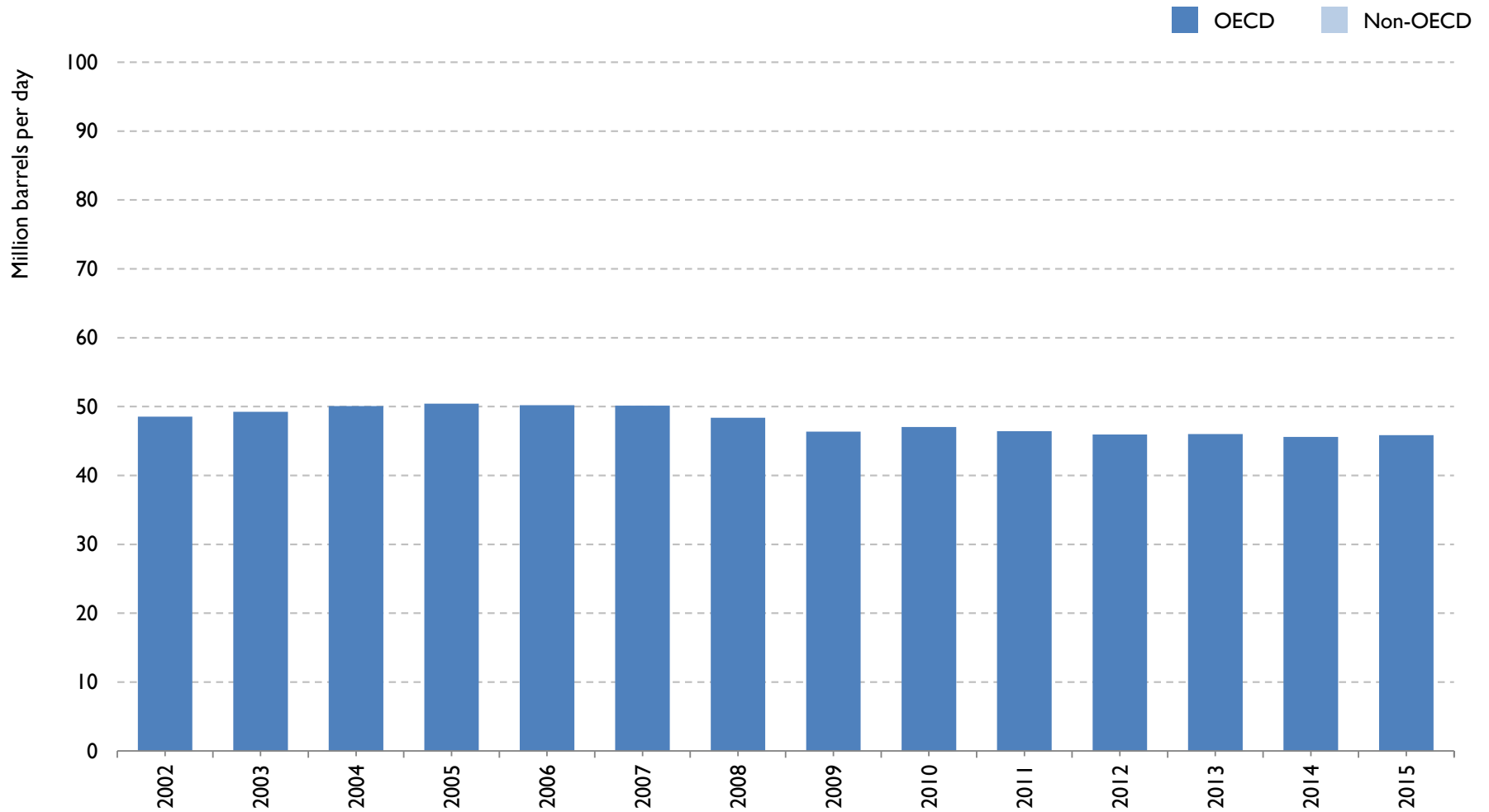
Supply, changes



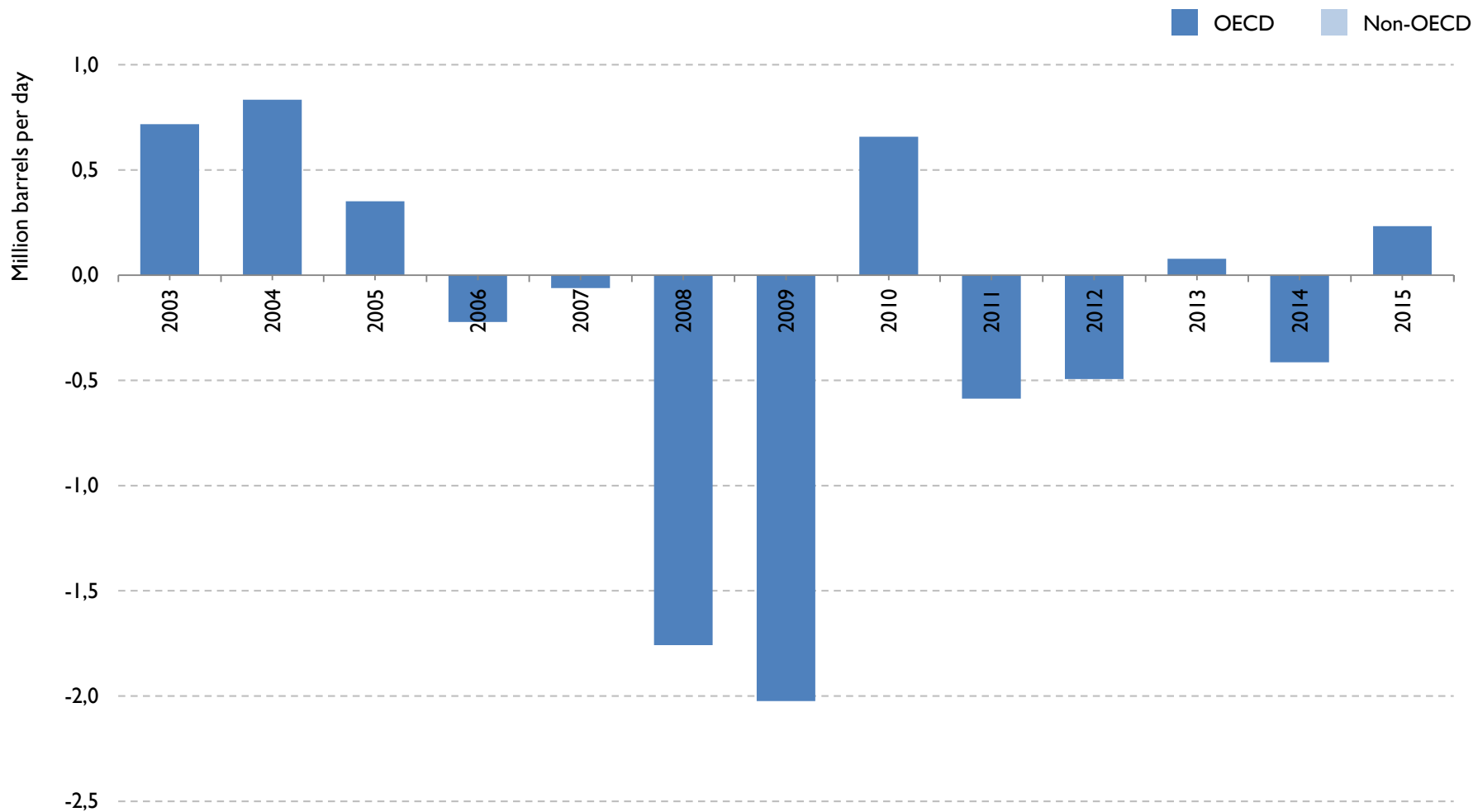
Supply, changes



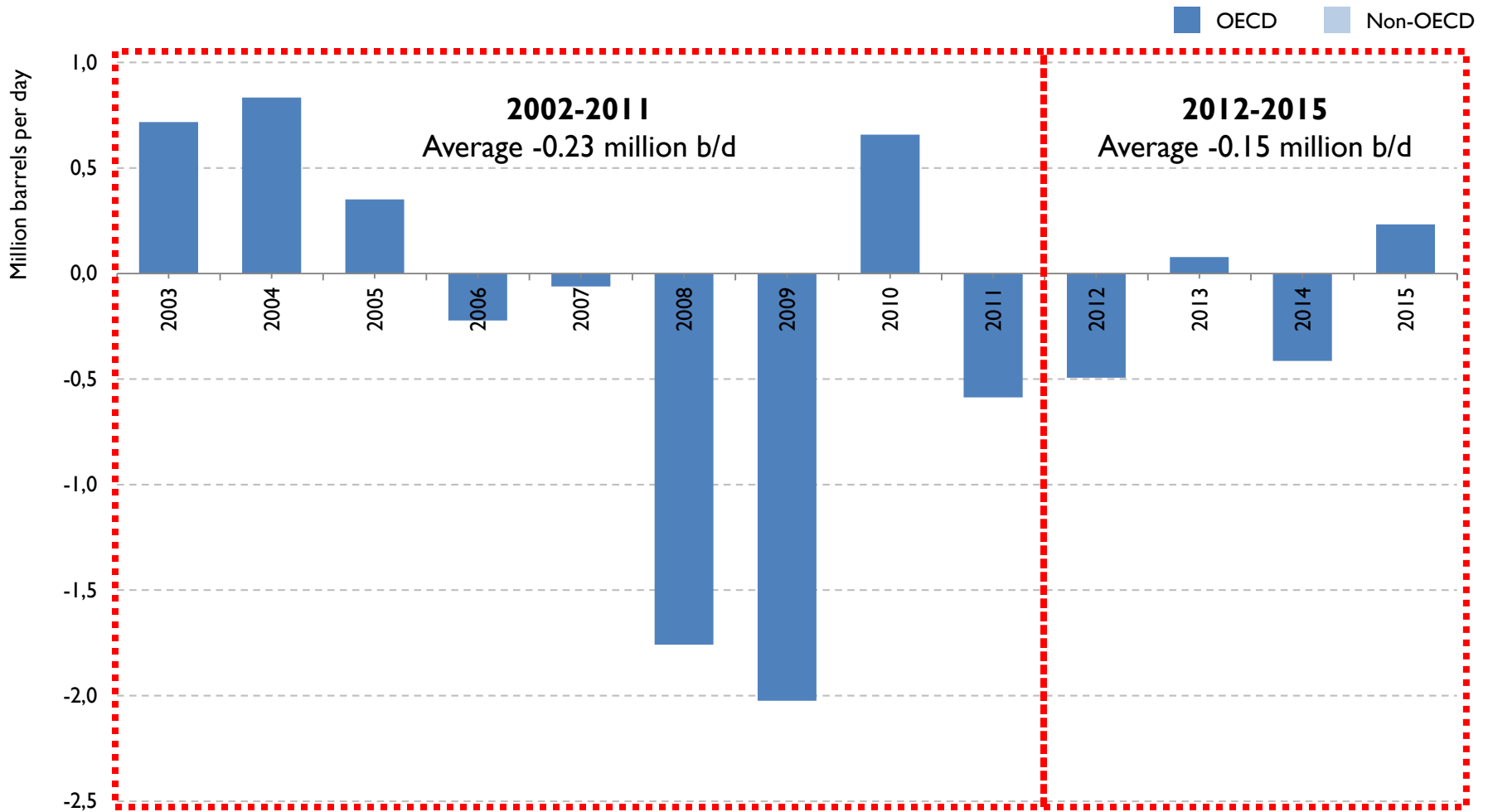
Demand, absolute



