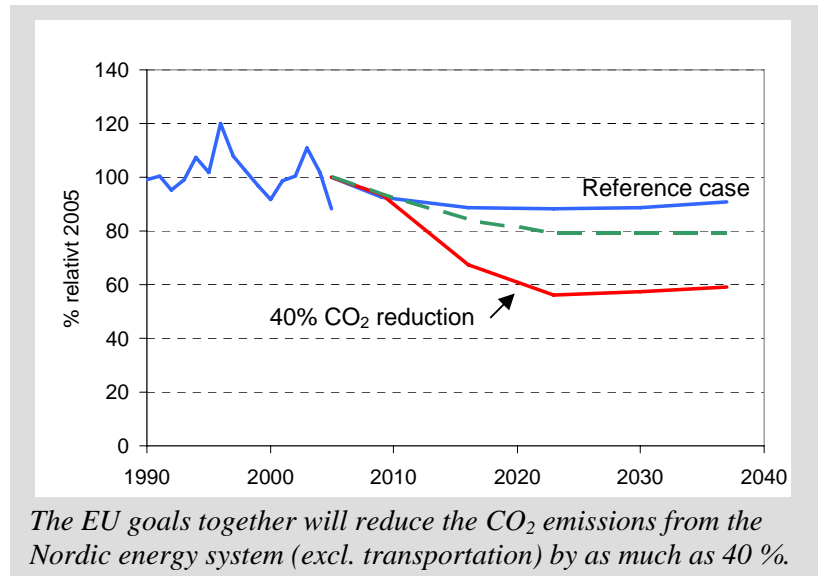


40% CO₂ reduction in the Nordic energy system EU's goals for renewables and efficiency have significant CO₂ impact

EU's goals of at least 20 % renewables in the energy mix and a reduction of the use of energy by 20 % through efficiency measures will become powerful instruments also for the reduction of carbon dioxide emissions. Model calculations from the NEP project show that the two 20 % goals together will reduce the carbon dioxide emissions from the Nordic energy system (excluding transportation) by as much as 40 %.

In the model runs, EU's goal for a reduction of carbon dioxide emissions by 20 % to the year 2020 is thereby met without the need for any specific policy instruments for the reduction of CO₂. Many have probably suspected that the aim of the renewable and efficiency goals is to give support to the emission reduction target. The model calculations which have been carried out for the Nordic countries show however, that the impact of the two goals on CO₂ emissions by far exceeds the effects of the emission reduction goal. If the impact of the renewable and efficiency goals would lead to a similar impact in the rest of the EU countries it would lead to a situation where the price of emission allowances would approach zero. *Alternatively* it may be argued that the EU in reality has a higher CO₂ ambition (e.g. 30% instead of 20%), at the same time as the three goals may become less stringent within transports. Thereby the impact on the stationary energy sector may become larger than anticipated.



What would the EU like to achieve by its 20 % goals? Is security of supply more important than the climate?

EU's energy policy is founded on three parts: improved security of supply, competitive energy prices and environmental sustainability / combating climate change. How do the three 20 % goals correspond to this comprehensive policy?



The goal of 20 % reduction of greenhouse gas emissions is in line with the ambition to combat climate change. The goal of 20 % renewable energy supports the climate goal, but model calculations made by the NEP project indicate that the emission reduction is then not made in the most cost effective way. The renewable target supports the security of supply ambitions, but there is at the same time other domestic energy alternatives which are not given support by the renewable target. The goal of 20 % reduced use of energy contributes to the reduction of greenhouse gases, but at the same time certain CO₂ reduction measures, e.g. nuclear power, CCS and increased use of bio fuels, become less favourable. The impression is that the three 20 % goals both support and work against each other. The NEP analyses indicate that it is possible to reach greater synergies between the goals if another balance between the goals is chosen, than that all goals should have its own 20 % ambition..

“Nuclear power, CCS & ethanol will become less competitive”