

COST

Domain Committee “Transport and Urban Development”

COST Action TU1104

Start Date 08/03/2012

Smart Energy Regions

MONITORING PROGRESS REPORT

Reporting Period: 25th May 2012 to 25th May 2013

This Report is presented to the relevant Domain Committee.
It contains three parts:

- I. Management Report** prepared by the COST Office/Grant Holder
- II. Scientific Report** prepared by the Chair of the Management Committee of the Action
- III. Previous versions of the Scientific Report; i.e., part II of past reporting periods**

The report is a “cumulative” report, i.e. it is updated annually and covers the entire period of the Action.

Confidentiality: the documents will be made available to the public via the COST Action web page except for chapter *II.D. Self evaluation*.

Based on the monitoring results, the COST Office will decide on the following year’s budget allocation.

Executive summary (max.250 words):

The Smart Energy Regions COST Action has been underway since March 2012. Membership of the Action has increased by 30% since May 2012 with continued further interest in the Action.

The Action has held 3 meetings during this first full year and 4 STSMs have taken place. One of the priorities of the Action is to address what a smart energy region is including the criteria for defining a region. The Action is currently identifying regions and sub-regions within each member country and collating a broad range of information about these regions in relation to energy together with case studies. This information will be published in an Action handbook in Spring 2014. The Action will co-host the 3rd International Exergy, Life Cycle Assessment, and Sustainability Conference in Greece in July 2013, which will generate proceedings relating to the Action.

The Action is highly interdisciplinary in nature and this is reflected in the members that are involved. Opportunities to develop this further are being investigated, through other COST Actions and organisations. The Action is developing well as a network and a number of proposals have been prepared by the team to date. This will be encouraged in the future. ESRs have been encouraged to participate in the Action, particularly through a Logo competition and STSMs. Opportunities for further involvement of ESRs are being investigated particularly through good practice in other Actions.

I. Management Report prepared by the COST Office/Grant Holder



I.A. COST Action Fact Sheet

Title

Smart Energy Regions “Smarter”

Contacts

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Details

Draft Mou: oc-2011-1-9464	Mou: 4188/11
Start of Action: 08/03/2012	Entry into force: 05/01/2012
End of Action: 08/03/2016	CSO approval date: 01/12/2011

Objectives

Low carbon technology is advancing. Government policy throughout the world needs to achieve considerable reductions in CO₂ emissions over a relatively short time scale to avoid catastrophic climate change. The built environment needs to play a major role in CO₂ reductions and needs to be addressed at a large scale. A broad set of issues have a significant impact on the successful adoption of new technologies and processes on a larger scale to create a low carbon built environment, including a lack of flexibility and shortage of skills in the supply chain, a misunderstanding of capital and operational costs, where technologies can be implemented, the impact on quality of life and policy and planning for the future. These need to be understood to enable technologies to be widely applicable and transferable within and between regions.

This Action will investigate the drivers and barriers that may impact on the long term creation of low carbon regions in Europe. It will identify what can be done to assist the large scale implementation of low carbon technologies and processes. The main focus will be on new and retrofit of existing buildings, their operation, embodied energy and potential for using low and zero energy supply.

Parties

Country	Date	Country	Date	Country	Date	Country	Date
Austria	14/02/2012	Belgium	16/07/2012	Bosnia and Herzegovina	29/03/2012	Bulgaria	09/12/2011
Denmark	19/01/2012	Finland	14/02/2012	Germany	17/01/2012	Greece	23/01/2012
Hungary	16/02/2012	Italy	09/01/2012	Latvia	26/04/2012	Lithuania	04/10/2012
Malta	14/12/2011	Netherlands	13/02/2012	Norway	09/01/2012	Poland	18/01/2012
Portugal	29/02/2012	Serbia	20/12/2011	Slovenia	05/01/2012	Spain	26/01/2012
Switzerland	24/01/2012	United Kingdom	07/12/2011	Ireland	30/04/2013		

Total: 23

Intentions to accept the MoU

Country	Date	Country	Date	Country	Date	Country	Date
Cyprus	N/A	The Former Yugoslav Republic of Macedonia	N/A				

Total: 2

Working Groups

Working Group 1 – Policy, industry innovation and case studies
 Working Group 2 – Skills, knowledge, training and supply chains
 Working Group 3 – Cost and value
 Working Group 4 – End User Engagement and Dissemination.

