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1. INTRODUCTION

The UPRES short courses have been delivered in towns and cities across the five participant countries. This report outlines why it was decided short courses would help to achieve the UPRES project objectives, and it then provides details of the courses carried out in each country.

In total, approximately 1000 delegates (Table 1) have benefited from attending the short courses, of which 50 have been carried out.

The short courses have varied in length and format, but they have been almost universally popular, with high ratings and enthusiastic comments received for courses run in all the countries. Delegates were also happy for their comments to be used as testimonials to assist the marketing effort for remaining short courses and for the long courses.

The target audiences have focused primarily on planners, but it is recognised that successful local initiatives involve a range of players. Consequently, a mix of delegates was sought, to include other local authority personnel with whom planners would have to liaise, together with other actors external to the municipalities. This has been in evidence in the audiences attending these courses.

The high number of overall delegates has been achieved despite the adverse economic circumstances prevailing across all the participant countries when these courses were being marketed and delivered. It was clear, however, that the economic difficulties did affect attendances. Indeed there were some very disappointing responses to several of the scheduled courses.

However, the UPRES team responded to these circumstances by redoubling their efforts with advertising and marketing, spending much more time on additional activities to secure audience members, for instance by means of extensive direct telephone contact with likely delegates. Also for this reason, the delivery of the short courses spanned a considerably longer period within the overall project schedule than was originally intended.

The objectives of the short courses included marketing the long courses, but it also quickly became apparent that the short courses could achieve much in their own right. Indeed, for one country (UK) only the short courses were run, though even here there appears to be some appetite to use the UPRES materials in university (longer) courses.

As well as achieving good feedback from delegates and helping to provide impetus to future long courses, there was plenty of feedback confirming that the basic information being provided by the short courses has helped to up-skill many staff members and improve their confidence for dealing, for example, with reluctant developers and providing key information to doubtful decision-makers.

The dynamics of the UPRES course stimulated contact and discussion between staff attending from different departments that need to work together for effective future energy solutions.

Suggestions emerging from the short courses to inform future long courses included provision of more detail on spatial planning related to future integrated energy systems, and also how to write effective local policies that will stimulate successful future systems.

Information about successful case study exemplars was felt to be very helpful and more was called for. There also appears to be a lack of firm information on system cost, and how to compile the information required to form an evidence base upon which to make decisions.

Table 1 UPRES short course delegates by country

	Country	Number of attendees
1	Finland	199
2	UK	290
3	Hungary	178
4	Germany	182
5	Spain	152



Short course delivery in the Catalan Chamber of Architects, Girona, February 2013

2. COUNTRY ANALYSIS OF SHORT COURSES

2.1 UK

The UK led Work Package 3. BRE agreed with the consortium that information was needed to help planners with the tasks associated with future energy renewable energy systems, particularly those associated with heat networks.

However, the under-developed nature of the market in the UK led BRE to suggest adding a short course to the planned outputs. The idea was to enable local authority staff to quickly assimilate some of the main elements necessary for them to move forward with their energy policies and begin to understand the potential energy solutions within their locality.

While the long course would be designed as a university level course, the short course would be assembled to cover key issues within a three day time period, and it would be accredited within the Continuing Professional Development (CPD) scheme.

Although designed specifically with UK circumstances in mind, it was quickly realized that the short course could be a valuable general addition for each of the other countries. It would function as a 'taster' course promoting the long courses, but as the economic crisis unfolded it also became an additional way to reach the intended target audiences who by now had less flexibility to take on a full Masters level module.

The short course material was assembled in the UK and then made available to the other partners who adapted the material to suit their own circumstances and target audiences.

This report outlines the development and delivery of the short course in the UK, and also how it was adapted and used in the partner countries. The material is available for use at aaltopro.fi/up-res in the languages of the partner countries.

