

## SESSION 1

### WHAT CAN YOU ACHIEVE FOR YOUR COUNTRY? EXPERIENCE FEEDBACK FROM THE 2011 NEEAPS

*Moderator: Stefan Thomas, Wuppertal Institute for Climate, Environment and Energy*

PAPERS:

#### **Evaluating Energy Savings Arising from NEEAP Implementation: Lessons Learned in Croatia**

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#### **Sensitivity Analysis for Calculating the ESD Energy Savings Target with the Top Down Method: The French Experience of NEEAP2**

Dr Didier Bosseboeuf, French agency for environment and energy management ADEME, France

Dr Bruno Lapillonne, Enerdata sa, Grenoble, France

Dr Jean-Sébastien Broc, Ecole des Mines de Nantes, France

#### **Are the Energy Savings Sufficient? Impact of Energy Efficiency Policies Included in the 2011 NEEAPs**

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SESSION SUMMARY:

In summer 2011, the Member States of the European Union (EU) had to present their second National Energy Efficiency Action Plans (NEEAP2s) as required by the EU Directive on energy end-use efficiency and energy services (ESD). For the first time, these NEEAPs had to present ex-post calculations of the energy savings achieved by 2010, but also ex-ante estimates for the savings to be expected by 2016.

This session will focus on the lessons learnt from this process. The three papers presented in this session will provide hands-on insight into the main questions for the NEEAP2s and also for this session: whether the results will be comparable e.g., between Member States, between sectors, between measures and between bottom-up and top-down methods; and whether the energy savings calculated will be sufficient for formally proving achievement of the ESD targets, but also what the contribution of the measures analysed in the NEEAPs to the EU's overall energy savings target of 20 % of primary energy savings by 2020 compared to baseline projections will be.

First, Bukarica et al. present lessons learned in Croatia. They show how the ESD requirements have spurred the evaluation process in the country, and how methods have developed and were refined between ex-ante calculations for the first NEEAP in 2008 and ex-post calculations in 2011. They find that the gap between *ex-ante* and *ex-post* energy savings estimations for specific programs and measures is significant and related to the precision of the evaluating method. Moreover, the top-down indicators as recommended by the European Commission were used to evaluate overall progress in energy efficiency at sector and national level caused not only by policy

measures but by other economic and social trends as well. The results of calculation show significant differences in energy savings determined by top-down indicators and bottom-up methods.

Next, Bosseboeuf et al. examine the top-down calculations made for France. They show that France is at present in the trajectory to achieve the ESD target when using these calculation methods, but also that results may change significantly with other methodological decisions. Five types of sensitivity analyses were conducted: 1) choosing indicators called "preferred, minimum and alternative" indicators, 2) level of disaggregation on the amount of energy savings, 3) including the energy saving of the industrial sectors engaged in the ETS (Emission Trading Scheme), 4) summation of the energy savings (including all sectoral savings results or only positive ones) and 5) ability of TD evaluation to tackle yearly energy saving changes in the context of an economic recession.

Finally, Schlomann et al. systematically collect and analyze the impact of the energy efficiency policies included in all the 2011 NEEAPs with support of the MURE database. Their quantitative analysis of measures targeting energy efficiency in residential and service sector building shows that a lot of savings have been achieved and more can be expected by 2016, but there is still a gap between the measures reported in the NEEAPs and the savings which are possible and necessary in order to reach the 20% saving objective. An additional qualitative analysis shows that policies for new buildings are mostly based on the national transposition of the relevant EU regulations, whereas energy efficiency in existing buildings is especially in the focus of financial measures.

Background: The ESD energy savings calculation requirement was an enormous evaluation experiment, because a) for the first time, a block of 27 EU Member States plus Croatia has tried to calculate energy savings at the national level, i.e., for the combined impact of all policies and measures and also energy services promoting energy efficiency by sector or sub-sector in a country, while eliminating double-counting but including multiplier effects and b) the aim was to obtain comparable results on energy savings.

However, especially the second point – comparability – has been compromised from the beginning by unclear regulations in the ESD: there is room for interpretation about whether to allow all or only policy-induced energy efficiency action and the corresponding savings, as well as whether to include early energy savings obtained before 2008, the starting year of the ESD, into the national energy savings number that will serve as the proof whether a Member State has achieved its self-adopted energy savings target of at least 9 % in the 9 years up to 2016.

Furthermore, there are two principal types of methods, known as bottom-up and top-down methods, to calculate these energy savings at the national level. The ESD text was rather vague, so both the Concerted Action of the Member States on the ESD and the EU-funded EMEEES project analysed the usability of bottom-up and top-down methods for different sectors and measures. The European Commission, based on the discussions with Member States, finally proposed a set of harmonised and recommended methods in 2010, but left the Member States freedom to use their own methods.