Website

www.smart-er.eu

I.B. Management Committee member list

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List of members and participation to Working Groups					
First Name	Last Name	WG membership			
		WG1	WG2	WG3	WG4
Peter	Ache	X			X
Rossano	Albatici	X	X		X
Fernando	Alves	X		X	X
Petra	Amparo Lopez	X		X	X
Roberta	Apostolska	X	X		X
Mark	Azzopardi				
Kiril	Barzev	X			X
Thomas	Berker	X		X	Co-leader
Ruben	Borg	X	X		X
Simon	Borg				
Demetri	Bouris	X	X		X
Vincent	Buhagiar	X		Leader	X
Vicente	Carabias	X	X		X
Helena	Corvacho	X	X		X

Torben	Dahl	x		x	x
Senatro	Di Leo	x		x	x
Elena	Dimitrova	x	x		x
Aleksandra	Djukic	x		x	x
Morten	Elle	x	x		x
Paris	Fokaides	x	x		x
Ioannis	Freris			x	
Philipp	Geyer	x			x
Jan	Gorski	x	x		x
Jean-Marie	Hauglustaine	x	x		x
Barbara	Havel	x		x	x
Jukka	Heinonen	x		x	x
Phillip John	Jones	x		x	x
Seppo	Junnila	x			x
Andrius	Jurelionis	x		x	x
Ingrid	Kaltenegger	x	x		x
Oliver	Kinnane	x			x
Christopher J.	Koroneos	x	x		x
Aleksandrs	Korjamins	x		x	x
Jonna M.	Krarup	x	x		x
Aleksandra	Krstic-Furundzic	x	x		x
Nadezda	Kunicina	x			x
Giuseppe	La Ferla	x	x		x
Werner	Lang	Leader	x		x
Gerald	Leindecker	x	x		x
Gudrun	Lettmayer	x	x		x
Ildikó	Molnár	x		x	x
Stéphane	Monfils	x			x
Evanthia	Nanaki	x	x		x
Akos	Nemcsics	x	x		x
Markku	Norvasuo	x			x
Antons	Patlins	x			x
Joanne	Patterson	x	x		Leader
Maj-Britt	Quitza	x			x
Cecília	Rocha	x		x	x
Sergio	Rodriguez Trejo				
Jaime	Roset Calzada	x	Leader		x
Dimitri	Rovas		x		
Adam	Rybka	x	x		x
Todorka	Samadzioska	x			x
Monica	Salvia	x		x	x
Michael	Schamiey	x			x
Lina	Seduikyte	x	x		x
Geralt	Siebert	x		x	x
Marjana	Sijanec Zavrl	x			x
Derek	Sinnott	x			x
Metka	Sitar	x	x		x

Jovan	Todorovic	x	x		x
Nicola	Tollin				
Luca	Urbani	Co-leader		x	x
Erwin	Van der Krabben	x			x
Fabrizio	Varriale	x	x		x
Sergio	Vega Sanchez				
René	Wansdronk	x		x	x
Annemie	Wyckmans	x	Co-leader		x
Anatolijs	Zabašta	x	x		x
Anastasija	Žiravecka	x			x



I.C. Overview activities and expenditure

(July 2012- June 2013)

Budget

Total Action Budget:

€156,569.33

Meetings

Meeting Type	Date	Place							Cost	Total
MC and WG meeting	19 and 20 /07/2013	Cardiff, UK								38, 296.55
MC and WG meeting	22 and 23 /11/2013	Barcelona, Spain								34,339.40
MC and WG meeting	11 and 12 /04/ 2013	Porto, Portugal								37,000*