	Place	Date	Number of attendees	Comments
1	Coventry	16-18 May 2011	5	
2	Bournemouth	23-25 May 2011	7	
3	London	7-9 Jun, 2011	68	
4	Swansea	13-15 Jun, 2011	22	
5	Truro	22-24 Jun, 2011	4	
6	Leeds	26-28 Sep, 2011	9	
7	BRE	7-9 Nov, 2011	4	
8	Bristol	21-23 Nov, 2011	16	
9	Colchester	12-14 Dec, 2011	7	
10	Stoke-on-Trent	24/27 Feb, 2012	2	10 registered

11	Rochdale	1/2 March, 2012	11	
12	Oxford	13/14 March, 2012	11	
13	Brighton	19/20 March, 2012	10	
14	Newcastle	1/2 May, 2012	10	
15	Southampton	18/19 Jul, 2012	24	As requested by attendee at Brighton
16	London	24/26 Sep, 2012	20	
17	Glasgow	20/21 Nov, 2012	17	
18	Plymouth	28/29 Nov, 2012	16	
19	Bridgend	18/19 Nov, 2012	16	As requested by attendee at Swansea
20	London	5/12 Feb, 2012	11	

Achieving the objectives

The UK courses were spread across the country to make sure that the important messages were well distributed regionally. There were even 5 delegates from 2 non-partner countries.

The generic course material was drafted and then adapted as changes in government policy came about, and extra versions were also developed for the courses delivered in Glasgow, Swansea and Bridgend to take account of planning legislation specific to Scotland and Wales.

Inviting people from different departments of the local authorities proved to be a very good idea. Feedback was received that people from different departments had not always been in a position to work together before and they found the course to be an effective catalyst in this respect.

The training team was a good mixture of experts, with the BRE staff member expertise including RES, district heating systems, and direct experience of working in a local authority. In addition, BRE enlisted support from other experts with a huge amount of practical experience with actual schemes across the country.

After the sixth course, the brand new Department of Energy and Climate Change (DECC) Heat Mapping Tool was also integrated into the course material, with DECC personnel attending to present it as a pre-launch activity. DECC also assisted with publicising the courses.

The introduction of the Heat Mapping Tool was very timely and delegates were excited about being able to visualize the heat demand density 'hot-spots' within their area. The tool provided the ability to aggregate the heat demand within any designated sub-area, so that delegates could begin to understand where a heat network might be initiated and where individual building level solutions might be preferable.

Although the number of delegates fell short of the numbers originally hoped for, the courses have provided timely assistance to those councils trying to take forward initiatives towards future sustainable energy systems based on RES. The courses have coincided not only with the government's heat mapping tool, but also with the emergence for the first time of a heat strategy.

Delegates from more than 30 councils attended the UK short courses, and as a result many have positive plans that are being taken forward in line with national policies on RES.

A number of these councils have kept in contact with BRE, and also with each other. Through this and via other networks, and also from delegate feedback it is known that the courses have successfully provided stimulus to councils that had not embarked on initiatives, and accelerated progress for those that had.

Course locations

The courses in the UK (Table 2) were run over a period of more than one year and a half. They were run in several series. This was in part due to the very slow take up of courses, and also the fact that in several cases initial strong interest in potential locations was not followed up with enough local action to attract a viable audience. This led to several postponements. It also had the advantage of giving some time for making revisions to course material and length.

The courses spanned most of the UK, with interest growing as time went by.

Course attendees

The courses were advertised to planners and also to those with whom they must liaise in order to successfully take forward local renewable heat initiatives. The hub of the events was always the planning staff within the local authority. Consequently, delegates prominently included local authority planning personnel, but also included energy, environmental and housing personnel. There were also some delegates from outside local authorities, including environmental and engineering consultants, environmental agencies, developers, architects, and utilities.

Course objectives

The main objective was to provide coherent information regarding RES systems, in order that attendees would know how to proceed to the next stage. This would include a consideration of the various technologies, their potential benefits, and local applicability.

