# **Europe's Market Transformation towards an Energy Efficient Society: The (Im)Possibilities of a European Directive**

Rob P. Kool, NL Agency, ECEEE

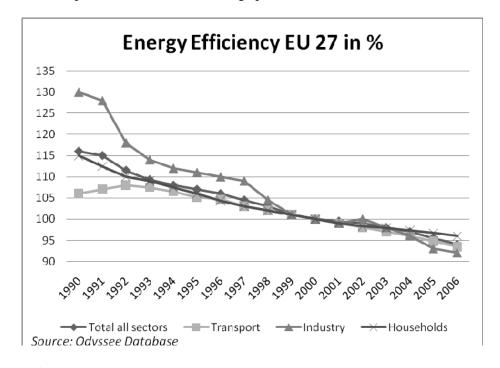
#### **ABSTRACT**

The Energy Services Directive (ESD) aims at structural reduction of energy use in the 27 Member States (MS) of the European Union. The directive gives guidance for a number of possibilities to achieve reduction in a structured way. A project, the Concerted Action ESD, financed by the Intelligent Energy for Europe program (IEE), helps countries to share information and learn from each other.

As the countries start preparing their second National Energy Action Plan, a requirement of the ESD, it is time to take stock of progress made. Areas addressed in the ESD (and its Concerted Action) are among others: The role of the Public Sector, The role of the Energy Sector, Auditing, Metering and Billing and Financial Instruments. These areas have been evaluated by European governmental policymakers and national implementation bodies.

All four topics show opportunities to start working on a market transformation, but there are still a lot of limitations. Both opportunities and limitations are presented in a qualitative way, using the reports and experience of the Concerted Action Management team.

The opportunities are reviewed in this paper in the light of the discussion of the next European Energy Action Plan currently under preparation. This plan aims at speeding up the transformation, if possible to a revolutionizing speed.



## Introduction

The European Union's first foundation lies with energy topics. The European Coal and Steel Community (1951) and the European Atomic Energy Community (1957) were the first foundations between six European countries aimed at releasing political tension and

stimulating economic growth. In 1957 the European Economic Community (EEC) followed. On the pillars the European Union was founded in 1993 by the Maastricht Treaty. Ever since the first collaboration in 1951 energy has been a priority area in the European Union and its now 27 MS. As early as 1973 Energy Efficiency<sup>1</sup> has been a topic in its own right.

During the energy crisis in the seventies of last century the dependency of Europe on energy import became clear. Guidelines were set in Green Papers, followed by shared actions (White Papers, Action Plans).

The main current drivers of energy policy are:<sup>2</sup>

- **Sustainability** to actively combat climate change by promoting renewable energy sources and energy efficiency;
- **Competitiveness** to improve the efficiency of the European energy grid by creating a truly competitive internal energy market;
- **security Of supply** to better coordinate the EU's supply of and demand for energy within an international context.

Other issues, like job creation, competiveness etc. influence the topic heavily, but are outside the scope of this paper.

In order to implement EU policies a number of directives were adopted by the European Commission and the EU parliament. Among them are directives on Ecodesign, Labeling, Energy Performance of Buildings and Energy Services. (Dyèvre et all. 2008).

In this article we analyze the implementation of the ESD. This analysis is made on the bases of the experience and documents of the IEE projects Energy Efficiency Watch and Concerted Action ESD in which the authors are involved on behalf of NL Agency<sup>3</sup>.

# **ESD General Description**

Directive 2006/32/EC of the European Parliament and of the Council on energy enduse efficiency and energy services and repealing Council Directive 93/76/EEC was adopted in April 2006. In everyday use the directive is called the "Energy Services Directive" or ESD. The directive sets a non binding target of 9% energy efficiency for each MS, to be reached in 2016. This Directive applies in general to: all energy sectors and in particular to providers of energy efficiency improvement measures, energy distributors, distribution system operators and retail energy sales companies, and the public sector. Part of the target groups or of the actions to be taken can be excluded by individual MS. For these details we refer to the directive text (European Union, 2006). In this text references to the ESD text are made by mentioning the article where appropriate.

