

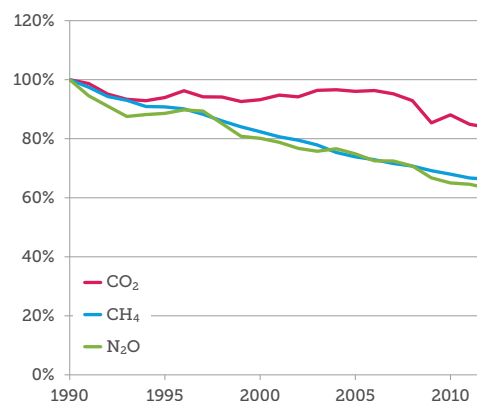
Did you know that ...

Three principal factors explain at least three quarters of the greenhouse gas reduction in the EU between 1990 and 2013

The downturns in GDP in the early 90s and during the financial crisis and the following years, investments in renewable energy, and measures taken for the reduction of methane and nitrous oxide emissions, are the three principal factors behind a very large part of the reduction of greenhouse gas emissions between 1990 and 2013.

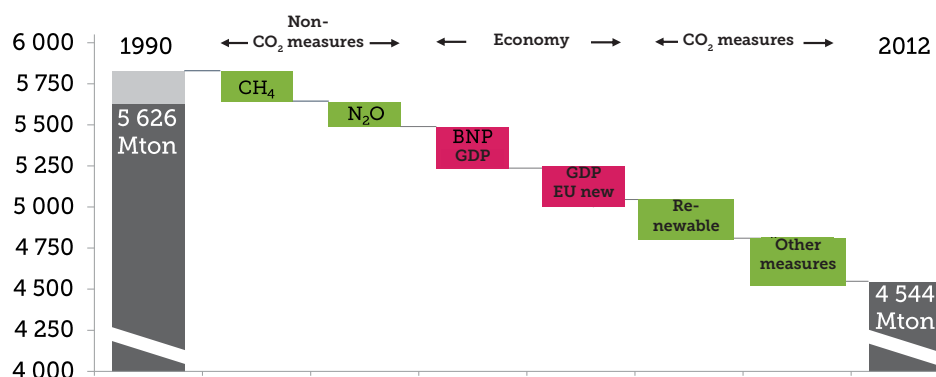
The emissions of greenhouse gases have been reduced by approximately 1,100 Mtonnes CO₂-eq. per year (about 20 %) in the EU 28 between 1990 and 2013. Carbon dioxide accounts for the largest share of the reduction with 700 Mtonnes CO₂-eq. per year, but the reduction of methane and nitrous oxide emissions is also substantial, about 200 Mtonnes CO₂-eq. each per year. Yet, in percentage terms, the methane and nitrous oxide emissions have been reduced more than twice as much as the emissions of carbon oxide. The emissions of the other greenhouse gases (SF₆, PFCs and HFCs), are small in comparison, and are therefore excluded in this analysis.

According to EU's environmental agency EEA, approximately 30 % of the reduction of greenhouse gases in EU since 1990 can be attributed to changes in the economy (GDP). NEPP's analyses show a similar result. The economic slowdown in Eastern Europe in the early 90s, and the global financial crisis since 2008, have had the largest impact on the emissions. According to our analyses, the increased use of renewables in the energy system since 1990 accounts for a further reduction of the greenhouse gases by 20 %, and for an even larger share of the reduction of carbon dioxide. The investments in renewables is thus the measure of greatest significance historically when it comes to reducing carbon dioxide. At least of the same importance for the reduction of greenhouse gases in the EU are the combined efforts in farming, waste management and fuel extraction/processing, which has reduced the methane and nitrous oxide emissions.



The development of the emissions of carbon dioxide, methane and nitrous oxide in EU 28 during the period 1990-2012. The figure shows the development in percentage terms, relative the levels of 1990. Source: European Energy Agency (2013).

Together, these three factors; the changes in GDP, the investments in renewables and the actions for methane and nitrous oxide reduction, represent a very large share of the greenhouse gas reduction between 1990 and 2012. Besides these factors there are several other changes that have been made; fuel replacement, efficiency, measure, structural changes in industry and commerce, etc. Our analyses show however, that these changes stand for a much smaller share of the reduction of emissions, than the three main factors described.



A schematic view of the main factors behind the reduction of greenhouse gas emissions in EU-28. The reduction is related to an emission level extrapolated from the emission level 1990, according to a Business-as-Usual scenario. Source: NEPP (2014).