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Reshaping markets for the benefit of energy saving

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Abstract

Energy saving is an important option for preventing emission of greenhouse gases. Furthermore, when energy saving is reducing the spatial and temporal density of energy consumption, it supports a rising market share of renewable energy sources. Last but not the least, energy saving plays a role in reducing the vulnerability for import dependency and supply disruptions. Despite these virtues energy saving and energy efficiency, being typically demand side options, appear to be harder to 'sell' than the other options which focus on the supply side. The currently prevailing market-based approach in energy policy initially brought setbacks for energy saving. The introductory article and the selected contributions to this special issue intend to show that markets can and should be shaped to the benefit of the uptake and of the potential of energy saving. To this end, all elements of the energy efficiency delivery context should be addressed in energy-saving policies. Learning, measurement and observation are important tools in this reshaping process. All contributions are based on papers of the European Council for an Energy Efficient Economy 2003 Summer Study.

Keywords: Energy saving; Energy efficiency; Market transformation

1. Introduction

All too often energy policy slips into an approach which focuses on the supply side of the energy system. Power stations, high-voltage networks, and oil reserves seem to be much more enticing objects for policy makers and politicians than energy-saving programmes and energy efficiency benchmark based tax schemes. That enticement can prove to be deceptive, however, and policy makers eventually become aware of demand-side opportunities that are both more cost effective and easier to implement. The collection of papers in this special issue presents plenty of evidence that energy demand deserves full attention in energy policy (and in related environmental policy issues), in particular through the upgrading of energy saving and efficiency policies.

It is remarkable that, despite significant changes in both the prevailing governance philosophy and in the ownership and management of energy systems, the structure and level of demand have remained largely an intentionally limited area for policy. A notable exception was an interlude of integrated resource planning (IRP) programmes in public utilities in the late 80s and early 90s nineties of the previous century.

Only one decade ago energy was still mostly treated as a (semi) public good in continental Europe, available to all and everywhere at fair prices. In other words the socio-economic and physical accessibility of energy was regarded as a public merit and therefore—as regards demand—it was usually off-limits to proceed from pure (technical) energy efficiency to concepts that potentially embodied upper limits on consumption. In the meantime in most EU member countries, and elsewhere, the

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policy paradigm has embraced the concepts (or at least the rhetoric) of market-based policies and liberalisation of energy markets. It is remarkable, however, that in this new era the demand-side still does not receive the same level of attention as the supply side. The old dogma of a 'public merit good' is replaced by a new dogma of 'minimal market interference'. The latter implies that the rationale of any unit of energy demanded should not be questioned. Bull (2001) refers to this problem by stressing the need for legitimisation of demand side policies in liberalised energy markets. The only leeway granted is for influencing demand through pricing: energy taxation. However, the original tax schemes suggested by economic researchers are usually watered down to exempt certain sectors and/or large consumers before they are implemented. Indeed, various EU member states have taken some steps towards so-called 'greening' of the tax system, but all schemes actually implemented contain significant exemptions.

Instruments other than taxation can often face even more opposition unless they are implemented at modest intensity levels and do not seriously interfere with the structure and quality of demand for energy carriers. The current fear of interfering with the demand side is inconsistent with the adoption of a market-based approach. A comprehensive market-based approach would, a priori, give as much attention to the supply side as to the demand side. From a national and international policy point of view, markets just happen to be an efficient framework in which policy objectives regarding security of supply, fair accessibility and environment can be achieved against a lowest, reasonably possible cost. To achieve a situation in which markets perform in the desired way, considerable moulding of both demand side and supply side features is necessary, e.g., with respect to preventing monopolistic (re)concentration, short-term and long-term security of supply, and environmental performance.

The contributions in this special issue show that the shaping of a full-fledged market-based energy policy is far from complete and that, especially on the demand side, much can and should be done. Many of the 140 contributions to the 2003 ECEEE[1] (6th) Summer Study demonstrated this in diverse ways. Therefore the *shaping of markets* was chosen as the lead theme for this special issue.

As a derivative from the lead theme it was concluded that *learning* constituted an important supporting theme. In this case learning is to be understood in various ways. First, there is the aspect how policy-making, in this case with respect to shaping markets, learns from past experience, i.e. through feedback, monitoring, evaluation and analysis. Second, there is the idea of incorporating conditions and consequences of learning in the policy instrumentation, e.g. by explicitly fostering learning or by taking into account so-called learning curves in technology development and deployment. This means, e.g., that the fiscal guidance of energy efficiency policy becomes dynamic, i.e., being linked to the progress in intended market evolution and relevant unit-cost developments. Third, learning raises the question of which role different actors, such as technology producers, energy suppliers and users, play in the innovation process.

As direct consequence of stressing the significance of learning, notably with respect to attempts to shape energy markets, the issue of *measurement and observation problems* arose as a second supporting theme. The shaping of markets can be still regarded as a new approach for many policymaking organisations. The consequence is that monitoring concepts and systems for these policies did not exist and still need a lot of elaboration. Given the above observation that learning (and hence monitoring and feedback) is essential for effective policy making, the need for adequate measurement and observation is obvious and urgent!

In summary, the overarching theme is *shaping of markets*, which is accompanied by two supporting themes, *learning* (for policy improvement and as operator in the instrumentation) and *measurement and observation* for an effective shaping of markets.

2. Reshaping markets—a disputed profile

Energy efficiency specialists, policy makers and researchers alike (but economists excepted) continued to be sceptical about market-based instruments longer than related specialists concerned with renewable energy or with greenhouse gas reduction policies. This was, e.g., also noticeable in the European Council for an Energy Efficient Economy ECEEE (2001) Summer Study presentations and discussions (see also Perrels, 2002; ECEEE, 2001) where the introduction of tradable permits was understood by many as potentially undermining the existing energy efficiency policy effort. In the ECEEE 2003 Summer Studies participants reflected the general change in attitude among many energy efficiency experts across Europe. Systems of tradable certificates of almost any kind appeared to enjoy much of interest. In addition to the selected contributions in this special issue the ECEEE 2003 papers of Starzer et al. (2003), Deuber and Cames (2003), Barzantny et al. (2003), Quirion (2003), Honkatukia et al. (2003), Olena (2003), Schleich et al. (2003), and Pagliano et al. (2003) all deal to a greater or lesser extent with (impacts of) tradable permit systems.

We consider it as positive that many in the energy efficiency policy world are now convinced that tradable

[1]ECEEE = European Council for an Energy Efficient Economy; http://www.eceee.org/.