The non binding indicative target doesn't offer the MS an opportunity to ignore this legislation. A number of requirements have to be met within the framework of the ESD. These requirements make it plausible that the overall target will be met.

For starters: the MS have to write three (National) Energy Efficiency Action Plans (NEEAPS) that have to be submitted to the EU commission mid 2007, 2011 and 2014 (Article 14).

The NEEAPs have to address the general target of the ESD which is to enhance the cost-effective improvement of end-use energy efficiency. MS are supposed to provide incentives and institutional, financial and legal frameworks to remove existing market barriers

<sup>2</sup> http://europa.eu/legislation\_summaries/energy/european\_energy\_policy/127062\_en.htm

<sup>&</sup>lt;sup>1</sup> Data energy figures are: http://www.odyssee-indicators.org/

<sup>&</sup>lt;sup>3</sup> NL Agency is the merger of three Dutch Agencies owned by the Ministry of Economic Affairs. SenterNovem, the former Agency on Sustainability and Innovation is the major partner within NL Agency.

and imperfections that impede the efficient end use of energy. The MS will work on creating conditions for the development and promotion of a market for energy services and for the delivery of other energy efficiency improvement measures to final consumers.

The responsible directorate for correct implementation of the directive is DG-ENER<sup>4</sup>

## **Concerted Action**

The textbook definition of a concerted action is "An activity that is planned, agreed upon, arranged, and carried out by parties acting together with the shared intent to pursue some scheme or cause." The Concerted Action has become one of the instruments of the European Commission to give the participating countries the possibility to work toward systematic exchange of information and results on common problems, the implementation of policies being one of them.

For energy related topics so far two CA's, have been commissioned by EACI under the auspicial of the IEE program<sup>5</sup>, started on energy topics. These aim at facilitating the implementation of a specific directive: CA-EPBD on buildings, and the CA-ESD. A third one is under preparation and focuses on the implementation of the CA-Renewable Energy directive.

The CA ESD, financed by IEE was launched in June 2008. Its aim is to provide a structured framework for the exchange of information between the 27 MS and Croatia during their implementation of the Energy Services Directive (ESD) and as such facilitating this process.

CA-ESD enables participants to share its knowledge and experience, and draw on that of others, in order to adopt the most successful approaches towards implementing the Directive and avoid any pitfalls highlighted by others.

The objectives of the CA ESD are to:

- Enhance and structure the sharing of information and experiences from national implementation and promote good practice concepts in activities to improve and strengthen MS implementation of the ESD.
- Create favorable conditions for an accelerated degree of convergence of national procedures in ESD related matters.
- Complement the work of the Energy Demand Management Committee (EDMC, Article 16 ESD) and its sub-groups on top-down and bottom-up methods and CEN (European Committee for Standardization) standards and certification work.

The work of the CA ESD is structured around five themes covering the key requirements of the ESD:

- National Energy Efficiency Action Plans
- The role of the Public Sector (article 5)
- The role of the Energy Sector (article 6)
- Auditing, Metering and Billing (articles 12 & 13)
- The use of Financial Instruments (article 9 & 12)

<sup>&</sup>lt;sup>4</sup> DG-ENER: Directorate General for Energy, formally Directorate General for Transport and Energy (DG-TREN)

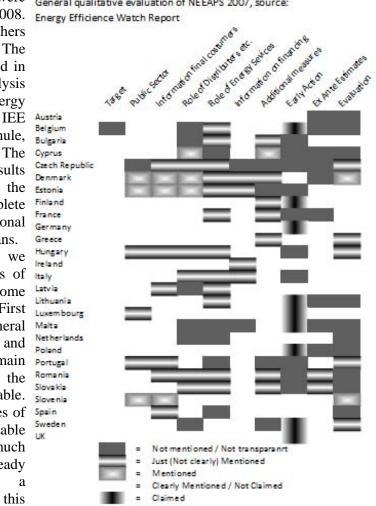
<sup>&</sup>lt;sup>5</sup> EACI = Executive Agency for Competitiveness and Innovation, IEE = Intelligent Energy Europe program

As this is a very functional clustering of the topics, this paper follows the structure of these five themes. The work carried out within the CA ESD is organized around a series of 7 Plenary Meetings spread over the three-year duration of the program. During the process of writing this article the internal reports of CA ESD were consulted. As this is ongoing and unpublished work, remarks on specific countries/opinions are only made on basis of other available sources. The CA ESD will produce summaries of their conclusions and actions, fit for the general public, in the summer of 2010.

