

## A comparison of different scenarios of energy consumption in the European Union by the year of their publication in the IEA World Energy Outlook – a summary.

**With every new edition of the World Energy Outlook (WEO) the International Energy Agency (IEA) has been reducing the outlooks<sup>1</sup> for Total Primary Energy Demand (TPED) and Total Final Consumption (TFC) in the European Union (EU).** The development trends have changed correspondingly.

Back in the WEO 2012 (orange colour in the charts below) the only scenario with a clearly decreasing future trend was the most progressive “450 Scenario.” On the contrary, in the WEO 2015 (dark blue colour) all scenarios of the TPED and the TFC assume a downward trend including for the first time the reference scenario “Current Policies<sup>2</sup>.”

The biggest annual differences between the outcomes within the same scenario are for the years 2012 and 2013 and then between 2014 and the latest Outlook of 2015, where the mathematical difference of TPED outlook for 2040 under the reference scenario achieved 122 Mtoe (5094 PJ), which is approximately 4 times the consumption of the Czech Republic.

Until now, as regards the sector of buildings in the EU, the IEA has assumed growth of the TFC in all the scenarios including the most progressive “450 Scenario.” However, in the latest WEO 2015 the only scenario experiencing growth is the “Current Policies Scenario,” followed by the narrowed “New Policies Scenario” and for the first time in the sector of buildings the downward trend appears under the “450 Scenario.”

WEO 2015 thus confirms the change of the game when concerning the energy efficiency and the possible impact of savings. The changes under the “Current Policies Scenario” in various editions of WEO show that the “current” policies and measures bring its fruit. “New Policies Scenario” then uncovers a significant potential yet to be exploited especially in the sector of buildings where the measures under this scenario only stabilize the consumption.

Following charts represent the comparison of various outcomes (different colours in separate columns (2020-2040)) according to the year of the WEO edition (2009<sup>3</sup>, 2012, 2013, 2014 and 2015). To bring a better picture the actual available consumption data (left side shaded columns) and trend curve lines were added to the outlook charts.