In the UK there are only a few councils where renewable and sustainable energy systems have been fully incorporated into planning documents. Therefore, in order to support the majority of the councils, it was decided that the course should start from the basics. This decision was supported by the feedback from National Steering Group members. Furthermore, the original survey also suggested that the course would need to be well populated with examples to demonstrate the issues, and what can be achieved.

The secondary objective was to examine international, national, and exemplar local policy and to articulate how to translate that into specific effective local policy frameworks that could help to deliver effective sustainable future energy systems.

Problems and corrective actions

At the start of the course the UK government had just changed and with that a radically new planning policy structure was introduced. This delayed the start of the courses in the UK as it was necessary to wait until the planned changes were known. It also meant that the planning-related material that had already been written had to be extensively re-drafted.

It was initially the plan to include a strong concluding workshop element within the courses, that would lead to formulation of a development plan based on local circumstances. However,

it was clear that many of the delegates were not sufficiently far advanced for this to be carried out. It proved more fruitful to include a series of small discussion elements within the course material.

After the first 6 courses had been run, the DECC added their new Heat Mapping Tool to the course schedule. Using this for each town or city represented provided a way to explore where the potential for heat networks was likely to exist and where individual building scale RES systems would be more appropriate.

There were some problems with delegates not turning up despite having registered. This could be a reflection of the pressure resulting from council cutbacks. As a result of this extra effort was made to organize each event and this consumed a great deal of additional staff time. Generally, the attendances improved significantly as the training programme proceeded, with requests also arising more frequently for further courses, including from delegates themselves.

Changes to original planned 3-day format

The first courses were delivered as full three-day sessions, but it became apparent that it was very difficult for the key planning personnel to attend for this length of time. Partly as a result of attendances being lower than desired, but also because of direct feedback received, the course was shortened to two days.

Marketing the courses

BRE's extensive network was used to publicise the course. For example, the Building4Change e-bulletin, which reaches 40,000 recipients, was regularly used. BRE also used its extensive databases of personnel from applicable professions.

Appropriate trade associations (CHPA, UKDEA) were also contacted and asked to circulate to their members.

Local host authorities were asked for their assistance in recruiting local networks, and letters were sent and phone calls made to those regional councils and city planning offices that were located in or near to cities where short courses were scheduled.

In order to secure a many delegates as possible a great deal of direct cold calling was also carried out by BRE staff to likely interest groups and individuals. Carrying this out together with a concerted effort from the local authority and local networks proved the most successful approach.

Delegate feedback

The feedback received regarding the courses was invariably positive, and often signalled positive future intentions. Several councils (eg Brighton, Southampton, Bridgend) have maintained contact and are known to have substantially accelerated their moves towards future local sustainable energy systems, while others (eg Oxford, York, Plymouth) have made contact to request further assistance or to take steps towards future cooperative engagement with BRE on specific energy initiatives.

This positive feedback also demonstrates the need for this type of course particularly at this time when strategic energy documents are emerging from government, and yet local authority spending is severely constrained.

'The 2 day training has had a massive impact in Brighton & Hove. Training was given to officers in Planning, Housing and Sustainability. Since which time Brighton & Hove has commissioned an Energy Study including Heat Map, included policies in the City Plan requiring or recommending connection to existing or future decentralised heat and energy networks, identified potential cluster areas and referred to these into site policies...'

Francesca Iliffe, Sustainability Officer, Brighton & Hove City Council

As a result of the positive feedback, BRE plans to carry on with offering the short courses. Discussions have taken place internally at BRE to try to develop a business model that will enable the courses to be offered at a rate affordable for local authority personnel. Subsequently further discussions are under way with potential sponsors. BRE also hopes to maintain links with DECC, especially bearing in mind the recent emergence of further relevant strategic documents such as 'The Future of Heating: Meeting the Challenge' and 'Barriers to Deployment of Heat Networks', the latter drafted by BRE with the University of Edinburgh and the Centre for Sustainable Energy.

As well as the courses listed in Table 2, BRE has delivered some of the short course materials at seminars and 'mini-modules' at University College London (UCL) and Brunel University.

