

Germany

Meeting energy savings targets through cost-effective measures

Why?

The EU has set itself an objective of achieving 20% energy savings by 2020 and 27% up to 2030; a substantial amount of these savings can be achieved by modernizing heating systems. Up to 38% of energy can be saved by modernizing an old and inefficient heating system. However, many households hesitate to perform the necessary refurbishment measures, even if these measures are generally beneficial. A simple and effective support scheme can help to overcome this barrier to modernization.

Outcome

- Modernizing a heating system is a particularly economical measure, which provides energy savings of around 38%. It is thus recommended as the first energy measure to begin with.
- Homeowners can achieve half of the overall energy saving potential of a given building for a quarter of the price of a deep renovation.
- Using highly efficient oil heating technologies in combination with renewable energies and appropriate insulation can enable up to 80% reduction of a one family building's energy use.
- Deep thermal renovations of buildings entail high costs, which many households cannot pay at once. Therefore, in many cases, only step by step modernization is feasible.
- Basing the rewards on the amount of energy saved provides an understandable, simple and target-oriented approach which will incentivize homeowners to save as much energy as possible.

What?

Under the slogan „Energy Winners (Energie-Gewinner), IWO, an organization representing the German mineral oil sector has launched a demonstration programme. The objective is to showcase and reward best practice examples of modernization, with a view to inciting other households to perform energy saving measures. The results of each modernization case (energy savings and costs) are assessed and published. Through modernization of heating systems, insulation measures and the use of renewable energies, energy savings of up to 80% can be achieved.

The overall costs of the modernization of a one-family building reach on average € 85,000. The amount of the possible subsidy is calculated according to the amount of energy saved: € 0.25 per saved annual kWh. Therefore, the system provides a good incentive to implement economical and affordable energy saving measures.

„Through this exemplary energy efficiency project, the IWO Institute for Heating and Oil Technology contributes to saving resources and protecting our climate. We would like to congratulate them for this success.“

(dena, the German Energy Agency)

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Cost and primary energy savings for various measures

Calculations by IWO based on results
of conducted modernisation works

Roof insulation

Costs: approx. € 21,000
Savings: 14%

Exterior insulation

Costs: approx. € 21,000
Savings: 18%

Window and door exchange

Costs: approx. € 17,000
Savings: 7%

Basement ceiling insulation

Costs: approx. € 4,000
Savings: 8%

Heating modernisation: Oil condensing boiler with solar

Costs: approx. € 22,500
Savings: 38%

Costs of primary energy savings (per kWh)

The calculation integrates the life of the energy saving measure