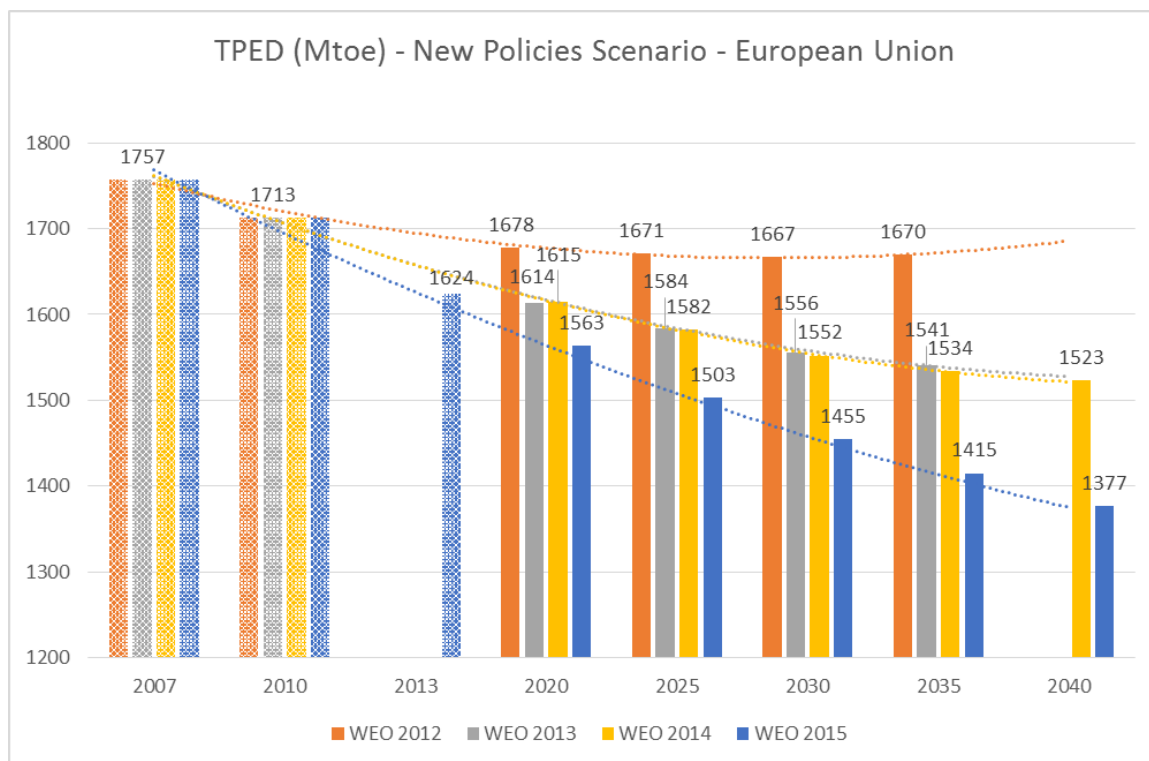
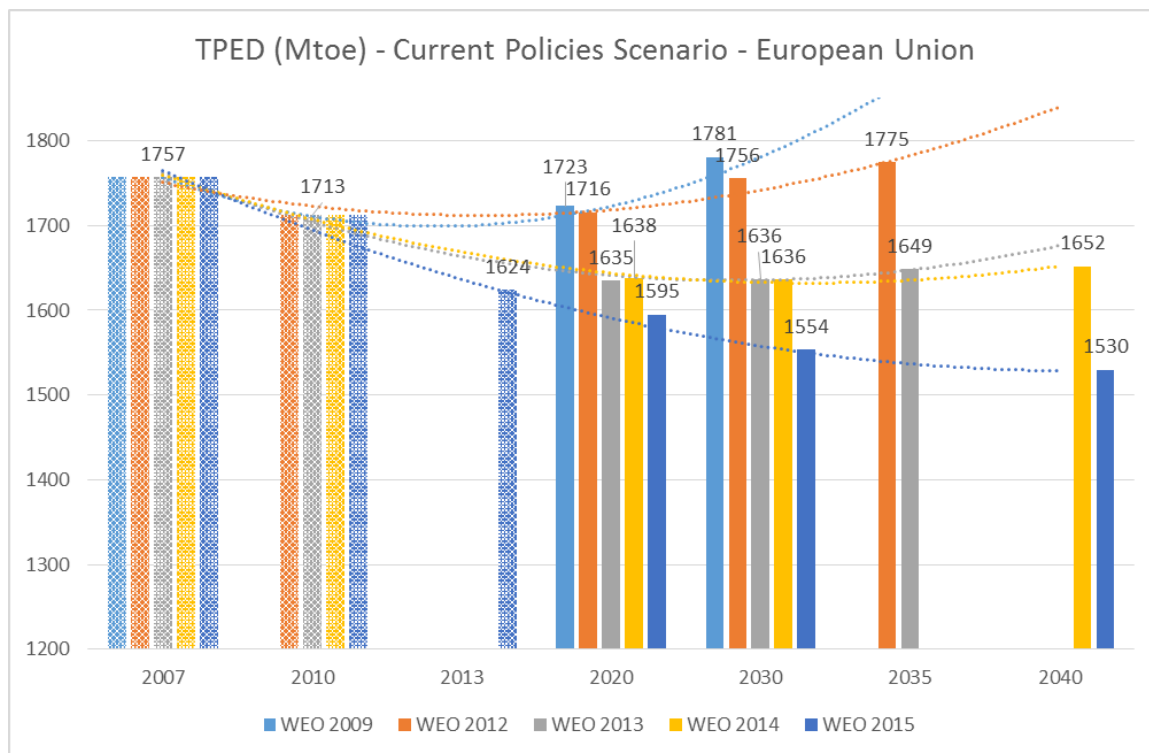
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