STSM

Beneficiary	Date	Place							Cost	Total
Dr Sara Verones	01/10/2011 – 21/12/2012	Cambridge, UK								2,500
Dr Gerald Leindecker	29/10/2012 – 05/11/2012	Barcelona, Spain								1,020
Dr Antons Patlins	29/04/2013 – 28/05/2013	Kaunas, Lithuania								2,000*
Mr Tim Forman	26/05/2013 – 07/06/2013	Liege, Belgium								1,641*

General Support Grants

Beneficiary	Date								Cost	Total
										0

Schools

Title	Date	Place							Cost	Total
										0

Dissemination

Title	Date	Place							Cost	Total
Website development	01/08/2013	Cardiff							2500	2,500

**Action Total : 119,2
96.95**

*** final payments yet to be made.**

II. Scientific Report prepared by the Chair of the Management Committee of the Action, describing results achieved during the Action operation in this period, in no more than 3 pages (the report is “cumulative”). All items listed in Sections A, B, and C, below, must be addressed.

II.A. Innovative networking

- *Innovative knowledge resulting from COST networking through the Action. (Specific examples of Results vs. Objectives)*

One of the priorities of the Action to date is to address what a smart region is including the criteria for defining a region. Countries have presented national targets and initiatives in place to work towards a smarter energy region. The Action is currently identifying regions and sub-regions within each member country and collating a broad range of information about these regions in relation to energy. The Assembly of European Regions is being utilised as a potential source for the definition of a region. In the coming year members are then going to investigate the impact of the larger scale regions policies on a sub-regional scale or look at the impact of a specific regional scale energy initiative.

- *Significant scientific breakthroughs as part of the COST Action.*

Expected outputs from the Action include scientific publications, further European collaboration and a multidisciplinary understanding of transition to smart energy regions.

- *Tangible medium term socio-economic impacts achieved or expected.*

The Aims and objects of the Action are centred on enhancing skills, knowledge, training, cost and value associated with smart energy regions. The Action will enable transfer of information between members of good practice in these areas which will have social-economic impacts. For example, at the meeting in Porto, case studies were presented regarding a range of training schemes that are being run in member countries involving both craftspeople in the building sector and Further Education training schemes.

- *Spin off of new EC RTD Framework Programme proposals/projects.*

EU proposals

Portuguese partners are awaiting a response regarding a proposal submitted under PURE FP7-SSH-2013-2'Post – Carbon Urban Roadmap for Europe - Collaborative Project (CP-FP) Small or medium-scale focused research project' with UK as partners.

The SUSBUILD IEE proposal was submitted in May 2012. This proposal is led by Greece and includes other Action members. Its aim was to promote the adoption and application of sustainable practices at preselected public buildings across EU, to serve as prototypes for promoting and increasing awareness about environmental management and applications within EU member states. Unfortunately the proposal was unsuccessful.

A consortium of European, Egyptian and Jordanian universities prepared a project proposal for Tempus IV which aimed to establish a new diploma and masters program on sustainable design of buildings with a focus on environmental assessment methods. The programme will be primarily established and piloted in Egypt and Jordan with an underlying aspiration to expand and disseminate the programme to other countries. The project also aimed to provide professional training to equip building rating assessors with cutting edge knowledge and education supported by EU partner institutions from the Smart Energy Regions COST Action.

A Marie Curie research fellow has been secured at Cardiff who is working in the field of urban planning and issues related to unfinished built environment projects in Europe.

A China-EU proposal is to be submitted by Tianjin University on retrofitting buildings, in partnership with Cardiff University. This forms part of the Tianjin Central funded '111' project on which the Action Chair Professor Jones is an International 'Master Academic' advisor.

Proposal development

Austrian team members are developing a proposal with Netherlands and Finland and for the Urban Europe call.

The Action members are following Horizon 2020 and will prepare to submit proposals where appropriate. Eva Nanaki has been nominated as the representative for awareness of relevant programmes and programmes.