Furthermore, BRE has also been in discussion with two UK universities with a view to developing longer courses based on the UPRES long course materials.

2.2 Finland

	Place	Date	Number of attendees¹	Comments
1	Kuopio	Feb 7, 2011	13	
2	Espoo	Feb 11, 2011	37	
3	Oulu	Feb 25, 2012	24	
4	Turku	Mar 3, 2011	19	
5	Tampere	Mar 10, 2011	18	
6	Seinäjoki	May 3, 2011	21	
7	Jyväskylä	May 5, 2011	9	
8	Rovaniemi	Mar 1, 2012	0	Cancelled
9	Jyväskylä	28.1.2013	17	
10	Tampere	14.2.2013	21	
11	Oulu	21.2.2013	20	

Course objectives

Primarily, the main objective was to raise interest in and awareness of the opportunities offered by considering renewable energy systems (RES) during spatial planning, and the issues that would need to be addressed in order to proceed. The selections made at the spatial planning stage often influence how extensively and at what cost various RES options can be introduced later on.

Secondly, the course acted as promotion for the long courses.

Additionally, the three extra seminars carried out in January-February 2013 were organized in order to disseminate the results of the project and share experiences from the project case studies. Course materials included a publication summarizing these.

Overall, the purpose of the short courses in Finland was to raise interest in RES and bring together all the principal stakeholders. We wanted to ensure getting enough people from different organisations in the seminars. By initiating this communication at the spatial planning stage, more effective and integrated overall solutions are much more likely to be achieved.

Course locations

The courses run (and one which was cancelled) are shown in Table 3. These include seven short courses run in February – March 2012, and an additional three promotional events in January – February 2013.

Course attendees

¹ number of registrations, most of these came to the sessions, but naturally there were some cancellations

The attendees came from city planning offices, regional councils, consulting companies and the local and regional energy companies. The position of individual delegates in their respective organisations included heads of city planning offices, urban and regional planners, land use planners, R&D managers, researchers, managing directors, and architects.

Problems and corrective actions

Planners found it difficult to obtain release from their duties for three days training within one month, particularly when the period of notice was two months or less. The impact of the economic downturn has been reduction of communal budgets, and as a result of this planning departments have had to cope with lower staffing levels. Consequently, courses were reduced in length but increased in number (see below).

Changes to original planned 3-day format

Due to the planners finding it difficult to attend for three days, the course duration had to be reduced from three days to one day. As a corrective action, the number of courses was increased.

Consequently, the original plan for three courses each lasting three days was converted to seven (originally eight, but one was cancelled due to low number of registrations) one-day courses. As well as these seven courses an additional three promotional seminars were run in January – February 2013.

The course scheduled to take place in Rovaniemi, the northernmost city in Finland, had to be cancelled. The reason was that a similar regional event for the whole of Lapland had recently taken place, so that it proved impossible to attract delegates. The distances from the Lapponian communities to Rovaniemi are as much as 400 km one way, and in most cases, the private car is the only transport.

Achieving the objectives

Short course delegates were very satisfied with the short courses: the average rating was about 4 of a maximum of 5.

The short courses also proved to be a very effective promotional tool for the long courses in Finland. Many of the participants of the long courses had previously attended a short course. The short course had raised their curiosity and interest in learning more about the links that can be established between urban and energy planning.

Marketing the courses

Letters were sent and phone calls made to those regional councils and city planning offices that were located in or near to cities where short courses were scheduled.

Delegate feedback

The attendees liked the morning session where district heating and CHP (combined heat and power) were introduced as a technical approach that requires measures from the city planners in order to be economic and environmentally sound.

Moreover, the Porvoo planning case was considered very interesting, and more information was requested about how it was organised and from where the benefits came.

Transportation was considered a key area that should be included in further training. Good examples of integrating public and light transport with urban and rural infrastructure and also linking to energy and emissions were requested.