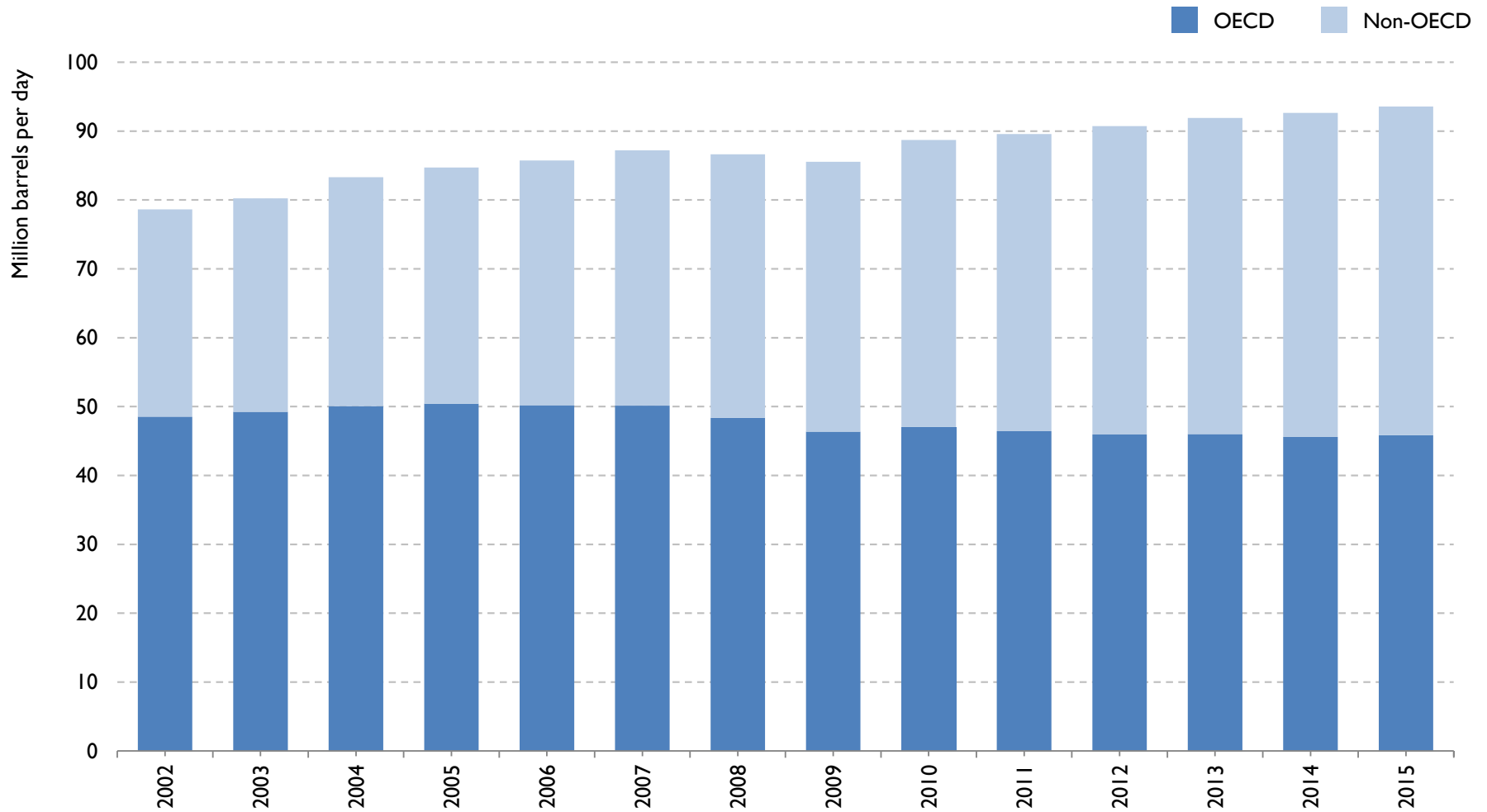
Demand changes, OECD



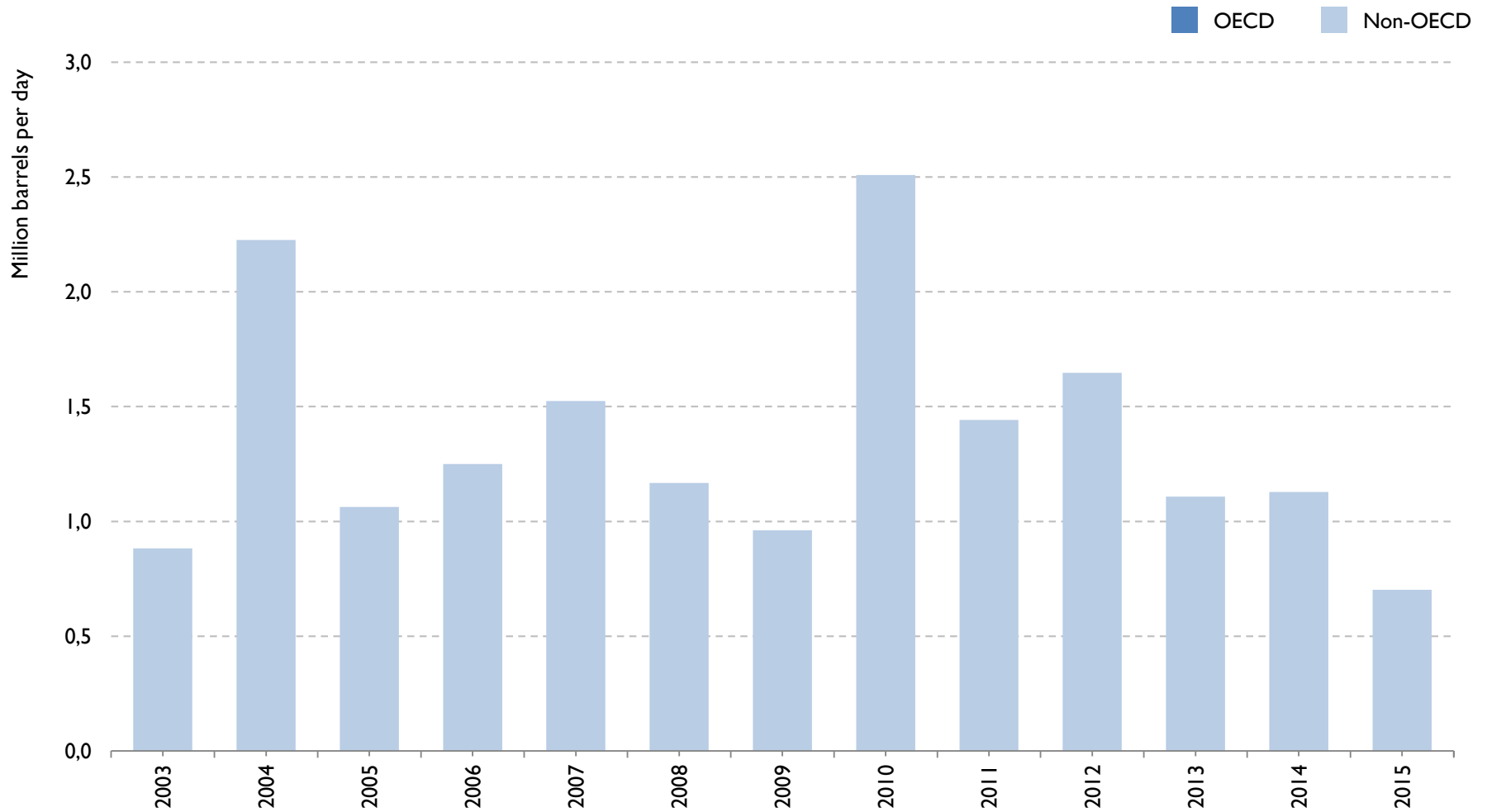
Demand changes, OECD



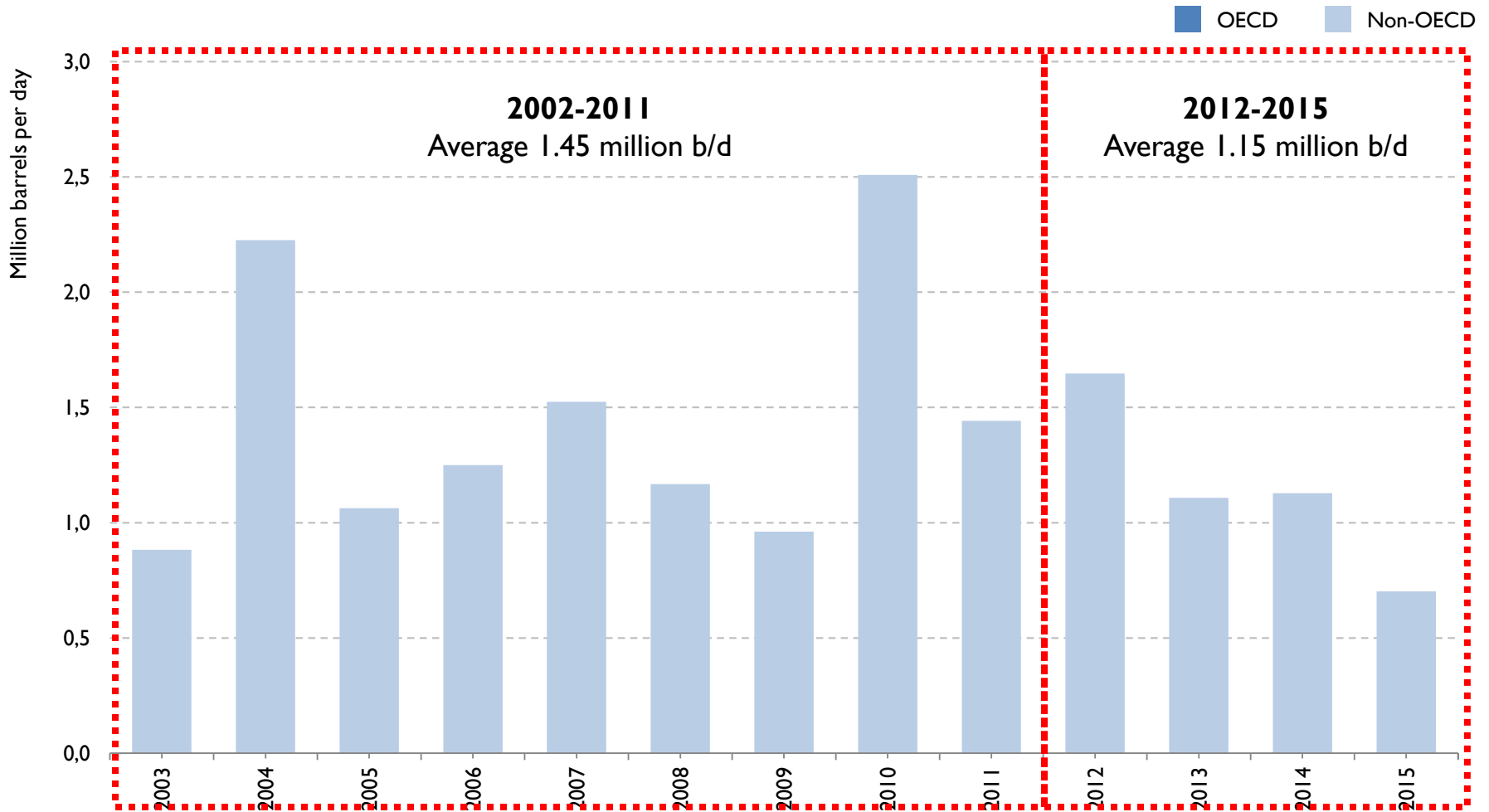
Demand, absolute



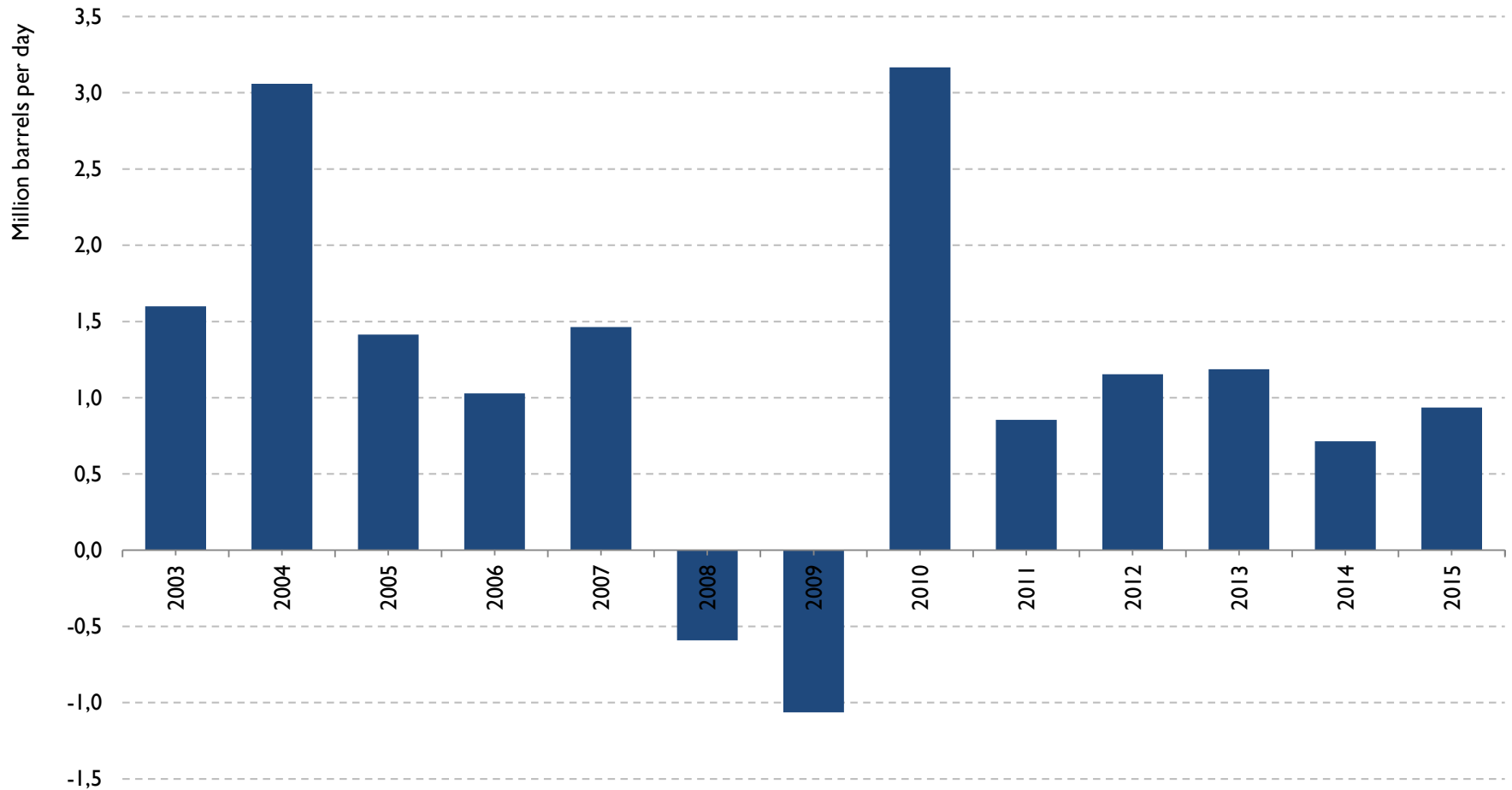