- *Spin off of new National Programme proposals/projects.*

Some examples of National proposals include a resubmission has been made to the Swiss State Secretariat for Education and Research for a research project "Towards Smart Energy Regions" project which proposes to explore Future Energy Systems at Regional Level submitted by ZHAW (Switzerland). This project wants to explore integrated transition approaches on the demand and supply side, evaluating the most promising elements from behaviour change programmes, business initiatives, policy strategies, measures, and technologies at regional level. Also the University of Ljubljana, Faculty of Civil Engineering team are taking part national research framework programme "Competitiveness of Slovenia 2006-2013": Analyses of the state of the art, development tensions and guidelines for the strategic spatial development of Slovenia (2010-2011). Other national research projects are taking place which are directly relevant to the Action. These will be presented to the Action members at meetings/conferences.

II.B. Inter-disciplinary networking

- *Additional knowledge obtained from working with other disciplines within the COST framework.*

A number of Action members are involved in other Actions (TU1205 - Building Integration of Solar Thermal Systems, TU0902 - Integrated assessment technologies to support the sustainable development of urban areas and TU0701 - Improving the Quality of the SubUrban Building Stock). This enables transfer of information and good practice between groups. A COST Action representative has been nominated to ensure that interaction with appropriate Actions take place, Professor Christopher Koroneos. The MC Chair and Vice Chair also attended the COST Strategic Workshop "Shaping Cities for the New Challenges" in Vienna in April which addressed the advancement of new methodologies, materials, technologies, strategies, practices and innovation, and challenging ideas to put in practice towards a better built and natural environment.

- *Evaluation of whether the level of inter-disciplinarity is sufficient to potentially provide scientific impacts.*

The Action has significant scientific involvement including architects, engineers and other built environment expertise. Transportation expertise is limited at present but this could be enhanced through links with other Actions. Presentations have also been made at each meeting from local experts. This has enhanced knowledge and learning between Action members and a broader network of experts, stimulating additional potential future collaborations.

- *Evaluation of whether the level of inter-disciplinarity is sufficient to potentially provide socio-economic impacts. (Specific examples)*

The Action is focussed around having socio-economic impact. Experts within and outside the existing current COST Actions will be identified where appropriate to ensure full representation. Presentations have also been made at each meeting from local experts. This has enhanced knowledge and learning between Action members and a broader network of experts, stimulating additional potential future collaborations.

II.C. New networking

- *Additional new members joining the Action during its life.*

51 members were involved in the Action on 25th May 2012. Twenty two new members have joined the action since from Belgium, Cyprus, Lithuania, Macedonia and Turkey together with additional new members from countries already involved.

- *Total number of individual participants involved in the Action work.*

73 participants from 25 European countries are involved in the Action. 35% of these are female. 20% of Action members are ESRs. We have a nominated ESR/Gender representative who will collate information on the representation over the duration of the Action.

- *Involvement of Early Stage Researchers in the Action, in particular with respect to STSMs, networking activities, and Training Schools. In addition, justification should be provided if less than 4 STSMs were carried out during the year.*

Four STSMs have taken place during the reporting period – 3 of these are by ESRs. A logo competition was launched in autumn 2012 to design of the Action logo. The contest was open to ESRs with an interest in energy and sustainability. ESRs were invited to provide a logo and a report on Smart Energy Regions. The winner and runner up were invited to attend and present their reports at the meeting in Barcelona.

Fernanda Acre Pacheco (Norway) has been successful with an application for a Conference Grant from the Domain Committee of Transport and Urban Development. She will receive almost €2000 to attend the CESB13 Central Europe Towards Sustainable Building from 26-28 June 2013 in Prague. Fernanda will present the paper 'Spatial Quality Indicators for Energy Efficiency renovation of residential building blocks'.

Fabrizio Varriale has been recruited by the Grant Holder Institution to undertake the core of the administration work associated with the Action on a part time basis. Fabrizio will utilise the rest of his time to undertake a PhD on a subject area directly related to the Action, which is currently being developed.

- *Involvement of researchers from outside of COST Countries. (Number of participants from non-COST Countries approved by the CSO. Give % of such participants from countries with reciprocal agreements. Specify their contribution)*

No researchers from outside COST Countries have been directly involved in the Action to date. Interest has been expressed from the University of Sydney, Australia which will be investigated. Strong links are being developed with a number of relevant institutions in China. Partnerships between the Action and the Earth Institute at Alma Mater Columbia University are also being investigated.