According to the delegate feedback the following issues should be covered by the long courses:

- Models for land use and energy efficiency of buildings.
- Legislation related to energy and spatial planning.
- Comparison of different modes of energy (costs, emissions, primary energy factor).
- Examples of urban/suburban and rural areas where energy and urban planning is integrated.
- Examination of what amendments could be made to the Land Construction Act (MRL) and to the Building Code (RakMK)?
- Practical advice about spatial planning, including how to take energy supply and emissions into account at different stages.
- How to best integrate locally available RES with spatial planning.
- Relationships between different modes of energy and the local economy and ecology.
- Methodologies and software for calculating energy consumption and related emissions.
- Complementary construction in existing urban areas:
 - Is it needed?
 - Is it possible while maintaining existing cultural values?
 - How can it be energy efficient?
 - Dealing with different character areas: some already energy efficient, others not
 - How to deal with heritage areas
- Sustainable development in spatial planning in general and per subject
- What is meant by 'smart energy systems'?
- Energy systems under development for the future – what are they and how likely they are? Should we be prepared for them in spatial planning terms where the planning period ranges from 50 to 100 years?

2.3 Spain

The short courses in Spain were mainly converted to information sessions. The reason for this proceeding was the fear that a complete three days training would not have the desired effect of attracting participants to the long course but would in themselves satisfy basic information needs and reduce further involvement.

Therefore, only one afternoon workshop was organised in the Chamber of Architects headquarters in Barcelona with the participation of Arto Nuorkivi and different Catalan energy experts from public and private bodies (Energy Research Institute of Catalonia, Trama Tecno Ambiental, SaAS). The other events were quite short, focusing on the need and importance to tackle energy issues in urban planning in order to achieve the 20-20-20 goals, and giving an outline of the long course content.

Then, in 2012/2013, as it proved not possible to implement a long course due to lack of participants, a two-day short course was organised in Girona at the Chamber of Architect's request.

	Place	Date	Nº of attendees	Comments
1	Barcelona	13/04/11	Around 40	Afternoon workshop
2	Barcelona	20/07/11	26	Afternoon information session
3	Barcelona	14/09/11	28	Afternoon information session
4	Girona	21/09/11	7	Morning information session
5	Tarragona	28/09/11	4	Morning information session
6	Barcelona	05/10/11	17	Afternoon information session
7	Barcelona	19/09/12	11	Afternoon information session
8	Barcelona	19/12/12	7	Afternoon information session
9	Girona	11 + 13/02/13	12	Two days short course

Course objectives

Two types of event were delivered: information sessions and short courses. The objectives were quite distinct:

- The main objectives of the information sessions were to raise general awareness, to promote discussion among professionals, and to attract people to the long course
- The main objective of the final short course, by contrast, was to impart basic knowledge to the target audience, who had stated clearly their interest in the long course, but who couldn't afford the fee in times of economic recession.

Course attendees

As foreseen, the courses were attended by representatives from municipalities, practitioners and students, and young professionals looking to improve their competences. This was seen as

particularly important given the difficult economic times, especially for those engaged in construction and urban planning.

Course locations

Nine courses were delivered in Spain, with the majority (Table 4) taking place in Barcelona. These were a mix of the originally intended short courses and much shorter information sessions.

Problems and corrective actions

Concerning the information sessions, only those organised in Barcelona itself in 2011 attracted the expected minimum of around 20 participants. The two sessions organised in 2011 in Tarragona and Girona fell below expectations, and the one foreseen for the city of Lleida was cancelled due to lack of subscribers.

Nevertheless, in Girona, the few participants were very active and discussed different options to participate in the long course in Barcelona. The main obstacle was found to be the time schedule, being twice a week until 9.30pm, which made it impossible for them to return by public transport the same evening. On the other hand, it was obvious that there would not be enough participants to run the long course in Gerona.