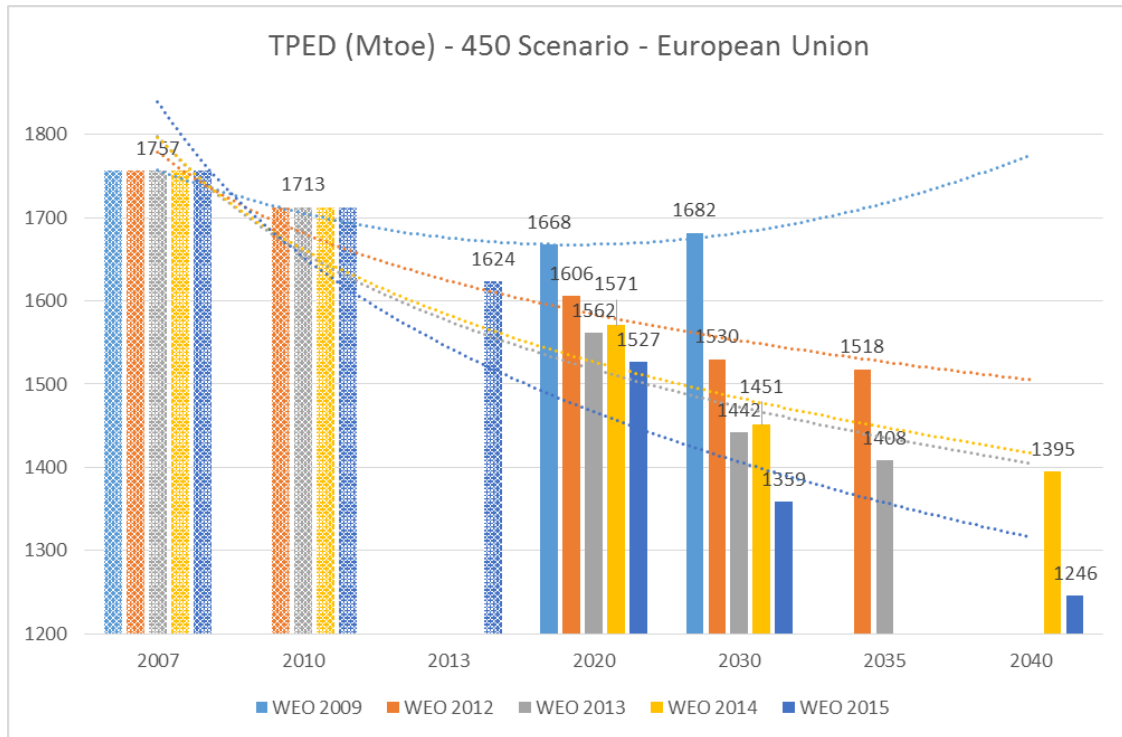
<sup>1</sup> The IEA notes that none of the scenarios outcomes should be considered as forecast.