- *Advancement and promotion of scientific knowledge through publications and other outreach activities. (Number of publications and other outreach activities that resulted from COST networking through the Action. Complete list should be given in an annex)*

The members of the Action are currently developing material to be combined into an Action Handbook due to be published spring 2014. Each National team will contribute to the Handbook with a study on a region containing:

- Overview of the specific characteristics of a region: Population, economic situation, energy situation including domestic, commercial, industry, transport, etc.
- Definition of CO₂ targets and identification of policies, technical innovation and training requirements on how to achieve the targets with regard to energy demand and supply in building and mobility, including broader issues including such as planning, skills, supply chains and how this relates to European policies
- Case studies on how these are being achieved within the region: energy efficiency of buildings, energy supply through renewables and CHP, embedded energy, etc.

- *Activities and projects with COST network colleagues.*

Numerous activities have been actioned between the COST network colleagues including:

- 3rd International Exergy, Life Cycle Assessment and Sustainability Workshop & Symposium (ELCAS-3), organized by Greek partner, prof. Koroneos will take place on July 7th, 8th and 9th 2013. This will also generate proceedings as an output.
- A two day lecture visit has been undertaken at Rzeszow Polytechnic University by Jaime Roset from Barcelona as a result of the Action.

- *The capacity of the Action members to raise research funds.*

Synergies between the Action members are being developed. A number of proposals have been developed to date involving partnerships formed as a result of the Action. These will be encouraged throughout the Action.

II.D. Self evaluation

Indicate in no more than 1 page what, in the opinion of the MC, were the main successes, drawbacks (if any) and the key difficulties encountered (if any).

An excellent start has been made to the Action with a strong commitment by Action participants. A variety of disciplines and cultural backgrounds exist between members. Participants are keen to network and share of knowledge within an outside the arena of the Action. A joint understanding of national variations is being developed with good practice and national perspectives being exchanged. The priority is to confirm what the Action is aiming to achieve and in what format.

Members' commitment to the Action is proving to be strong driver of the Action with a genuine scientific curiosity on a broad and relevant theme. It is a strength of the Action that practice is central with involvement and development of an extended network of Stakeholders who have attended and presented at local meetings. The Action has been supported by good administration.

Not all EU countries are represented on the Action at present. Some effort will be made to identify appropriate institutions in countries that not involved together with some areas of expertise that are underrepresented. Institutions in France and Sweden have been identified. A lack of available national funding for related projects has been identified, this will be investigated further. Differences between EU countries in standards and understanding/translation of terms sometimes cause confusion during discussions. Clarification of key terms is to be made to ensure understanding across the group, a glossary of terms will be developed on the website, which can be challenged where appropriate.

The large number of members makes it impossible to identify dates for all members to attend all meetings. Therefore online communication networks need to be enhanced in order to stimulate contact between meetings this will also help to remedy the issue of a shortage of time at meetings for in depth discussions. Structure of the meetings will be reviewed in order for all members to have an input.

Year	Date	Location	Focus	Output
2013	July	ELCAS Conference Greece	Smart Energy Regions	Proceedings
2013	September	Plea Conference Munich	Smart Energy Regions	COST Papers
2013	November	MC/WG meeting Rome	WG1	Draft Handbook
2013	March/April	MC/WG meeting Zurich	WG1	Handbook
2014	Summer	?	Mid-term Action conference	Proceedings
2014	Spring	?	WG2 WG3	Handbook
2015		?	IMPACT	Dissemination
2016	March		Final Output	

Table of planned events and deliverables for Smart Energy Regions COST Action

III. Previous scientific report(s)

Part II of past periods' reports are to be found here.

REPORT 1 - 2011-2012

II.A. Innovative networking

- *Innovative knowledge resulting from COST networking through the Action.*

The Action has not held any meetings yet so have not exchanged any specific knowledge.

At the first Action meeting to be held in July 2012, each country will make a presentation stating the drivers and barriers in relation to smart energy regions with regards to policy, industrial innovation giving one or two case study examples. This information will be used to initiate the 24 month Status Report and will also allow for all countries to understand the position of each country.

