

# Introduction to Panel 2

## Energy efficiency policies – how do we get it right?

Panel leader: **Charlotte Ruhbaum**

German Business Initiative for Energy Efficiency, DENEFF e. V.  
Germany  
charlotte.ruhbaum@deneff.org

Panel leader: **Erwin Cornelis**

VITO – Flemish Institute for Technological Research  
Belgium  
erwin.cornelis@vito.be

### Introduction

The implementation of cost-effective energy efficiency measures still faces significant structural and behavioural barriers in all sectors. To close this gap, adequate and effective policies haven't proven to be an essential cornerstone. But how do we get it right? Which government interventions are necessary to overcome these barriers and how do they need to be designed and implemented? This panel looks at current policy developments inside and outside the European Union and discusses lessons to be learned from these experiences to make sure that energy efficiency policies deliver.

The papers presented in this panel discuss policies in various phases of policy making. Some authors discuss the design of new policies, such as Friedrich Seefeldt et al. (2-345-15); others analyse how existing policies are implemented and can be improved (e.g. Rosenow and Eyre, 2-001-15, and Gooding and Mehreen, 2-082-15, on the UK Green Deal) and which lessons we can learn from these examples (e.g. Regina Betz et al., 2-331-15, who evaluate the current Swiss energy and climate policy). Some papers discuss specific policy instruments, such as the Portuguese Demand-Side Efficiency Promotion Plan (Sousa et al., 2-256-15), other focus on specific end-consumers, such as SMEs (Günther et al., 2-197-15), or specific intermediates in the energy efficiency supply chain, for example the paper by Boza-Kiss et al. (2-375-15) on the European ESCO market.

### Implementing Article 7 of the EED

The European Commission gave a clear signal by adopting the Energy Efficiency Directive (EED, 2012/27/EU). To reach the EU 20 % energy efficiency target by 2020 this directive targets all end-use sectors except transport with a set of binding meas-

ures. Now, we are about two and a half years after its adoption and – not surprisingly – the implementation process in the member states is discussed in a set of papers for this panel.

It is noteworthy, however, that the dominant issue is the implementation of Energy Efficiency Obligations (or alternative measures) as requested by Article 7 of the EED. This is thus chosen as opening topic for Panel 2. However, before gauging the progress in implementation in the EU, we make a small tour in non-EU countries to draw some lessons from related Demand Side Management (DSM) programmes.

### LESSONS FROM DSM PROGRAMMES OUTSIDE THE EU

Cédric Jeanneret and Martin Patel (2-282-15) analyse the effect of the DSM programme started in 2009 by the utility of Geneva, Switzerland. The DSM programme succeeded in converting Geneva from a canton where the growth in electricity consumption was higher than the national average into a canton where the electricity consumption has been levelling off, while the trend for Switzerland as a whole is still increasing. The paper describes the main efficiency drivers responsible for this inflection point. The authors further test a simple bonus-malus mechanism and analyse how it would affect the costs of the programmes. They conclude with a discussion of the possibility to use such a mechanism to incentivize utilities to develop DSM programmes across the country in a harmonized way.

Julie-Ann Vincent (2-317-15) focuses on the DSM programmes administered by Efficiency Nova Scotia, Canada. More in particular, her paper explores factors that lead to a successful stakeholder engagement in the process of the development and implementation of effective energy efficiency programs. She examines the model for stakeholder engagement practiced by

Efficiency Nova Scotia and explores its key success factors. The model consists of a non-binding advisory body made up of key, knowledgeable stakeholders and involves both formal and informal engagement processes. Her paper concludes with a number of considerations and challenges to take into account when dealing with stakeholder engagement under DSM programmes.

#### STATUS INSIDE THE EU

How can an existing DSM programme catalyse the implementation of an Energy Efficiency Obligation? José Luís Sousa et al. (2-256-15), discuss the Demand-Side Efficiency Promotion Plan (PPEC), a voluntary mechanism in place in Portugal since 2007. Under this mechanism, utilities are invited to submit proposals of measures that should contribute to the reduction of electricity consumption. The paper analyses the eligible and approved measures presented both by utilities and non-utilities in the different PPEC editions and its associated societal costs. The paper further compares the avoided energy consumption of these measures to the Article 7 target. José Luís Sousa et al. conclude that the voluntary efforts of utilities might pave the way to the fulfilment of EEO.

Friedrich Seefeldt et al. (2-345-15) describe the discussion going on in Germany on the implementation of an alternative energy efficiency obligation model linked to a competitive tendering system. There was much scepticism against the introduction of a classical EEO, as outlined in the EED. Stakeholders questioned if such a model could be integrated into the German energy and energy services market. As an alternative, a Competitive Efficiency Tender was proposed. Friedrich Seefeldt et al. depict the design process, the public debate and the involvement of various key stakeholders.

Paolo Bertoldi et al. (2-380-15) analyse the EU Member States' report to the European Commission on the implementation of the EED Article 7 in December 2013. Both the introduced and planned EEOs are described by Bertoldi et al. in terms of sectoral coverage, obligated actors, eligible projects, monitoring and verification (M&V), baseline and additionality, sanctions, trading rules if any, and public authorities' role. The paper further compares the different national EEOs and highlights their common features. Paolo Bertoldi et al. conclude that EEOs are at a time of transition and that EEOs will need to target higher cost measures or other sectors as many of the lower cost, mass-market efficiency opportunities in the buildings sector have already been taken.

### Building renovation policies

#### DEALING WITH THE GREEN DEAL

Two papers start with the same observation: the Green Deal, the flagship policy that would stimulate deep refurbishments of buildings in the UK, does not take up. Both papers try to identify the reasons why the Green Deal does not deliver, but they are complementary.