<sup>2</sup> According to the IEA the reference scenario “Current Policies” is based on currently formally adopted policies and measures and represents the business as usual scenario. The “New Policies Scenario” works with the current and proposed policies and measures that are to be adopted and is thus optimistic about the intentions of policymakers. The “450 Scenario” takes into account everything needed to be done to achieve 450 ppm outcome.

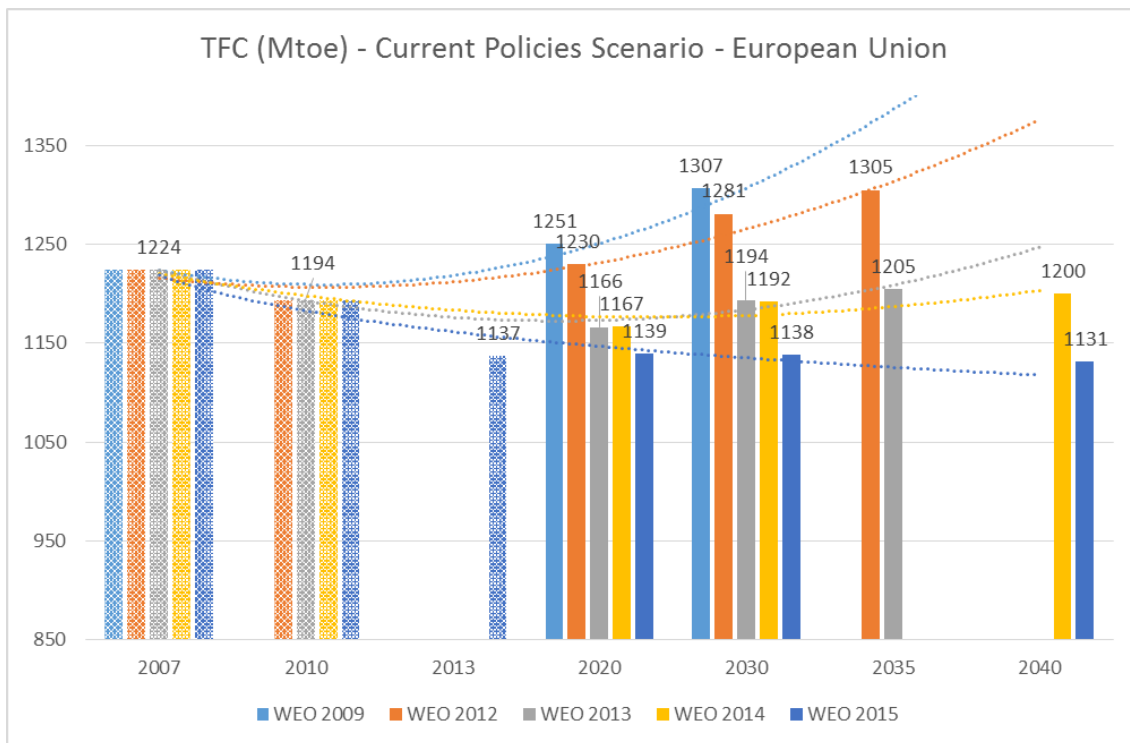
<sup>3</sup> The WEO 2009 does offer only a “Reference” and “450 Scenario.”