- *Significant scientific breakthroughs as part of the COST Action.*

The Action has not held any meetings yet so have not achieved any significant scientific breakthroughs.

- *Tangible medium term socio-economic impacts achieved or expected.*

A workshop session is going to be held at the July 2012 meeting to discuss social, economic, environmental and technical measurable outputs that may be possible by the end of the Action, including how relevant information can be gathered to measure them.

- *Spin off of new EC RTD Framework Programme proposals/projects.*

The SUSBUILD IEE proposal was submitted in May 2012. This proposal is led by and includes some of the Action members and will promote the adoption and application of sustainable practices at preselected public buildings across EU, which will serve as prototypes for promoting and increasing awareness about environmental management and applications within EU member states.

- *Spin off of new National Programme proposals/projects.*

An application has been made to the Swiss State Secretariat for Education and Research for a research project involving three Swiss partners IBV Hüsler AG, ZHAW and HOSOYA SCHAEFER ARCHITECTS AG who are involved in the Action. These projects will look at Urban Development and Land use planning, mobility and transformation policies at a regional level.

II.B. Inter-disciplinary networking

- *Additional knowledge obtained from working with other disciplines within the COST framework.*

The Action has not held any meetings yet so have not exchanged any specific knowledge.

- *Evaluation of whether the level of inter-disciplinarity is sufficient to potentially provide **scientific impacts**.*

The Action has not held any meetings yet so have not exchanged any specific knowledge. However, significant interest has been expressed in the Action from a wide range of disciplines and types of stakeholder organisations across the EU. This will be collated and expanded where necessary to achieve Scientific impacts appropriate to the Action.

- *Evaluation of whether the level of inter-disciplinarity is sufficient to potentially provide **socio-economic impacts**.*

The Action has not held any meetings yet so have not exchanged any specific knowledge. However, significant interest has been expressed in the Action from a wide range of disciplines and types of stakeholder organisations across the EU. This will be collated and expanded where necessary to achieve the socio-economic impacts appropriate to the Action.

II.C. New networking

- *Additional new members joining the Action during its life.*

50% of the members of the Action were involved in the preparation of the proposal.

- *Total number of individual participants involved in the Action work.*

The total number of participants involved in the Action to date is 50. Further approaches have been made with regards to membership of the WGs which will be followed up appropriately. 33% of the members of female.

- *Involvement of Early Stage Researchers in the Action, in particular with respect to STSMs, networking activities, and Training Schools. In addition, justification should be provided if less than 4 STSMs were carried out during the year.*

As the Action has only just begun ESR involvement has not taken place.

- *Involvement of researchers from outside of COST Countries. (Number of participants from non-COST Countries approved by the CSO. Give % of such participants from countries with reciprocal agreements. Specify their contribution)*

No researchers from outside COST Countries have been involved to date.

- *Advancement and promotion of scientific knowledge through publications and other outreach activities. (Number of publications and other outreach activities that resulted from COST networking through the Action. Complete list should be given in an annex)*

This has not taken place due to the early stage of the Action.

- *Activities and projects with COST network colleagues.*

This has not taken place due to the early stage of the Action.

- *The capacity of the Action members to raise research funds.*

This will be assessed at the meeting in July.

II.D. Self evaluation

Indicate in no more than 1 page what, in the opinion of the MC, were the main successes, drawbacks (if any) and the key difficulties encountered (if any).

The Action has only held the kick off meeting in March 2012 so has yet to hold a full working meeting. This is planned for July 2012.

Those members of the Action who attended the meeting in March were very proactive and supportive of the Action and have contacted relevant organisations to inform them of how to become involved in the Action. The MC has developed significantly since the proposal was submitted and now involves 50% additional members. Many approaches have been made with regards to joining the WGs. A process of WG membership will be discussed at the July meeting to ensure that members are relevant, appropriate and are prepared to support the Action to achieve the outcomes expected.

It was agreed at the kick off meeting that clear and, where possible, measurable outputs from the Action will be identified in order to demonstrate its achievements fully.

III. Previous scientific report(s)

None.