



# Interview of Mr. Gordon Sutherland from EACI

As the Senior Project Officer of the Energy-efficiency at the European Commission's Executive Agency for Competitiveness and Innovation Mr Sutherland is now in a privileged position to offer valuable insights into how Intelligent Energy Europe contributed to the current status of EPBD implementation in Europe.

Questions by Prof. Eduardo Maldonado, Coordinator of the EU Concerted Action-EPBD

**The EPBD is the main policy tool for energy efficiency in buildings. Intelligent Energy Europe is the main EC programme supporting its implementation. Can you describe why the EC decided that support was necessary for this particular Directive and the objectives that were established?**

– To discuss that we would need to take ourselves back to the time of the adoption of the Energy Performance of Buildings Directive in 2002. At that time the work programme of the Intelligent Energy – Europe Programme (2003-2006) was also being put together. As you rightly pointed out, the Programme is the EU's main instru-

ment for overcoming the non-technological barriers to the widespread market penetration of energy efficiency and renewable energies. These barriers, which are hindering the use of known, technically proven solutions and approaches, are often categorised as being related to behaviour, capacity, financial or regulatory issues. Given the comprehensive nature of this framework Directive, it would seem logical that the processes for preparing the national legislation and implementing schemes that would put it into practice in each country should be supported. The objectives were – and still are – to support activities of European added value which would support the take-off of the Directive. What I mean by

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that, is that whilst each country holds the competence for implementing the legislation in relation to its own building stock which is in effect a national asset, there are multiple benefits to be gained from collaboration amongst the body of administrations and stakeholders dealing with this legislation, each of them under differing national and even regional circumstances.

**The EPBD was first published in 2002, and IEE started supporting it in 2004. Since then, however, we have seen that priorities for support changed along the years. Can you explain the logic that IEE adopted to decide which topics to support when?**

– In the early period there was a definite need for a broad sharing of concepts on how to best transpose and implement the Directive, on how to best prepare the national procedures whilst adequately reflecting national requirements and markets. Very quickly the Commission and the Member States came together in a joint initiative, the Concerted Action which you yourself Co-ordinate and which is financed in full by Intelligent Energy - Europe, on the transposition and implementation of the Directive. That brought together the national bodies charged with implementing the legislation. Through this approach, Intelligent Energy - Europe supports dialogue and collaboration across Europe, helping national administrations to develop tailored approaches to implementing the Directive. That initiative was paralleled by a suite of projects, in the nature of grants supported in part by the Programme, which had the aim of finding practical, on the ground solutions. These solutions ranged from development of training schemes and materials for qualified experts to the methods and means for carrying out inspections of air-conditioning systems. The projects are selected in a competitive process through annual calls for proposals. The logic has always been to support the implementation of the Directive as broadly as possible, subject of course to the submission of proposals for which meet the evaluation criteria. Over the years, the priorities became more focussed to reflect the market requirements.

**Can you point out a few important specific outputs from IEE projects that had a contribution towards improved MS implementation of the EPBD?**

– That's a challenging question. Not because the projects haven't directly contributed to national implementation, which they have resoundingly, but because many administrations used elements of the projects' outputs and adapted them or incorporated them in their own processes, not in their entirety but in a tailored manner.



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Additionally, the projects were carried by consortia of partners across Europe, amongst participants from countries in which the legislative process was dynamic. Remember that the projects need to be carried out by consortia made up of at least three independent organisations from three different countries, although the vast majority of consortia are larger than this and have a broader EU coverage. We need to remember that the national transposition of the Directive implies the incorporation of its requirements into the corresponding building codes in each country. Since most countries revise their building codes at more or less regular intervals, you can appreciate that the process was at varying stages in different countries. That's a challenge for a consortium of partners dealing with, for instance, the form, shape and content of the energy performance certificate in each of the countries participating in the project. Let's take the example of an early project, IMPACT, which in many ways exemplifies a successful Intelligent Energy – Europe project, both in terms of its concept and its results. As early as 2003 a number of countries already had fully fledged energy performance certification schemes, such as in Denmark, or had planned to carry out pilot tests of such schemes. Within the IMPACT project, the experiences from these schemes and pilots were compared. That whole process gave insight into the challenges of the energy performance certification process, not only for the participating countries but also, particularly through the presentation of the results to the Concerted Action EPBD, to all countries implementing the Directive. A variety of issues, such as the shape and form of the certificate and property owners' response to it were investigated by that project. It resulted in a best practice guide outlining the pros and cons of different approaches to energy performance certification, made available in ten languages. Those outputs were