# The National Energy Efficiency Action Plans

The first NEEAPS were General qualitative evaluation of NEEAPS 2007, source: submitted in 2007 and 2008. Energy Efficience Watch Report Two of them in time, the others in the months to followed. The NEEAPS have been analyzed in several ways. The first analysis that was published by the Energy Efficiency Watch (EEW)<sup>6</sup>, a IEE project, by Eufores (Schule, Bulgaria Becker & al.(2009)) commission published its results later that same year in the Estonia Synthesis of the complete Finland assessment of all 27 National Germany Energy Efficiency Action Plans.

In this figure summarize the qualifications of EEW on the NEEAPs. Some Latvia remarks have to be made. First Luxembourg of all EEW is a very general Matta study, performed to help and stimulate the MS. The main Portugal conclusion by EEW is that the Romania plans are hardly comparable. Slovenia Compiling the different tables of Spain the report into one overall table with reduced the nuances further than the EEW already had to do to write comprehensive report. But this compiled table shows the level



of uncertainty of the MS to deal with the different topics, even if we assume that certain topics were left out deliberately. The column 'Evaluation' is an example of a deliberate gap. Some countries, like the Netherlands, considered this a topic for the commission. This doesn't mean MS don't work on evaluation; all participate in the IEE Odyssee/Mure<sup>7</sup> project and often they have an evaluation for national policies that cover (most of) the NEEAPS. An example is the Dutch Energie report (ECN, Annual).

<sup>&</sup>lt;sup>6</sup> ECEEE, (European Council for an Energy Efficient Economy) was part of the consortium worked on the project. The author participated in EEW on behalf of ECEEE

http://www.odyssee-indicators.org/

But even with these remarks the table shows that there is enough room to complete and improve energy efficiency policy plans within the scope of the ESD.

The first NEEAP's purpose was to encourage MS to think ahead and provide the Commission with insight into the measures that they would or implement between 2008 and 2016 leading to their national energy savings target. The first NEEAP's differs substantially from the 2<sup>nd</sup> and 3<sup>rd</sup> NEEAP where reporting in energy savings achieved form a major part of the plans. A major problem issuing the 1<sup>st</sup> NEEAP's was the lack of a general reporting format. As a result they differ considerably in the amount of information that's given and the level of concreteness.

A second problem for MS is the indicative target. Nine percent of the final energy end-use of the average annual energy end-use over the time of the directive, as stated in article 4 of the ESD (art. 4 ESD), seems obvious. That is 1% a year.

Before adopting the directive, it was argued, however, that this target doesn't do justice to earlier actions of MS that were aiming to accomplish energy efficiency. In fact, the target is relatively easy to reach for the 12 new MS but harder to realize for the former EU-15. The difference was solved by the possibility to take early actions into account. These were actions taken in the years 1995 to 2007 (and by exception 1991 to 1995) that had a lasting effect on energy efficiency. An example is the use of strict building codes in the years before the ESD was adopted. By introducing these "early actions", savings still being generated in 2016 may be included. Using early actions, the challenge laid upon the several states became more fair. At the same time expressing energy savings target in absolute terms in GWh, or equivalent, becomes much harder. Deciding which measure qualifies as early action is hard. Calculating their contribution in a comparable way is impossible without very precise rules. The annexes of the directive dedicated to monitoring and evaluation give limited guidance. The use of words as "general" and "indicative" were accepted too lightly to assure the adoption of the directive by the EC. The directive doesn't have a good framework to formulate national plans now, nor a good description on how to measure and evaluate the results. A number of articles and reports have been written on the topic of measuring and evaluation. Although some of these studies were very detailed (S. Thomas, EMEES project 2009), no acceptable proposal for an overall EU methodology has been produced. (Vreuls, 2009).