As a consequence of this involvement, in winter 2012/2013, when it became obvious that there would be no long course running even in Barcelona due to the prolonged economic crisis especially in the building sector in Spain, a two-day short course was run in Girona. In this course, the maximum number of participants was limited to 16 people, to assure the interaction among teachers and technicians. The final number of participants was 12.

Changes to the original planned 3-day format

The short course delivered in Girona at the end of the project was conceived as a two-day course based on the experience of BRE concerning the short courses in UK, where two days seemed to be the maximum time delegates were able to be off from work. Two days seemed to be a good compromise that would still enable substantive discussion on energy and urban planning.

Achieving the objectives

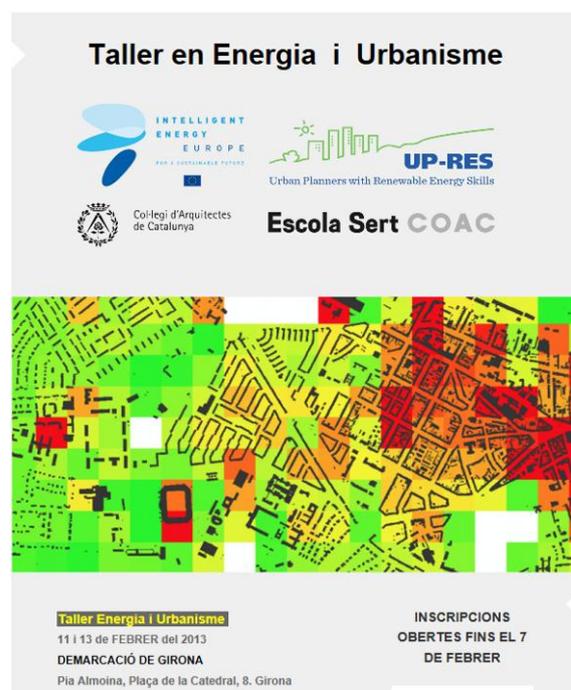
The courses were effective in achieving the main objective of imparting basic knowledge to delegates, raising awareness and stimulating discussion about energy and urban planning among public urban planners and practitioners. Nevertheless, some parts of the training could have been even more concrete and applied to local circumstances.

Marketing the courses

The information sessions and the short course were advertised through the Catalan Chamber of Architect's webpage and newsletter. Furthermore, for the final short course, a selected mailing was done directly by SaAS to 931 municipalities, 20 energy agencies, 35 urban planners that

participated in previous training on energy efficiency in buildings organised by the Catalan Federation of Municipalities, as well as to nearly 60 practitioners of diverse entities.

Mailshots were sent to more than 1000 addressees to announce the short course in Girona.



Delegate feedback

The feedback received about the short course delivered in February 2013 was mainly positive, reaching an average overall evaluation of 3.72/5 with a score of 3.65 for the interest in the sessions, of 3.30 for the content and 3.90 concerning the teacher's competence (see table below). Nine of the twelve participants returned questionnaires.

In a detailed view on the responses (Table 5) it seems that some of the participants didn't distinguish well in answering the questionnaire, giving very similar scores to the interest and the content. For example, it is quite probable that the dis-satisfaction with the teacher's competence in session 3 influenced the topic "interest in the session", even though this session was dedicated to sustainability in the urban context and therefore the core of the short course. On the other hand, the two very practical oriented sessions 4 and 5 on DHC and experiences with ESCOs in the municipal context were of high interest and presented in a way the participants liked, with basic calculations applied to real cases during the training.

Ironically, most participants would prefer a course of longer duration. They requested more details on:

- the consequences of issues relating to urban legislation
- developing specific policy material for promoting RES
- practical planning issues, including the urban space required for DHC
- small-scale RES examples that are easy to implement, for example in public buildings.

The main conclusion is that the short courses should be:

- longer than two days, perhaps four days spread over a one month period
- practically oriented
- emphasising even more the urban legislative context
- delivered locally across the country, as was done in UK.