on the one hand strategic in nature, on the other hand based on robust analysis of existing schemes and pilots applied to thousands of properties, and the outcomes remain relevant today. But there is a long list of examples from memory: such as the BUDI project where the training materials for expert evaluators form the basis of that used in a number of countries; the AuditAC and HarmonAC projects on auditing and inspection of air-conditioning systems where the methods developed have been incorporated in national approaches; the EPLabel project which provided basic inputs to operational rating schemes for public buildings in a number of countries; and the EPA-NR project – which demonstrated that the CEN EPBD standards offer a comprehensive approach to energy performance certification of buildings.

**What about a few outputs that helped policy-making at Commission level?**

– The Intelligent Energy – Europe Programme supported a number of projects that helped to inform the policy making process at EU level. Studies on intercomparison of energy performance requirements in different countries in Europe was instrumental in highlighting the challenges of direct comparison of national legislation and the performance levels set therein. These studies informed the dialogue on the cost-optimal methodology which is now embodied in the recast of the Directive. Similarly, the HarmonAC project was instrumental in demonstrating the feasibility of monitoring of air-conditioning systems in tertiary sector buildings in order to flag poorly performing systems which could benefit the most from on-site inspections. These are only two examples, but the whole process is best reflected in the contribution of the Concerted Action. The reports of the Concerted Action provided insight into both the transposition and implementation of the Directive, highlighting which areas could be strengthened. These were used in support of the Commission's proposal for the recast of the Directive prior to its adoption. I should point out that almost all of the projects contributed to the activities of the Concerted Action, and vice-versa.

**In a way, the priorities that have been defined for IEE support have an implicit policy background. Can you explain the role of DG ENERGY in this process?**

– The priorities of the Programme are adopted by the Directorate General for Energy in consultation with the Intelligent Energy – Europe Committee, the body of representatives from the national administrations that oversee the implementation of the Programme. The

Executive Agency for Competiveness and Innovation also takes part in that consultation. The priorities are set on an annual basis, and that allows the focus of the Programme to be adapted on as needs basis. For example, in response to the Energy Efficiency Action Plan of 2006, the priorities at that time called for activities in support of the recast of the Directive. A number of projects from that period, such as the ASIEPI project which aimed to assess the impact of the Directive and provide insight into how it could be strengthened, were instrumental in informing the debate around the new legislation.

**As you stated earlier, the EPBD covers different topics. From your experience, in which areas has IEE made greater inroads and where more improvements are still needed?**

– Reflecting on what we've already discussed and the specific projects which immediately sprang to mind, the projects and initiatives supported by the Programme have made inroads to successful implementation of the Directive more or less across the board from implementation of certification schemes to setting of performance requirements, from training structures to national awareness campaigns. For sure, they have produced guidance and options, as well as having highlighted possible pitfalls if the legislation isn't put into place effectively. The possible exception would be on the topic of boiler inspections. Although projects in that area have been supported with the general aim of improving performance and quality assurance in boiler installations, this hasn't necessarily been from the direct perspective of the Directive's requirements, but rather from the energy management and voluntary market approach, as opposed to support to the regulatory framework. The ongoing MOVIDA project could help to overcoming that. I should point out that since 2004 roughly 100 projects have been supported in the building sector, with more or less one fifth of them focussing on supporting the regulatory process. The other projects address market transformation, access to finance, capacity building - which includes education and training, as well as awareness raising.

**The EPBD applies across the whole of Europe, even beyond the EU 27. Do you see the same level of enthusiasm for IEE projects supporting the EPBD everywhere or do you detect some differences?**

– We do study statistics for the Programme as a whole, across all sectors and fields of delivery, but the analysis doesn't go to the level of individual priorities. The calls for proposals through which the projects are selected are open to all EU countries, plus Norway, Croatia, Iceland,



Lichtenstein and now the Former Yugoslav Republic of Macedonia. Since it's a competitive process, we wouldn't expect to have equal participation across the whole of Europe in a sample of about 20 projects on this topic. Through the dissemination activities of the projects and the widespread availability of the outputs, as well as through initiatives such as the Concerted Action and Build Up, all of the relevant information and experience can be readily used by organisations in any country which is implementing the Directive. The interest of the Energy Community in the outputs of the projects, with some countries acting as observers in project meetings and workshops, shows there is interest in the projects' findings and outputs not only within the EU 27 but also beyond.