Jan Rosenow and Nick Eyre (2-001-15) on the one hand focus on the design of the Green Deal. They draw lessons about the relative success of regulatory and voluntary approaches; and discuss the design details that have resulted in the very low take up. They conclude with a roadmap for recovery and present potential modifications to the current Green Deal.

Luke Gooding and Mehreen Gul (2-082-15) on the other hand focus on the supply chain; how it is impacted by the Green Deal and at what rate which barriers to growth are being removed. Their analysis involves interviews with key commercial stakeholders to pinpoint the influential factors affecting the performance of policy. Their results contribute to ongoing policy learning from ground level sources, with insight into the effectiveness of policy upon the financial, operational and growth characteristics of businesses.

#### SETTING UP EFFECTIVE BUILDING RENOVATION POLICIES

Jean-Sébastien Broc et al. (2-150-15) also bring up the Green Deal by comparing it with the German KfW CO<sub>2</sub> Energy-Efficient Renovation programme to learn more from financing mechanisms related to building renovation. They examine certain contextual conditions (e.g., well identified technical solutions, qualification of professionals, quality of works, transaction costs induced) for both programmes, questioning whether and how they affect their actual achievements. The authors conclude that these contextual conditions may present constraints or success factors and should not be overlooked in the national strategies for building renovation.

Sophie Schnapp (2-186-15) defines a state-of-the-art policy package for deep renovation across the residential building stock and analyses best practice policies. The paper identifies six key themes as intrinsic to a state-of-the-art policy package. The paper further compares thirteen best practice renovation policies in the EU and US. The results of this study and the comparison of the best practice policy packages are presented as an online policy interactive comparison tool. The tool's purpose is to strengthen today's renovation policy packages and encourage the adoption and implementation of state of the art policy packages around the world.

### Distribution of costs and benefits and policy interactions

#### ASSESSING AND DISTRIBUTING COSTS AND BENEFITS

The equal distribution of costs and benefits of energy (efficiency) policies amongst different stakeholders and across the economy is discussed in three papers. Johanna Cludius et al. (2-259-15) look at the distribution of the burden of the renewable electricity surcharge in Germany amongst different household types and show that low-income households face the highest relative burden. They then argue that energy efficiency policies have the potential to reduce the burden imposed by the renewable surcharge. However, if the distributional effects of these policies should come into effect they also need to be targeted at low income households. The authors thus call for a balanced policy approach which evaluates and takes into account costs and benefits for different income groups. Dieter Seifried and Sebastian Albert-Seifried (2-392-15) present the results of a project which directly targets low-income households and achieved significant energy savings with energy audits and the installation of simple energy saving devices. Theo Covary (2-062-15) analyses the situation in South Africa where Municipalities have a strong incentive not to encourage electricity conservation measures as they are heavily reliant on the revenue derived from the sale of services, such as electricity and

water. The author describes the consequences of the current situation and suggests an alternative cost effective framework which benefits the whole economy.

#### **HANDLING POLICY INTERACTIONS**

Three papers put our attention to sometimes conflicting or at least challenging interactions between different national policies, and between national and EU policies. Dominique Osso et al. (2-228-15) invite a discussion on how the requirements of the EU Energy Efficiency Directive and the EU Eco Design Directive will affect the French white certificate scheme. In particular they look at the necessary alignment of the methodology to calculate energy savings in light of the European directives and the impact on the retrofitting market for residential buildings. Finally recommendations are made for the future design of the French white certificate system.

Regina Betz et al. (2-331-15) raise the issue of how different economic policies to promote energy efficiency and the use of less CO<sub>2</sub> intensive energy sources in Switzerland interact. By disentangling the effects of the different policies they show that their combination in Switzerland leads to inefficiencies and give recommendations for future policy evaluation and design.

Teemu Hartikainen et al. (2-014-15) look at the challenges related to handling minimum energy performance standards (MEPS) under free trade agreements with regard to the proposed TTIP agreement between the European Union and the United States. Based on an analysis of other international free trade agreements they argue for a harmonization of MEPS and the setting up of a trans-Atlantic product database.

#### **Designing consumer-oriented energy efficiency business models and programmes**

The consumers' needs and how these can be better addressed in energy efficiency business models and policy programmes are discussed in four papers of which three focus on non-residential customer segments. Paul Waide and Hans de Keulenaer

(2-166-15) present an assessment of current levels of adoption of energy management in European organisations and the potential for savings from broader and more effective adoption of energy management across the EU. Building on the assessment of factors that trigger the adoption of effective energy management, they conclude with a set of policy recommendations that could help to increase energy management adoption rates across the EU.

Based on a survey among 334 SMEs Eva Günther et al. (2-197-15) give recommendations on how to increase participation in energy efficiency programmes and improve the implementation rate of energy efficiency measures in SMEs. As a function of the companies' current energy efficiency behaviour they identify different market segments which have different needs and expectations depending on their "stage of change". They argue for a programme design which takes into account the specific characteristics of these market segments and give recommendations on how to better approach them.

Wolfgang Glatzl et al. (2-267-15) put our attention to the European food and beverage industry which consumes more than 10 % of the final energy demand in industry in the EU-28. Based on the results of the GREENFOODS project they present a branch concept that allows the easy, quick and comprehensive evaluation of energy efficiency measures within a company of the food and beverage industry.

Finally, Benigna Boza-Kiss et al. (2-375-15) compare key indicators and market specificities of the ESCO markets in EU member states and neighbouring countries. They identify a growth trends for several of the national ESCO markets in the last three years and but declare that the markets are still far from reaching their potential. Based on an assessment of barriers and success factors for successful market development and customer's motives to engage in an ESCO project they conclude with a list of characteristics that describes a mature market and that can serve as an orientation for political and market actors intending to further foster the market development.