The initiative already adopted by the Girona Province Government, is to subsidise by 50% the subscription costs of future modules of the long course for municipal agents. The next courses are already scheduled to take place from May to September 2013. This is regarded as an important step to achieve the objectives set for UPRES in Spain, to train a maximum number of public urban planners.

Table 5 Feedback from Spanish delegates

Session	Global	Interest in the session					Training content					Teachers competence				
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	2	1	1	3	4	4	1	1		4	5	1	1		5	5
	4	3	4	1	3	4	3	3	1	1	1	4	4	2	3	4
	4						0	4	4	3	4	4	4	4	4	4
	4	5	4	4	4	4	3	3	4	4	4	4	4	4	4	4
	4	4	3	2	4	4	4	4	2	4	4	4	3	2	4	4
	4	4	4	0	5	5	4	5	0	5	5	5	5	5	5	5
	3.5	5	4	5	5	5	3.5	3.5	1.5	4.5	4.5	4	4	1.5	5	5
	4	5	5	2	4	4	5	5	2	4	4	5	5	3	5	5
	4	4	3	2	5	4	4	4	2	5	4	4	4	2	5	4
Average	3.72	3.88	3.50	2.38	4.25	4.25	3.06	3.61	2.06	3.83	3.94	3.89	3.78	2.94	4.44	4.44
Global average					3.65					3.30						3.90

2.4 Germany

	Place	Date	Number of attendees	Comments
1	Dresden	21.-22.03.2011	27	8 lecturers
2	Frankfurt am Main	28.-29.03.2011	18	7 lecturers
3	Munich	21.-22.06.2011	36	11 lecturers
4	Hamburg	29.-30.08.2011	31	10 lecturers
5	Chemnitz	12.-13.09.2011	29	8 lecturers
6	Berlin	20.-21.10.2011	41	9 lecturers

Course locations

The courses were run during 2011 in six different locations across Germany as shown in Table 6.

Course attendees

The participants (Table 7) of the short courses included representatives from the following:

- Municipal authorities, e.g. local urban planning and development, local energy suppliers and municipal departments (environment, infrastructure)
- Planning organisations and consortiums
- Private and semi-public offices and companies dealing with urban planning, architecture, city development
- Regional and national energy suppliers
- Technical Universities and Universities of Applied Sciences
- Local authorities and municipalities.

Table 7

Place	Attendees from					Total
	Municipalities	Utilities	Universities/ Research	Architectural/ Planning	Other	
Dresden	7	7	4	3	6	27
Frankfurt a. M	5	6	4	0	3	18
Munich	11	9	9	0	7	36
Hamburg	5	10	10	0	6	31
Chemnitz	7	12	4	0	6	29
Berlin	25	5	2	0	9	41
Total	60	49	33	3	37	182
Percentage	33%	27%	18%	2%	20%	100%

Course objectives

The main objective of the short courses was to identify the content of the long term courses and to promote the pilot training. The idea was to secure interest among the attendees and to awaken their interest in this topic sufficiently to attract them to the long term courses.

Problems and corrective actions

While preparing the short courses, attracting the expected number of attendees proved a major challenge for two reasons:

- In most cases, the course fee was not regarded by employers as an eligible cost they were willing to reimburse. Consequently, most of the participants paid the course fee themselves.
- Two-day courses took place during the working period, therefore requiring leave of absence by the employer.

As a corrective action, the German team decided to offer six short courses instead of only three.

Changes to original planned 3-day format

In Germany, the short courses were run in a 2-day-format to obtain a higher number of attendees. Usually, it is easier to justify to the employer an absence of two instead of three days.

Achieving the objectives

The objective of the short course was to teach urban planners to consider the effects of their planning activities on energy and emissions. The German short courses set the foundation for rethinking urban planning and energy issues and lead to better communication between urban planners and utilities.

Marketing the courses

The short courses were announced by sending the flyer to all 444 members of AGFW. E-mails were sent with the flyer attached together with information about the short courses. These were sent to 450 municipalities and 195 contacts at universities and research institutions. In addition, printouts were handed out to interested stakeholders by the University of Augsburg and TU Munich.