In July 2009 the Commission services presented measure methods to the MS, however these were considered too inflexible. The Commission services are now working on providing MS with recommended methods which are expected to be made available to MS by September 2010.

# **Implementing the First NEEAPS**

A first challenge with each piece of EU legislation is how to transpose it into national legislation. Officially transposition of the ESD requirements had to be met in 2008.

A more detailed description of the quest to match this EU directive and national legislation was written by Kool & Bruel (2007) on the creation of the Dutch NEEAP.

The drafting policy has its own cycles which are seldom in sync with the EU policy cycles. Only seven countries used the ESD to actively support the national policy on energy efficiency, all others had national policies in place, eight of them, reported the NEEAP, had only been a reporting obligation to the EU. Getting National an EU policies in the same gear is a lengthy process. Many countries didn't meet the transposition deadline which led to further negotiations and infringement procedures by the commission.

Still MS think the course set is the right one. Twenty-six countries indicate they want to make better use of the NEEAP for national purposes in the future and the process is seen as a very good opportunity to cooperate with and learn from other MS (source CA ESD reports).

The development and implementation of the NEEAPS became one of the first priorities on the agenda of the CA-ESD.

Two main topics dominate this issue. The first is discussing the monitoring and format for the second NEEAP, the second is evaluating the (announced) target group measures used in the individual NEAAPs.

MS NEEAP's describe a wide range of EEI-measures to be implemented. The number and the character of EEI-measures in MS vary considerably. Overall 1348 measures were reported in the NEEAPS.

They can be divided into different groups of measures: legislative, financial, cooperative, communication and enabling measures. There is a big difference in the preferred types among countries, which makes discussion an evaluation even more valuable.

Dividing the measures into target groups shows that "Buildings" is the group that gets the most attention, followed by Multi-targeting and transport. (More details in the figure).

Sharing best practices and pinpointing cost effective measures is part of the work of the CA ESD.

#### The Role of the Public Sector

The roles of the Public Sector (Article 5.1, 6.2) that first come into scope are the exemplary role of the sector and public procurement. The first assumption is that there is a good definition of "Public Sector". That assumption turns out to be false. About 40% of the MS have a definition of the Public Sector in their NEAAP, and they differ from one another. "Bodies governed by public law" (Legro 2008) is a good starting point, but eventually a good definition has to be decided upon within the EU framework. Public authority buildings are mostly seen as part of the public sector, so is public lighting, schools and publicly owned buildings. But in some countries social housing and utilities are also included. Defining the energy use of the public sector is not possible due to the lack of both definition and exact data in many MS. Looking at the CA experts' opinions and other data available the public sector uses 10-15% of the over-all energy end use (Borg, 2006).

As long as targets of the ESD are not binding, these differences are remarkable, but not really important.

The highest potential for saving energy within the public sector is can be achieved in buildings. MS design mainly (21 MS) programs for their buildings that are stricter than for other sectors. These programs are in majority based on quantitative data and often exceed the demands of the EPBD. An exemplary role to the public sector is the main driver for actions targeted at public buildings. On local level the cooperation with the Covenant of Majors is more and more seen as an opportunity to fulfill obligations towards energy efficiency and climate policies. There is no real link between the ESD and the Covenant of Majors.

Besides the exemplary role in their own buildings, green procurement is another method by which the public sector may implement the ESD. Sixteen MS are already working with green, or even sustainable procurement. The successes of Energy Star<sup>8</sup> are seen as a good example on how to introduce public procurement. As the European market is much bigger than that of the US (495 vs 307 million inhabitants). The possible impact of procurement can be significant. The way the public procurement is shaped is the responsibility of the individual MS. Some of them have substantial experience, others are just starting this instrument.