Demand changes, Non-OECD



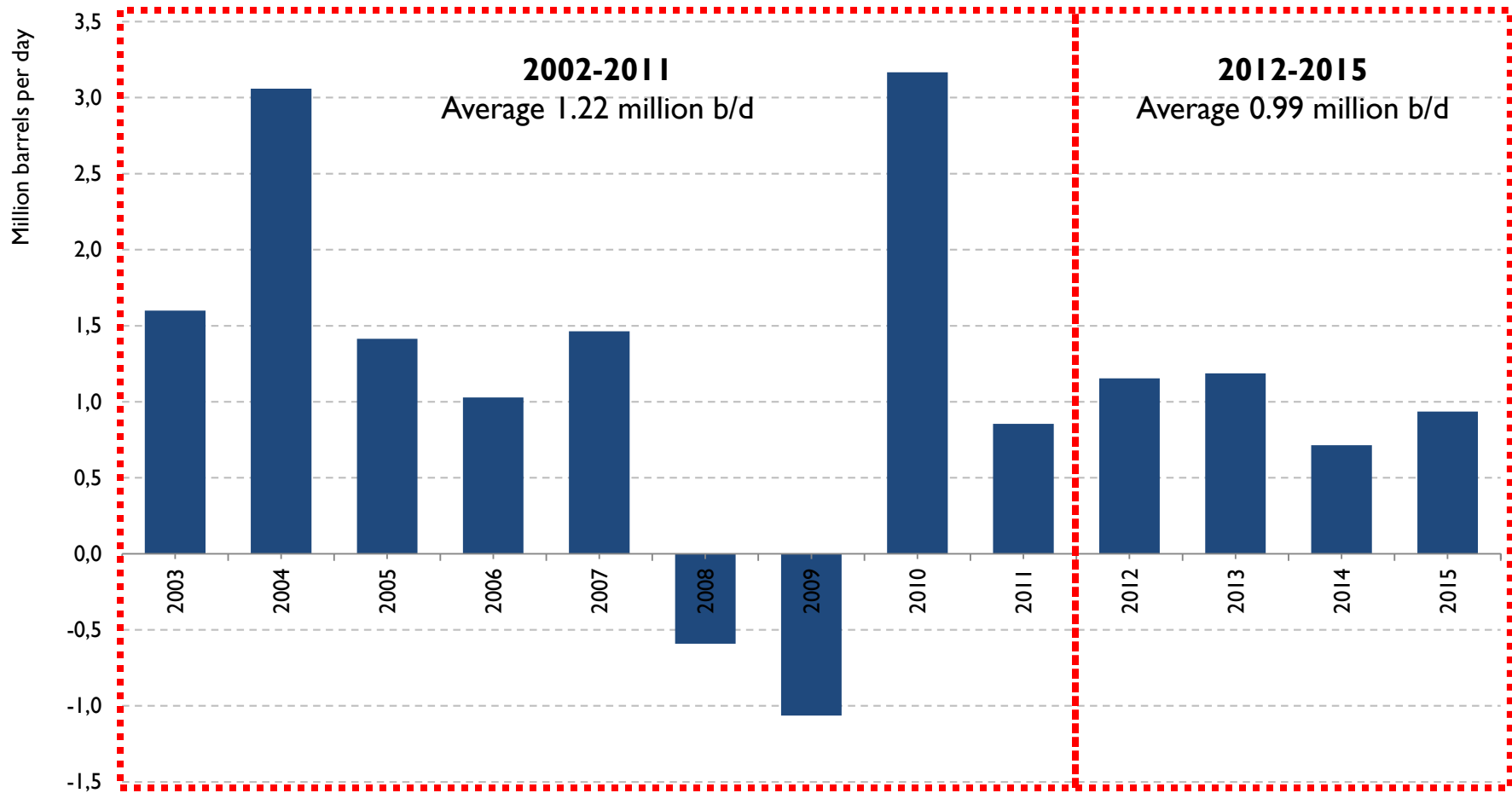
Demand changes, Non-OECD



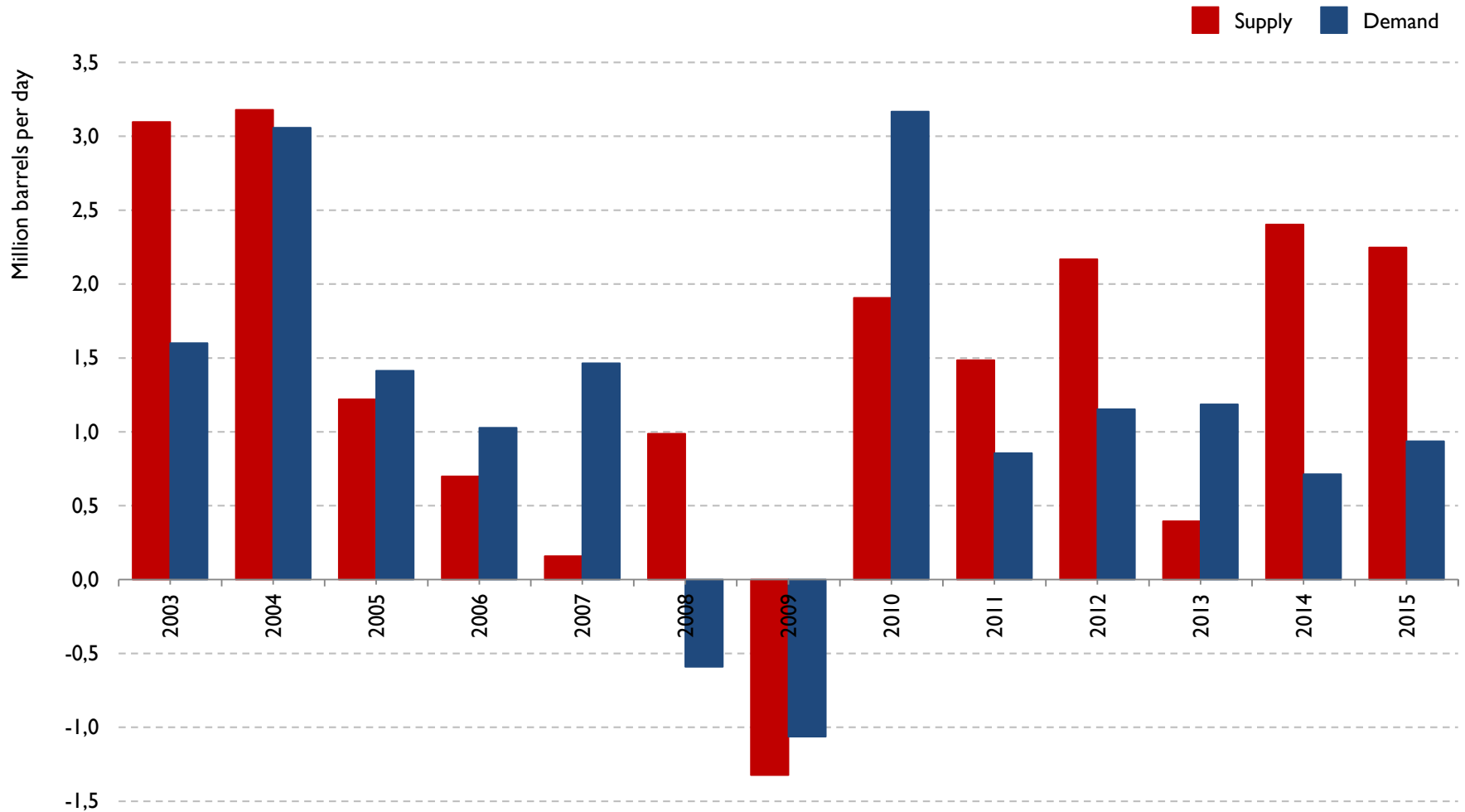
Demand, net changes



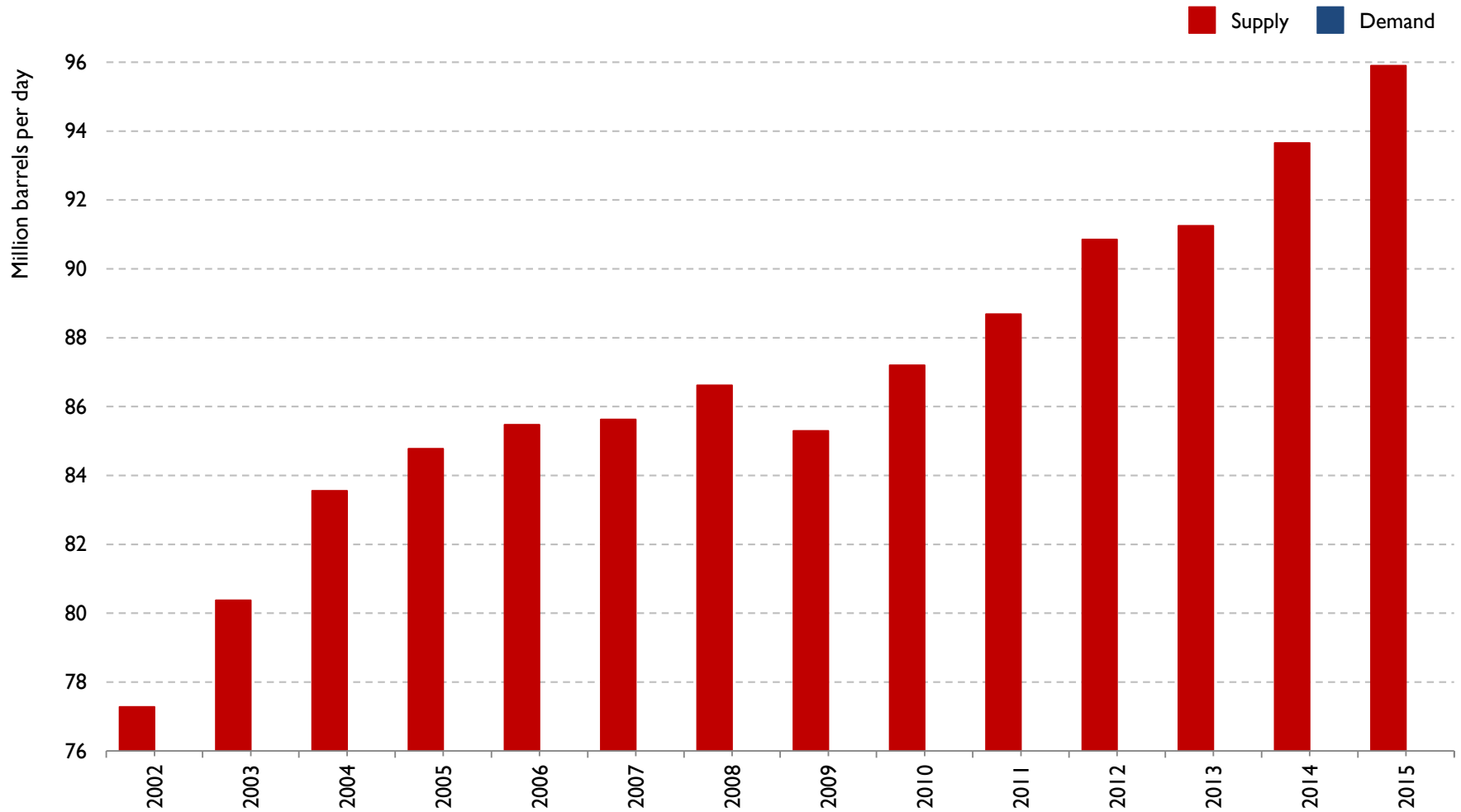