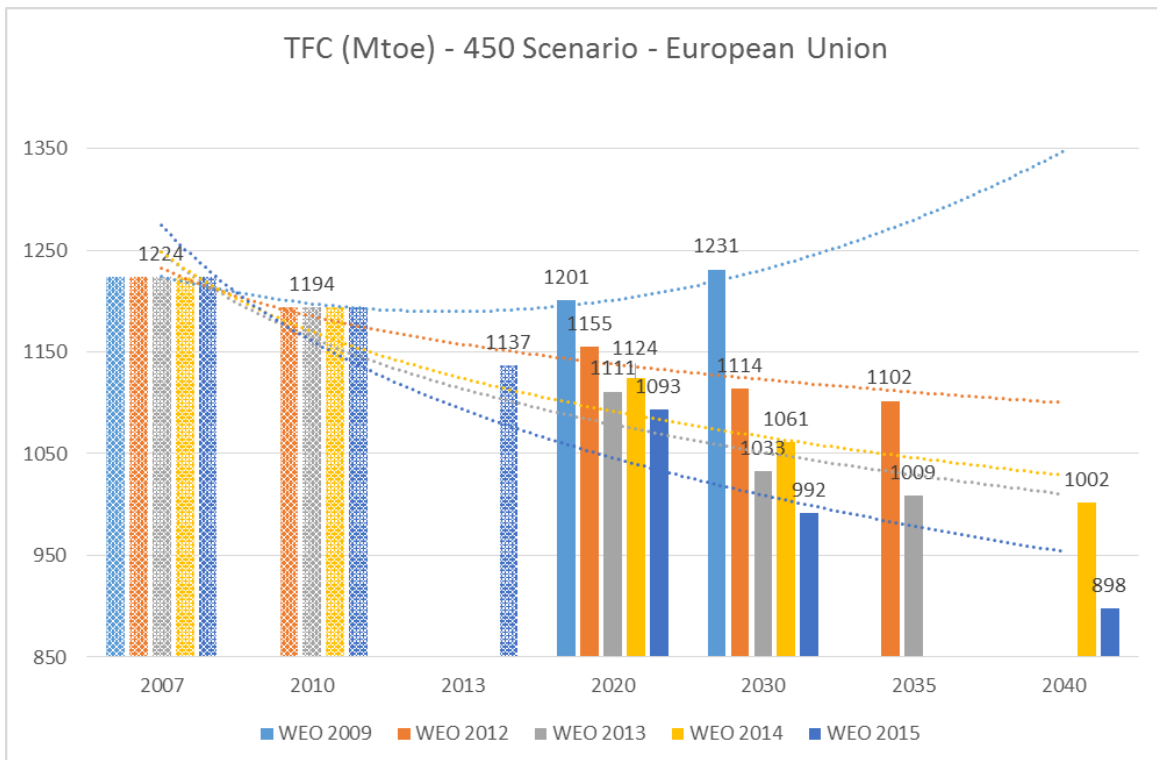
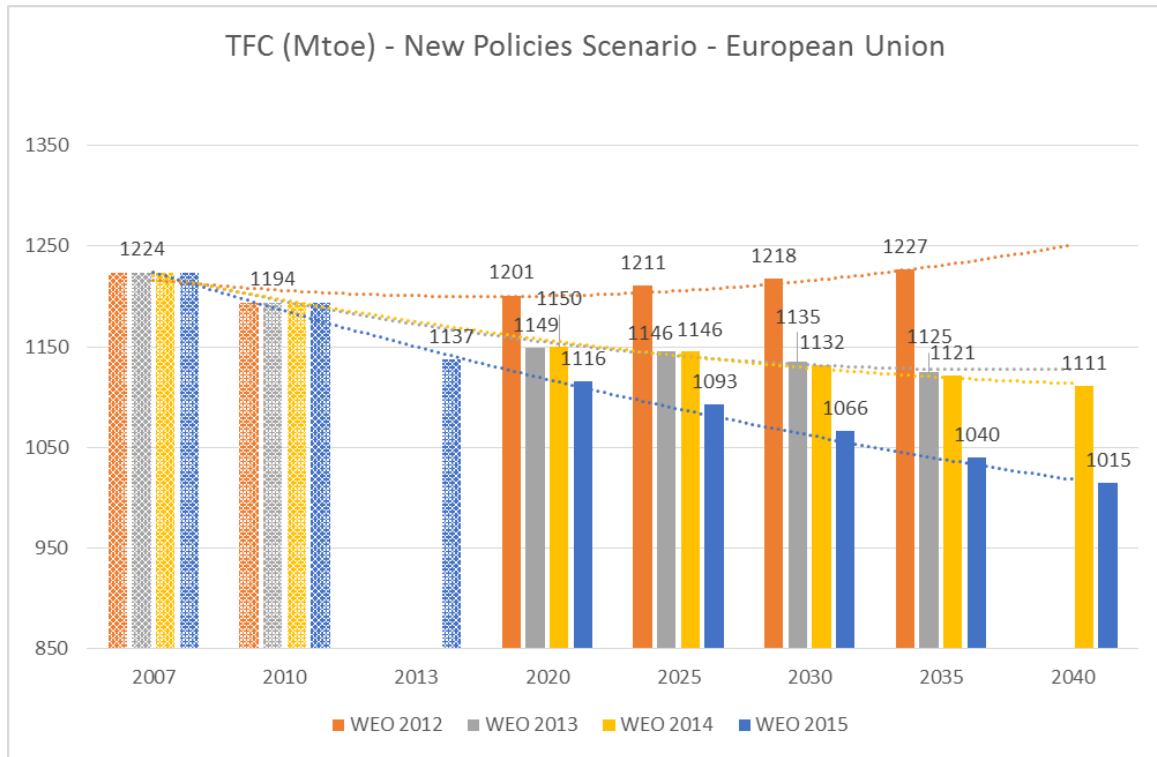
**Development and outlook of Total Primary Energy Demand in the EU under different scenarios according to the edition of IEA World Energy Outlook**