The main discussion topics for implementation are:

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<sup>&</sup>lt;sup>8</sup> http://www.energystar.gov/index.cfm?c=about.ab\_index

- How do MS develop a set of criteria that are easy to use by persons responsible for the purchases by the public sector.
- There is no "absolute truth" on what is sustainable and what's not. Who decides on the national criteria? So far this is done by responsible ministries with often the minister as formal responsible person.
- Sustainable procurement isn't, at least in theory, more expensive then BAU. This can be supported by cost analyses of lifecycles of products. There is certification (ISO 14040/14044 and the European Commission has two websites<sup>9</sup> on the topic. For real sustainable procurement these analyses are still in their early stages and have limited value when it comes to actual purchasing. The combination of this information and the information exchange between MS can help the individual MS forward in building a good system. Good examples are available in several MS, like Austria<sup>10</sup> and the Netherlands<sup>11</sup>.
- Communication and training are essential to use the legal methods and criteria that are the foundation of procurement.
- Getting from green to sustainable procurement means social aspects have to be added. In general were talking about fundamental labour standards and human rights in the international supply chain. Defining those elements in criteria that can be used in sustainable procurement is still in its earliest stages and far from getting implemented.
- Last, but not least the procedures have to meet the requirements of the EU legislation and more specific the tendering directives (2004/17/EC and 2004/18/EC). Non-discrimination, proportionality, objectivity & transparency are valuable in all tender procedures, but sometimes they limit the possibility for real sustainable procurement. Changes in these rules can only be expected in due time.

The available information is more than sufficient for MS to decide on national implementation. The necessity of good description of products groups and necessary communication and training are demonstrated clearly, but it will be a though topic for a lot of participants.

# The Role of the Energy Sector

The third theme is the role of the Energy sector. This theme mainly is focuses on Article 6 of the ESD. The Article 6 covers a wide area, analyses so far concentrates on Voluntary or Long Term Agreements (LTA) and Qualification, Accreditation, and Certification Schemes (Quacs). First we'll look at the Voluntary Agreements. In this paper we use the term LTA instead of voluntary agreements, because these agreements are all shaped in the form of a contract between public and private partners. As these are legally binding contracts the term voluntary is misleading. Article 6 states: Member States shall "ensure that *voluntary agreements* and/or other market-oriented schemes ... exist or are set up". This has to be read in the total context of the directive. Implementing these measures is not binding, but MS have to take it into serious consideration.

Eleven of the 27 member states have voluntary agreements, or long term agreements (LTA) in place. Eight of them for a period of > 10 years. In reaction to the ESD 9 countries are considering LTA's. Compared to other instruments the LTA's are losing share to other approaches in the instrument mix. (Bosseboeuf, 2009).

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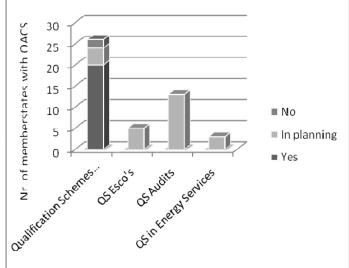
<sup>&</sup>lt;sup>9</sup> The main EU site: http://simap.europa.eu/index\_en.htm

<sup>&</sup>lt;sup>10</sup> www.oekoforum.at

<sup>&</sup>lt;sup>11</sup> www.agentschapnl.nl/sustainableprocurement

LTA are appreciated as policy instruments for a number of reasons:

- First of all, the relation between public and private sector improves as parties negotiate the aspects of the agreement, which forms a good basis for cooperation, (SenterNovem, 2008).
- While a lot of implementation measures lack a good estimate on the possible effects, LTA's have the benefit of making good potential studies and excellent possibilities for monitoring and evaluation.
- An important element of the LTA's is the introduction of energy management on the basis of audits and available possibilities to reduce energy use by both energy efficiency and technology improvement. All these elements to draft a successful LTA are available.



The IEE projects BESSS and EXBESS<sup>12</sup> have resulted in a complete set that's publicly available.

There are some concerns that LTA are generating additional administrative burden on parties involved and concerns as to whether LTA's are cost effective, compared to other measures. All these findings are in line with an analysis by NL Agency on the effects of a number of bi- and multilateral projects in which the Netherlands have been involved. (Kool & Jonkers, 2010). Especially governments of new MS tend to look to legislation as the solution instead of agreements. Representatives of industry on the other hand are more willing to choose the LTA approach.