Demand, net changes



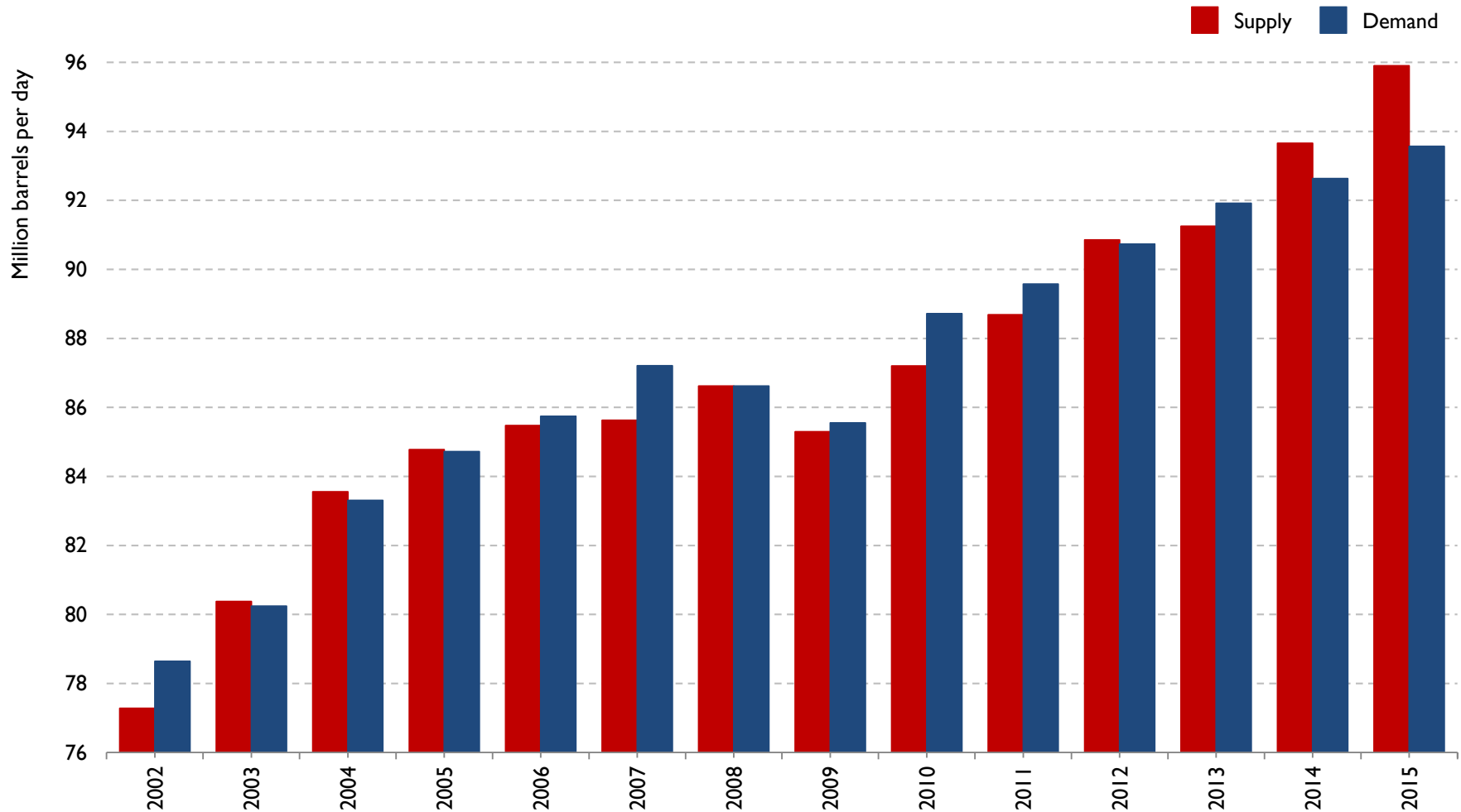
Supply & Demand, changes



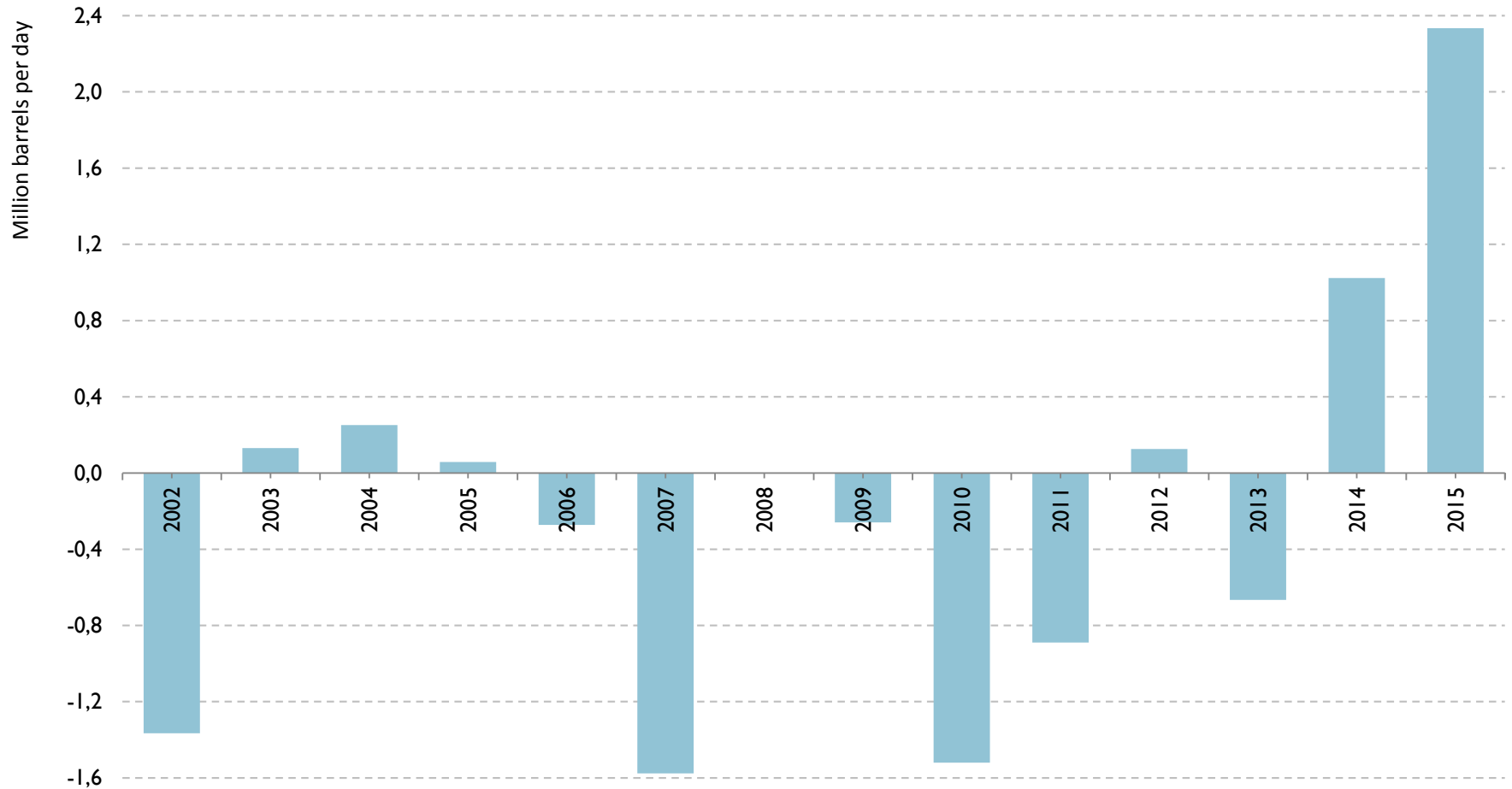
Supply & Demand, absolute