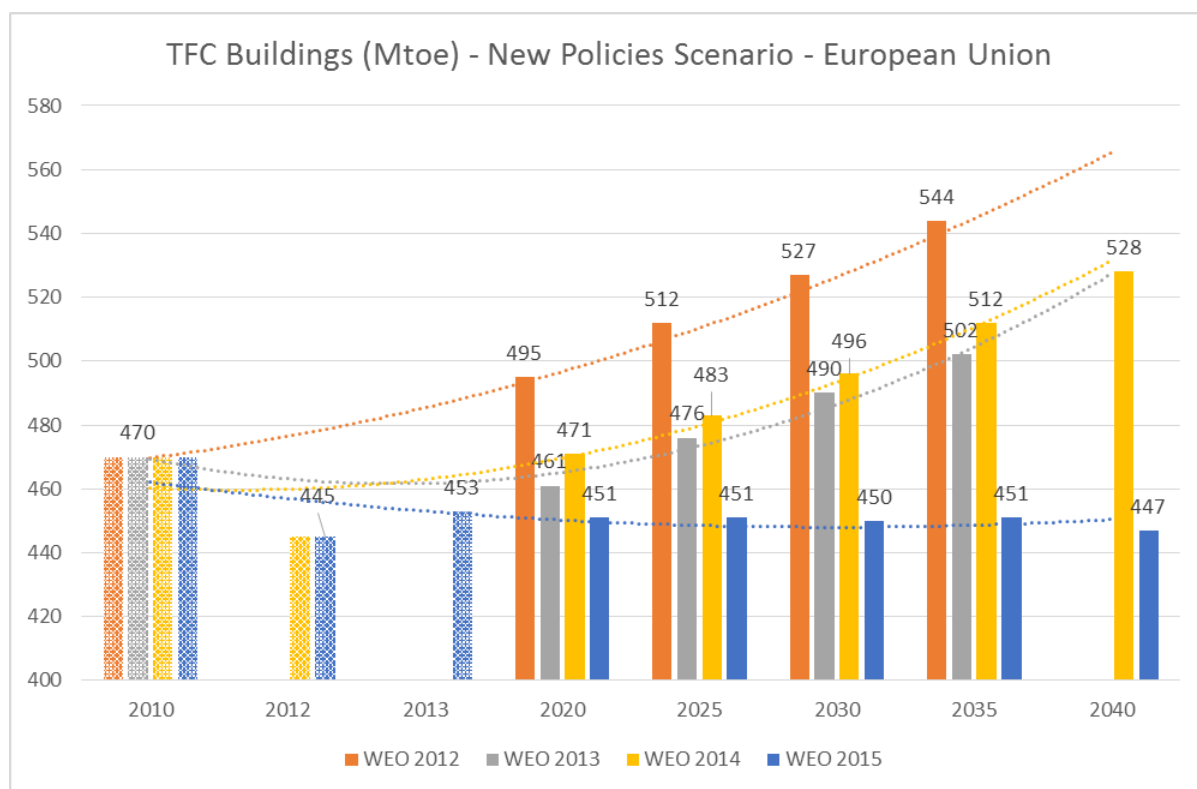
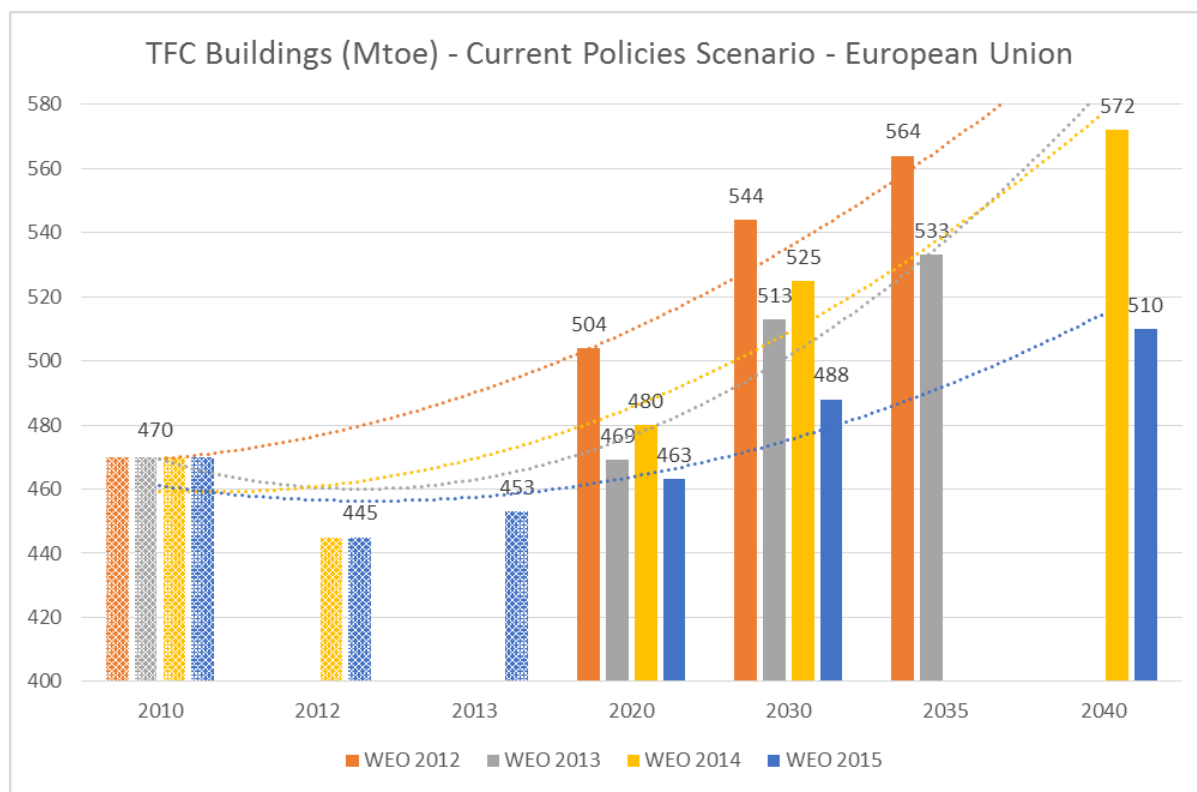


