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THE BOTTOM UP APPROACH FOR THE EX-ANTE ANALYSIS OF THE MEMBER STATES ENERGY POLICIES: THE CASE OF THE HOUSEHOLD SECTOR OF THE CZECH REPUBLIC

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Overview

In the future, increasing requirements can be expected with regard to quantitative monitoring and evaluating the impacts of energy policies and measures because there are quantitative targets for the improvement of energy efficiency, renewables, combined heat and power generation (CHP) and the reduction of greenhouse gases, with the corresponding obligation to report on the progress of actions carried out or the results achieved, e.g. in

− The Energy Service Directive (reporting on the energy efficiency progress achieved using indicators; evaluation of single measures taken under the Service Directive);
− National and EU Monitoring Reports under the EU Monitoring scheme (Council Decision 280/2004/EC for a monitoring mechanism on CO2 and other greenhouse gas emissions);
− The European Climate Change Programme, proposing detailed policies and measures to cope with the EU Kyoto target of –8 %;
− National reporting of Member States on climate change measures under the EU burden sharing and for national targets; and
− National Communications to the UNFCCC (EU and Member States).

This paper presents the general methodology proposed to carry out the ex ante evaluation of policy and measures of the EU Member Countries in the household by using the MURE simulation tool. An example of the way the energy saving measures can be analysed and evaluated at country level is presented for the for the residential sector of the Czech Republic. Eleven Czech Measures issued from the mid of the year '90 to the year 2005 have been analysed and their impact quantitatively evaluated. The results have been thus analysed and commented in the light of the objectives stated by the Energy Service Directive.

Method

In brief, the evaluation of the impact of policies and measures (P&Ms) is carried out by measuring the impact of a "Policy scenario" with respect to a "Reference" case within a scenario covering the period 2005 – 2005. The "Reference" is defined as a simulation in which the energy demand trend is calculated by taking into account the main energy consumption drivers (e.g. the demography and social drivers as measured by the number of households). It includes possible saturation trends in the drivers, and the (residual) impact of energy saving measures implemented before a certain reference year (the year from which the impact simulation exercise starts (i.e. 2005). The "Policy scenario" refers to a scenario in which the energy demand development takes into account additional energy saving measures implemented (or even planned) after the respective reference year.

The energy saving measures implemented by MS each country are then first sorted by issuing date in order to separate the measures enforced during the past decade from those commencing in the year 2005 (or later on). To simulate the P&Ms impacts in the ex-ante exercise, each measure is then parameterised. The measure parameterisation consists of setting the following simulation criteria and figures:

− selecting the type of intervention foreseen by the measure (building shell insulation, boiler substitution, maintenance of heating systems, introduction of renewable energies, etc),
− evaluating the penetration rate in the dwelling stock affected per type of intervention (exogenous data for MURE),
− setting the relative energy gain per type of intervention (internally calculated by MURE).