

Assessment of the IEA's *World Energy Outlook* Demand Projections

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The role of forecasts is not to predict future developments but rather to assist policymakers in making informed decisions about possible outcomes given a certain set of assumptions. The energy demand projections in the *WEO* are based on the important assumption that policies do not change over the outlook period. Only policies which are already in place are included in the projection results. Thus, major policy initiatives, which may soon be enacted, are excluded from the analysis. The *WEO* projections reflect possible outcomes given the best judgement of IEA analysts and discussions with energy experts. In turn, the *WEO* projections serve as an empirical framework to assist IEA member countries in making long-term energy and environment related policies.

The *WEO* long-term oil price assumptions have changed significantly since the first *Outlook* was published in 1993. These modifications have reflected current events and technological advancements in oil exploration and production, and have been in line with similar changes in expectations by energy analysts and other long-term energy outlooks. On the other hand, GDP assumptions for the OECD have not changed significantly. The oil price assumptions in the *World Energy Outlooks* have largely overestimated the true path of oil prices, while the GDP assumptions have largely underestimated world economic growth over the past decade.

The purpose of this paper is to analyse the accuracy of the *WEO* projections and assumptions *ex post*. *Ex post* assessment is important in order to identify likely mistakes in model construction and to see if it is possible to recognise circumstances that could lead to projection errors. This paper assesses the projections of the *World Energy Outlook* over the past eight years. It focuses on the accuracy of the underlying assumptions for economic growth and crude oil prices and on the projections for OECD primary energy demand and world oil demand. The paper also compares the *WEO* projections with other energy outlooks and analyses the common themes and the important differences between them.