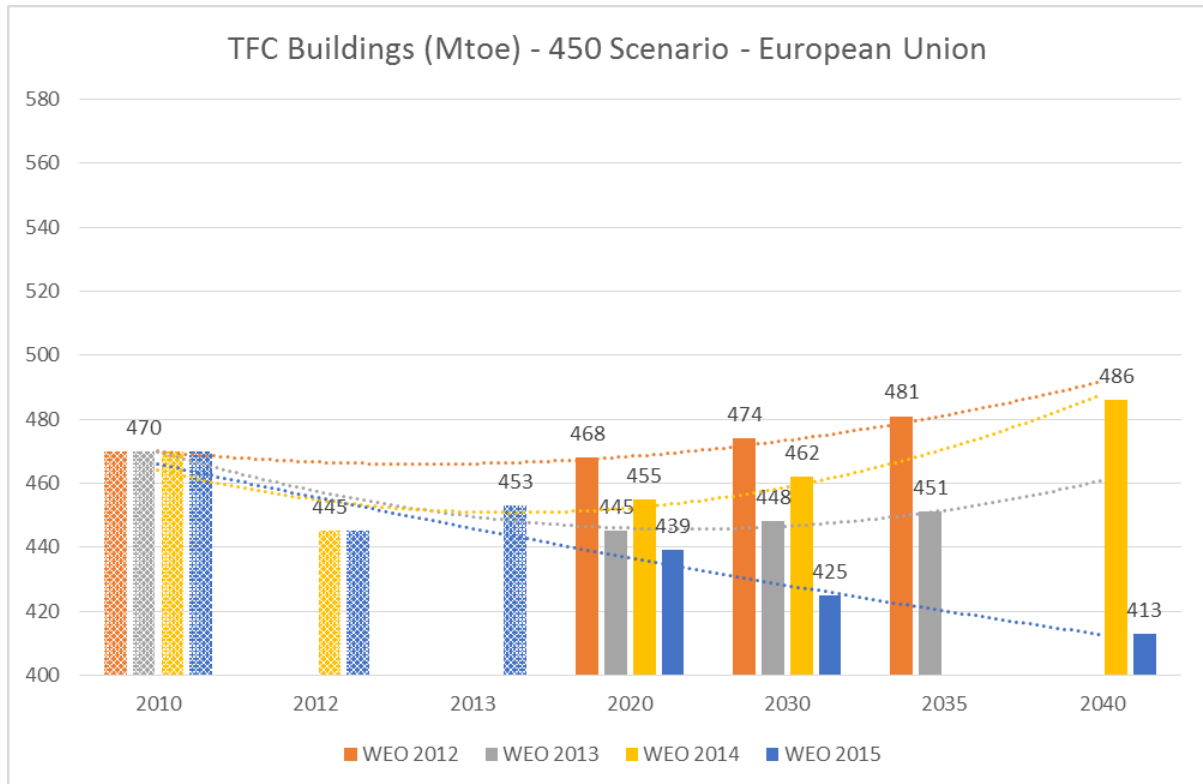
**Development and outlook of Total Final Consumption in the EU under different scenarios according to the edition of IEA World Energy Outlook**





**Development and outlook of Total Final Consumption in Buildings in the EU under different scenarios according to the edition of IEA World Energy Outlook**





**Sources:**

Data: IEA World Energy Outlook 2009, 2012, 2013, 2014, 2015.