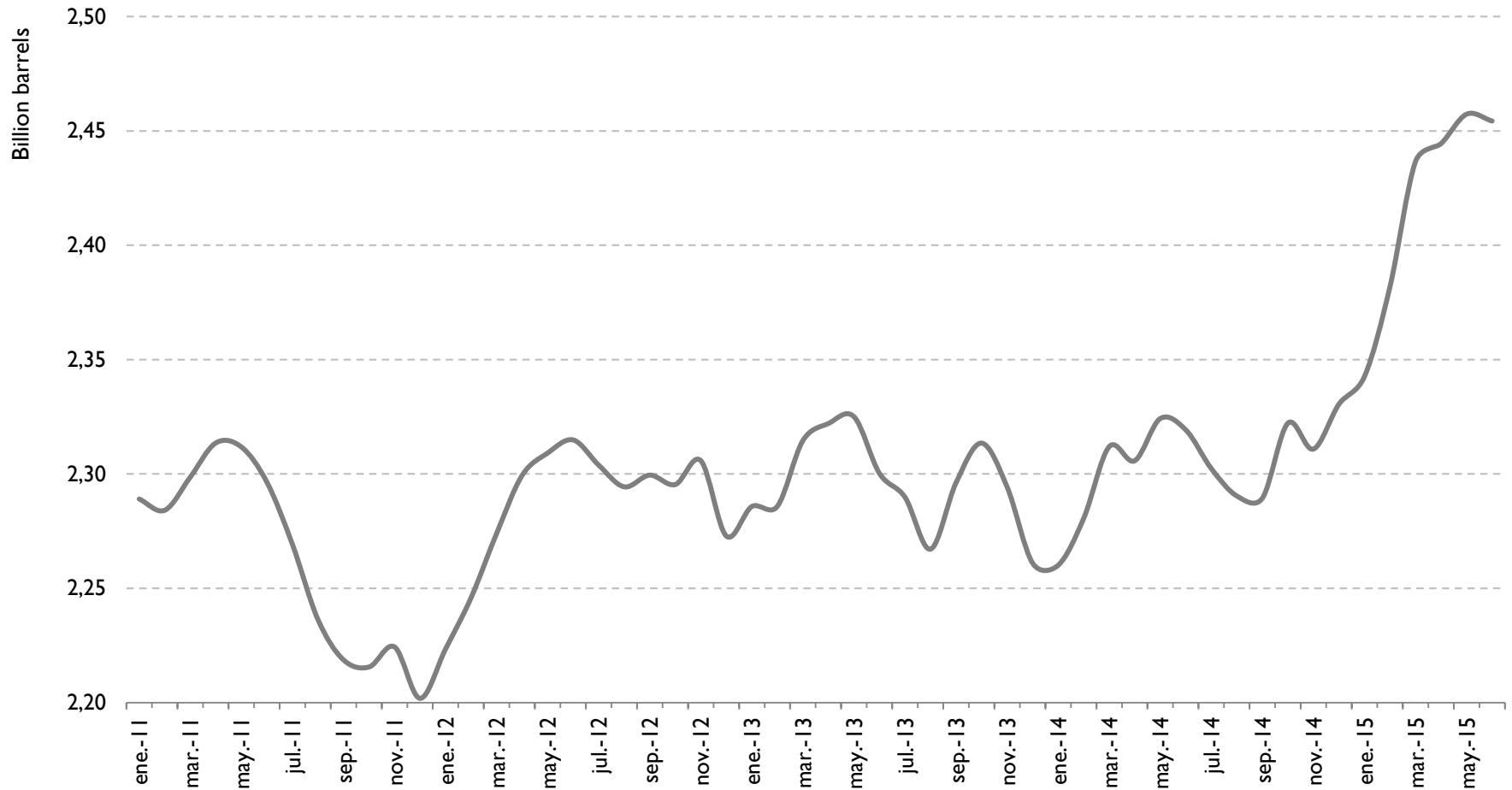
Supply & Demand, absolute



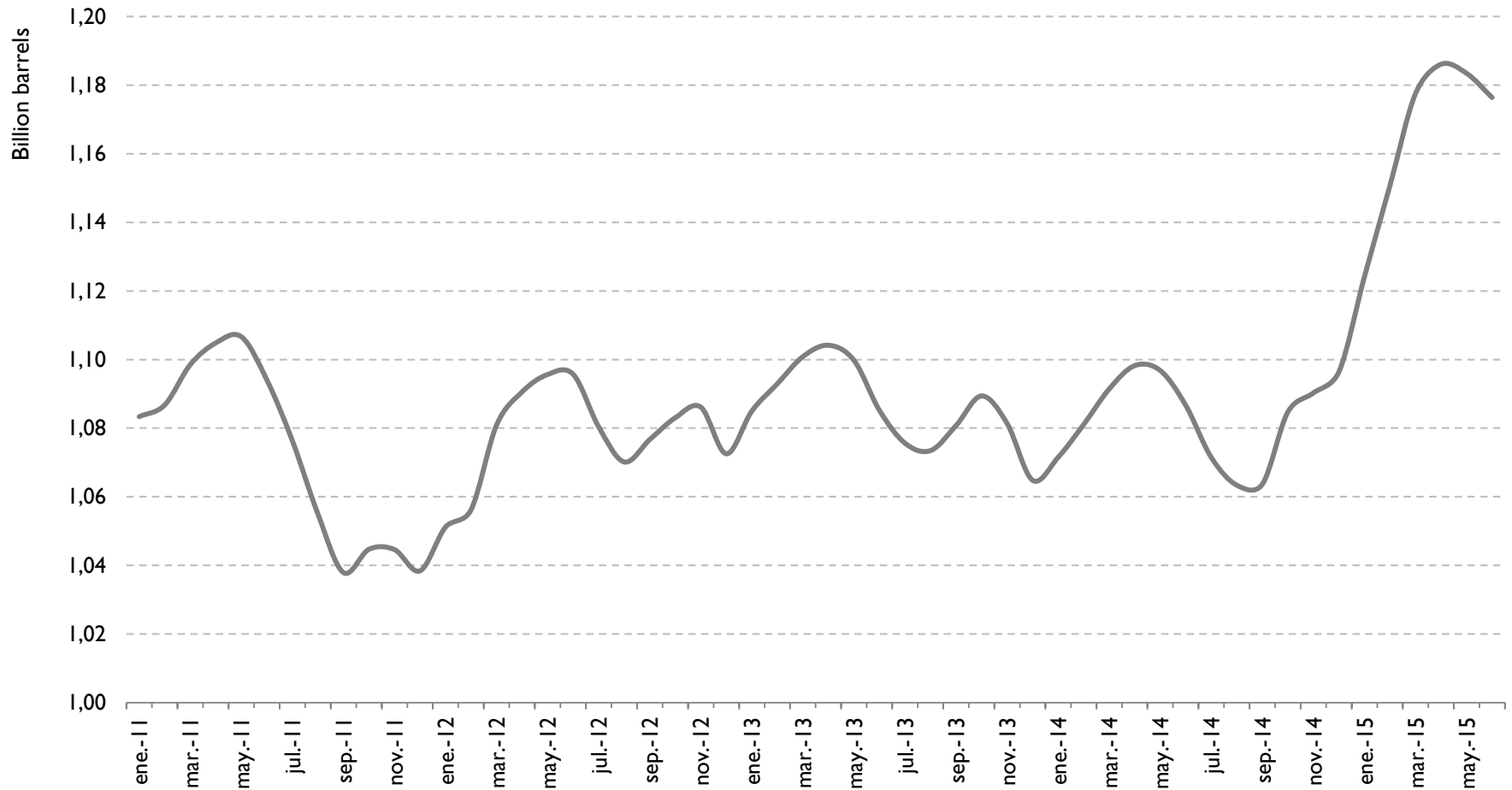
Supply & Demand, balance



Stockpiles, OECD



Stockpiles, USA



Closing perspectives

- Market is in a **competitive process** to find an **equilibrium price** set by the cost of production in the **marginal production areas**
 - Price setting mechanism is developing
 - External non-economic factors that can affect price still remain
- Large **spare capacity in OPEC**, for non-economic reasons, will be re-introduced at almost any price
- Demand **growth from Non-OECD is sluggish** at best
- Process of finding a competitive equilibrium price **may lead to seemingly very low prices**
 - In historical context these prices are not so low



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