Two articles to promote the short courses were published in the AGFW-newsletter in February 2011 and June 2011. This AGFW newsletter is distributed to all the members.

The newsletter articles and the flyers were presented at various events attended by the German partners.

Delegate feedback

The discussions during the course showed that, as a basic principle, existing processes and communication between municipalities and utilities must be better coordinated.

Currently, there is a significant dislocation between municipalities and utilities in the assessment of energy needs. However, it became apparent as the courses proceeded that both communities and utilities consider the integration of renewable energies of great importance for the future. It was also noticed that, at the moment, energy is only a small aspect in the education of urban planners. There is an urgent need to improve this.

The participants welcomed the opportunity to point out the everyday problems concerned with urban planning. As a result, a list of objectives was prepared, and these were implemented in the long courses. However, this also meant that hopes of a solution orientated discussion during the short courses were not fully realized and focused more on highlighting and detailing the problems.

Discussions arising during the short courses showed both utilities and especially the municipalities have training needs.

2.5 Hungary

	Place	Date	Number of attendees	Comments
1	Budapest	14/2 – 8/4 2011	22	
2	Debrecen	17/2 & 14/4 2011	35	
3	Debrecen	23/24 June 2011	27	
4	Budapest	8/9 Dec 2011	70	
5	Hódmezővásárhely	27 Sep 2012	24	

Course locations

In Hungary two courses were carried out at the University of Debrecen, and two were delivered in Budapest. A total of five courses (Table 8) were carried out with the fifth being in Hódmezővásárhely.

Course attendees

In general the audience consisted of mechanical engineers (with HVAC specialisation), architects, civil engineers and a few electrical engineers. Diploma students from all of the aforementioned fields appeared, too – they were obviously interested in the continuation of their academic training.

Delegates attending the first course in Budapest were mainly from the capital and its suburbs, representing utilities, district heating and gas companies, local authority staff members responsible for these services.

Of particular note at the next course, in Debrecen, is that the Technical University of Kosice (which is one of the potential successor universities delivering UP-RES material) cooperated in this course: two of their Hungarian speaking professors delivered lectures together with the hosts.

The third course also took place in Debrecen, in this case acknowledged with a modest credit by the Chamber of Architects.

At the fourth course in Budapest engineers and architects operating the building stock and energy system of the Hungarian Railway participated.

Staff members of local authorities participated at the “extra” short course in Hódmezővásárhely (in the second year of the project).

Course objectives

Except for the very first course run in Budapest the short courses have been considered as marketing and public relations events.

Even with this concept in mind short courses offered valuable professional information, related to the renewables, energy supply at an urban scale and the planned national regulation aiming at the fulfilment of nearly-zero energy building requirements.

Problems and corrective actions

Slides from BRE were used as a source and catalyst for the courses. However, the material has been rearranged, and combined with the teaching material of the host institute, adapting everything to the curricula of the Hungarian universities and to the actual interest of the target audience.

Changes to original planned 3-day format

The courses carried out in Hungary were integrated with existing courses from the outset. Therefore, having adapted the BRE accordingly they were tailored to the necessary time available.

For example, the first short course that was run in Budapest was delivered in cooperation with the Centre of Environmental Studies. This provided a good logistic background for addressing the energy issues in the course.

The course lasted for 10 days in total (distributed over a longer period of time) with 62 contact hours. Of this the University of Debrecen (UD) taught for 38 contact hours. Since the materials from BRE comprised roughly 20 contact hours this meant the course went into greater depth.

Achieving the objectives

The courses were in tune with the planned national regulation, and this proved to be a good appetiser because Debrecen University has been mandated by the Ministry of Interior to develop the required system, thus information from a reliable source was available.

Marketing the courses

Engineers and architects who intend to remain members of the related Chambers have to collect a given number of credits from attending occasional training events or conferences. The short courses represented an occasion for this: most of the participants were motivated by this obligation.