### **What can Intelligent Energy do to correct that imbalance?**

– We put a significant amount of effort into making clear information and guidance online, whilst the Programme is supported by a network of National Contact Points which promote the annual Calls for Proposals through Info Days held in most countries. The staff of the EACI participates in these national events, as well as in the European Info Day in Brussels, the presentations from which are available online. The EACI also offers a pre-check facility, whereby our experts can inform interested parties if their proposal falls within the priorities of the Call. We also strive to have the key outputs of the projects available in the IEE project database as soon as they are available in their final versions, whilst requiring the projects to have appealing and up-to-date websites and encouraging them to use portals to make their results as widely available as possible.

### **The EPBD is not the only Directive dealing with energy efficiency in Buildings. We also have Renewables, Energy Services and Construction Products, just to mention the most important. Is IEE tackling this challenge and promoting synergies between the Directives? If so, how?**

– Intelligent Energy - Europe projects can address more than one sector or more than one policy area. A good example is the integrated initiative launched in 2011 covering energy efficiency and renewable energies in buildings. Additionally, we have Concerted Actions for the Energy Services Directive and the Renewables Directive. Over the last few years there have been a number of exchanges of representatives between these actions. More recently, the Co-ordinators from these actions – yourself included - have met to exchange experiences.

### **To conclude this first part of the interview, can you identify, from project outcomes so far, the main bottlenecks for EPBD implementation in MS?**

– The projects have identified a wealth of options for effective implementation of the Directive, as well as pitfalls that should be avoided. The comprehensive nature of the Directive coupled to the high level of detail required in setting energy performance requirements is perhaps the greatest challenge that administrations face in setting up functional schemes that embody the Directive's requirements. On a more personal philosophical note, we could perhaps say that societies, like people, might have difficulty learning from the mistakes of others. The projects encompass Europe's collective knowledge on implementation of the Directive, it should be sufficient for the administrations that set the national requirements in each country to learn from others. There is no need to face the same challenges twice, or multi-fold. Another major bottleneck will be the construction of nearly zero-energy buildings. This is recognised by the EU and the recently launched Build Up Skills, the EU sustainable construction workforce initiative, has been launched in response to that.

### **Now, let's try to focus on the future. The EPBD recast is currently being transposed by the MS and its implementation shall start soon. How is IEE planning to support this new EPBD recast?**

– From conception to results on the ground, the majority of projects have a medium term delivery time. Although there is scope for having shorter term projects that can deliver market ready results within two years from the time of submission of a proposal, the normal time to full impact would be three to four years, with the impact continuing long after the end of the project. We've seen examples of outcomes from projects launched in 2005, being taken up by national administrations in 2010 and put into daily practice in 2011. That's the case for the EPA-NR software and methodologies. To look to the future, when the integrated initiative on energy efficiency in buildings and renewable energies was launched last year, it focused exclusively on nearly zero-energy buildings. It was obvious that the transposition of the Directive by mid-2012 couldn't be supported by projects which will only start in the coming months. Rather, support to the market transformation and national action plans for nearly zero-energy buildings was well matched to the period when the projects would be carried out, that is between 2012 and 2015, at which stage all countries in the EU should be

at the stage of reaching their interim targets for such performance levels.

**Is it still too early to have any conclusions from these projects focussing on NZEBs? If so, when do you expect them to be available, as MS must make decisions about NZEB definitions and implementation plans quite soon?**

– As stated previously, these projects will deliver final outputs only in 2015, but it's an ongoing process and we'll be expecting the projects to interact at national and European level, as well as with the Concerted Action. The projects will inform the dialogue and vice-versa. That said, the project NorthPass was launched in 2009 with one of the aims to assist in the development of national action plans. The EACI also held a workshop amongst the consortia addressing the topic of high performance buildings in early 2010 which focussed on this topic. The proceedings of that workshop can be found on BUILD UP ([www.buildup.eu](http://www.buildup.eu)). A lot of lessons have already been learned. Also, I should point out that the projects are not directly addressing the national application of the definitions of nearly zero-energy buildings, but with the implementation in practice. That is to say, supporting the market transformation to very energy efficient buildings according to the principles of life-cycle costing, coupled to integrated renewables from on-site or nearby. The projects will support the practical application of the nationally defined regulations which will embody the concept of nearly zero-energy buildings.