More in depth analysis on cost effectiveness of the LTA's might change opinions of policy makers. This could be in the near future when nearly published studies in Sweden<sup>13</sup>, Finland and the Netherlands give a better economic basis for using LTA's. One specific advantage of LTA's is that not only the possible components are well described, but, in the IEE project LTA-Uptake<sup>14</sup>, the process and all its elements as well. Non compliance to the obligations of the LTA by industry is a topic of debate among policymakers. A number of MS state that more emphasis should be put on enforcement of the legal obligations in the contracts. Qualification, Accreditation and Certification Schemes (QACS) are described in article 8: .... MS shall ensure, ..., the availability of appropriate qualification, accreditation and/or certification schemes for providers of energy services, energy audits and energy efficiency improvement measures as referred to in Article 6.

This paper stimulates the improvement of the quality of energy efficiency activities in the market. The figure clearly shows a majority of the MS have qualification schemes in place and more are planned. But, in line with the text of Article 8, the scope of the actions is very broad. The actions can be on ESCO's, audits of other organizations that provide energy

14 http://www.ltauptake.eu/

<sup>12</sup> http://www.bess-project.info/

<sup>&</sup>lt;sup>13</sup> For the Swedish LTA (PFE) program: http://www.energimyndigheten.se/en/Energy-efficiency/Companies-and-businesses/Programme-for-improving-energy-efficiency-in-energy-intensive-industries-PFE/

services but that's only the first variety. Within the MS there are also notable differences between the number and nature of professional categories targeted by certification (see figure below). But the diversity between approach by MS only starts there.

Other differences can be found in the nature of the organization(s) responsible for qualification and certification, nature of certification (personal, company, duration of certification), financing and so on.

Evaluation of NEEAP's and policies provides MS with lots of possibilities and good examples. The only conclusion at the moment is that, although well used by MS, QACS are still in the phase of data collection and showing best practices in MS. The upside is that a lot of work on these topics is done in international frameworks like ISO and IEA. This will make the harmonization, which is likely the next phase of implementing QACS a transparent process.

This next step is eminent as Article 6 also states that member states provide initiatives to promote actions in this field. So in practice this international material is used already. One example is IEA work on ESCO's (Bleyl 2010)

# **Auditing, Metering and Billing**

Simplified, Article 13 requires MS to have individual meters installed (with limited exception). This is interpreted in very different ways by MS. Some MS consider annual feedback sufficient, others feel that quarterly billing is necessary. It seems only logical that in the end SMART meters will be rolled out on a large scale to enable direct feedback and demand policies that have high potential to enable energy efficiency. One of the major hurdles here is the issue of consumer protection and whether SMART meters are an infringement of this. A further matter for consideration is the cost of SMART meters and who

Certification Scemes for Professional Categories

Building energy auditors

Industrial system auditors

Energy suppliers

Designers

Installers of EE systems

Conclusions on a European scale can't be drawn yet, but the annual report of the IEE project ESMA provides excellent insight in this technical possibility. (ESMA 2010).

will bear these.

Auditing programs are wide spread in the EU. Only three countries indicate they don't have a program,

based on national of regional guidelines. Audits are primarily done in industry of buildings. About a third of all evaluations is linked to industrial LTA's. Audits provide good opportunities for energy efficiency. But there is much room for improvement. A majority of MS indicate neither prior estimation nor evaluation of estimated savings had been made in the auditing programs.

#### The Use of Financial Instruments

Financial instruments are widely used to promote Energy Efficiency. After legislation, financial instruments are the most used tools for most target groups in the EU27 (Bosseboeuf, 2009). This theme divides financing into two categories on first review: Fiscal instruments and funds and funding mechanisms. Fiscal instruments to promote energy efficiency exist in a number of countries. About seven countries consider the introduction of new measures to comply with the ESD. In line with other instruments the conclusion is drawn by the ESD experts of the MS that monitoring of the results of this instrument in terms of energy savings is rare.

