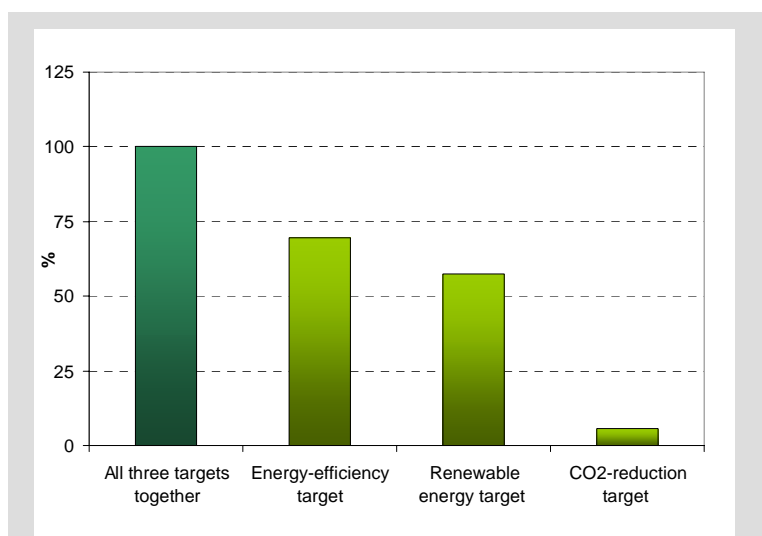


# Expensive to reach all EU goals

## The climate goal demands the least effort!

The total cost for reaching EU's three 20% goals in the stationary energy sector in the Nordic countries (excl. transportation) has been calculated by means of NEP's energy models. The climate goal is the least expensive, while the other goals are considerably more expensive.

We have calculated the costs for reaching the goals as a cost increase compared to a reference case. Already in this reference case, which among other includes the EU ETS (with a CO<sub>2</sub> price of 20 €/ton), the Nordic countries will come a long way in CO<sub>2</sub> emission reduction. Therefore the additional cost for reaching -20 % will be relatively small. Also the share of renewable energy increases in the reference case – as a consequence of the support systems already in place in the Nordic countries – but here greater efforts are needed in order to reach the EU goal. The energy efficiency goal also calls for great economic efforts, in spite of the fact that a large part of the measures are profitable already today. The associated transaction costs to get the measures in place are often of significant size. Such transaction costs may be dealt with by governmental support.

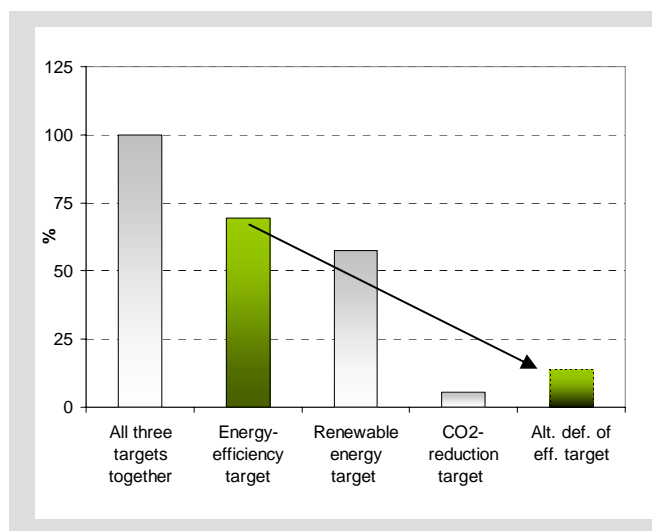


*The ranking in cost of the three EU policy goals, compared to the cost in a reference case. The cost for fulfilling all three targets within the Nordic energy system is set to 100%*

# Synergies is the key to less costly solutions

## The definition of the efficiency target is of great importance

More efficient use of energy and energy savings are important, both for the environment and for improved security of supply. But are all efficiency measures of equal importance? Is it equally important to save one kWh of nuclear power as one kWh of coal based electricity? Is it as important to save one kWh of bio fuel as one kWh of oil?



In the way that the EU's goals are presently formulated there will be an imbalance in the menu of measures between the energy efficiency goal and the renewable goal. There are however, a number of ways of improving the synergies between the efficiency goal and the two other 20 % goals. If EU, for example, would include only fossil fuels in the efficiency target, synergies would increase dramatically. At the same time, costs for reaching the efficiency goal would decrease considerably. The figure to the left shows the cost reduction if such an alternative definition of the efficiency goal is applied.

**”More important to reduce kWh than CO<sub>2</sub>?”**