**What about support for NZEBs in the warmer southern European climates? They pose really different challenges than NZEBs in very cold climates. Has IEE focussed on this issue yet?**

– Indeed, none of the projects supported under last year's Call for Proposals focus specifically on nearly zero-energy buildings in warmer climates. In the past however, projects such as PASSIVE-ON have focussed on very high performance buildings in those regions. The ASIEPI project also investigated the concept of the Climate Severity Index which can help with dealing with the challenges of designing buildings to optimal performance over the year. We know that design parameters which optimise summer comfort can impinge on winter comfort and vice-versa. It is the annual, holistic optimisation which is important, as confirmed by the findings of the projects.

**The Commission recently proposed combining all its Research, Demonstration and Innovation programmes into a single programme, Horizon 2020, including current CIP activities. Does this mean the end of the Intelligent Energy Europe brand, or will it continue with its own autonomy within Horizon 2020? Stakeholders are worried that such a successful programme would suddenly disappear. Can they count on continued support for policy implementation?**

– Discussions on the next financial framework 2014-2020 are ongoing at European level, so it isn't possible to comment on the shape or identity of any of the Programmes. In the first instance, one more Call for Proposals is foreseen under the Intelligent Energy – Europe Programme in 2013, and the successful proposals will run from 2014 to 2017. As with other projects they will continue to deliver after their completion. For the future, actions in the spirit of the Intelligent Energy – Europe Programme are currently proposed within Horizon2020, but we'll need to wait for the adoption of the Financial Framework to know the precise nature of those actions. However, as I said, it's 2012 and the market can still expect support for policy implementation from Intelligent Energy – Europe Programme until 2017.



**To conclude, two final questions for which I would like to have your personal views as an expert in the field of energy efficiency in the buildings sector. First, I would like to know your opinion about the real impact of the EPBD in Europe. We hear from some that it has been a milestone, others say it had some impact but not enough, others say it hardly improved the buildings sector so far. What is your opinion, looking back at the sector 10 years ago and today?**

– The feedback from the projects, of which around 20 dealt exclusively with issues relating to the Directive, reflects what you stated. The ASIEPI project reported that in the period since the adoption of the Directive there has been at least one revision of the building codes in each country. It also pointed out that since many European Member states revise their regulations for buildings in periods of typically 5-7 years, some front runner countries would have tightened their legislation with or with-


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out the Directive. The aim of the Directive is of course for all countries to set appropriate performance levels for their building stock. Prior to the Directive, few countries had minimum energy performance requirements, the main approach being prescriptive requirements for building components and systems. Since the transposition of the Directive, that has changed. We've also seen from the IDEAL EPBD project, which carried out a robust market analysis on consumer response to the energy performance certificate in the residential sector in the period 2008-2011, that in countries where the implementation of the Directive was well advanced home owners are twice as likely to carry out energy efficiency renovations if they have a certificate and are aware of its content. That project showed that the Directive can and does make a difference when properly implemented. It is in the hands of the national administrations to ensure that it is effectively and efficiently implemented in each country. From a personal viewpoint, having worked in the field of energy efficiency in buildings since the late '80s, for the most part with a European perspective, it's clear that the Directive has indeed made a positive difference. That its implementation can be improved is however also clear. Reflecting on the outcomes of the projects we discussed today, the outcomes corroborated the approach to strengthening of the Directive through its recast. In the nature of any legislative process, it will take a few years from the adoption of the recast in 2010 to direct impact on the energy performance of the buildings that we occupy.

**And, finally, how can REHVA and the HVAC industry, manufacturers, designers, etc., help improve the implementation of the EPBD?**

– By upholding the principles embodied in the Directive as laid down, which are no more than best professional practice. That is, appropriate, holistic energy performance design for buildings and services. By flagging national and local regulations that contradict the Directive's provisions and by raising awareness to ensure that these get changed. By producing relevant guidance for REHVA members and encouraging the use of existing material out there. I should also point out that REHVA has over the years participated in a number of Intelligent Energy – Europe projects with the aim of helping the HVAC industry, manufacturers and designers to move towards a more energy intelligent building stock for Europe. Through actions such as these, REHVA has an important role to play in improving the implementation of the Directive across all EU countries. That said, I'd like to thank you and REHVA for the opportunity to chat about the Intelligent Energy – Europe Programme and also to point out that the outputs of all the projects we've talked about are available either from the project websites or the Intelligent Energy – Europe database at <http://ec.europa.eu/energy/intelligent/> 

Intelligent Energy Europe programme supports the implementation of EPBD