More qualitative recommendations can be made. Strengthening the inter-institutional cooperation and establishment of a special fund providing subsidies for energy efficiency and renewable energy are the most urgent ones. But the EU can do more: the EU guidelines and notifications process are regarded to be barriers to energy efficiency and could be substantially improved. The results of this theme may be a push for a stronger long term fiscal policy aimed at energy efficiency and should be explored further. Funds and funding mechanisms seem to suffer overall from the financial crises: experts within the CA feel that investments in energy efficient measures have decreased. This is also reflected by the fact that EU funds that could be used for the implementation of energy efficiency aren't fully used at the moment.<sup>15</sup>

## **Conclusions and Recommendations**

Legislation on energy and climate topics is relatively new, certainly on as large a scale as the European Union. Lessons learned, even if they are not yet fully quantifiable, can be used to improve European directives, but also can be used by other key acting countries that dominate the energy and climate scene. An example of learning effects of the EU can be found in the Renewables Directive, where the reporting and monitoring aspect were established before adopting the Directive.

The experience of the ESD shows that by cooperation a lot can be learned on Energy Efficiency by MS simply by comparing methods and developments. Variety in approach and possibilities have been identified. Behind these descriptions are numerous examples of good and bad practices that serve as extra inspiration to those involved. Many of them are described in other IEE projects. A number of them are mentioned in the text. More will follow in the midterm report of the CA-ESD. In that light the ESD is a success and it clearly contributes to more energy efficiency in the EU.

As a piece of legislation the conclusions are far less favorable. This article uses the information collected within CA-ESD and the first 18 months of the project. As a result a number of topics of the ESD are not, or only very partially analyzed.

The goal of the ESD is the implementation of a sound package of energy improvement measures. Although at first a compromise or an afterthought, the NEEAPS became the cornerstones of the implementation of the directive. The lack of guidance (other than Article 14) on the format of these NEEAPS have resulted in a pile of documents that are hardly comparable. There is consensus of all involved that DG ENER has to provide a template before the end of 2010 to ensure second NEEAPS that, besides its national importance, can serve as a communication tool between MS. This is not only important for discussion and development of methods between MS, but also for the cooperation between public and private

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<sup>15</sup> http://www.eceee.org/press/Open\_letter/

partners. LTAs and public procurement are just two examples where these stakeholders cooperate. The importance often goes beyond energy efficiency. The mentioned examples can have significant economic implications.

The second mayor flaw of the directive is the lack of guidelines to monitor the results of the directive. Nor CEN, nor the EMEES project have delivered an acceptable model.

The Commission services announced a method to be made available in September 2010 for MS. Given the long history of getting overdue, it remains to be seen if DG-ENER will be able to produce those really timely. A majority of the MS would prefer a combination of guidelines and some harmonized parts/templates. There is, however, still much diversity in expectations and opinions.

It is remarkable that this is in line with preliminary results of an IEA survey on energy efficiency governance: over half of respondents indicated that energy efficiency programs are not evaluated. (Nigel Jolands, Oral IEA presentation during an IA DSM Exco meeting, April, 2010).

It will take time to sync national and EU policies. Streamlining the reporting obligations and the monitoring the results in a standardized manor will certainly support this. The coherency of the EU legislation is not a topic of this article. It is a simple fact that the ESD targets are not comparable to the EU 2020 objectives that were set shortly after the adoption of the ESD. To stimulate further integration of EU and MS approach bigger steps have to be taken. A recast of the ESD seems inevitable.

The different models, especially the Primes model, indicate that there is enough energy efficiency potential to stretch the directive to 2020 (in line with the 2020 goals) or even beyond. A closer link to other pieces of legislation of the EU itself will have to be part of evaluation. The directives on buildings (EPBD, Energy Performance Buildings Directive), CHP and renewable are main examples.

With the ongoing recast of the EPBD an integral EU policy, also including the Renewables Directive that demands one Integral National Energy Plan with on report on results could be the ultimate goal to achieve transparency and efficiency.

A continued cooperation based on a second concerted action is a recommendation that certainly can be made. The main steps after sharing best practices will have to be a closer look to remove market barriers to implementation of policies, a topic that now only marginally has been touched on, and a quest for better evaluations (both quantitative and qualitative).

This last conclusion is not a call for unified measures and approaches. The variety of Europe in all its dimensions (culture, climate, economy etc.) demands policies that make implementation that respect and benefit from the patchwork quilt which makes Europe what it is.

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