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Co-ordination of Research Policies  
with the Western Balkan Countries



**Project number: PL 212029**

## **Report on each of the thematic priorities defined in the third phase of the identification and consultation process (Energy)**

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(1)	October 10, 2012	First version	Ulrike Kunze, Bastian Raue
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## Executive Summary

This Deliverable follows-up on Deliverables D2.10<sup>1</sup> and D2.12 (including update)<sup>2</sup> reporting on the thematic priorities defined in the first and second phases of the identification and consultation process from 2008 – 2011 (ICT, AgroFood, Health, Transport, Environment, Transport II and Social Sciences and Humanities).

Thus, D2.43 provides the results of the consultation process in the field of **energy research** accomplished in 2012. It was implemented in the frame of a major European Conference in April 2012 in Maastricht/The Netherlands. Around 20 energy experts and researchers from the WBC took part. The results achieved were a set of regional energy research priorities for the Western Balkan countries and possibilities of cooperation targeting the FP7 Energy calls published in July 2012.

The Regional Energy Research Priorities identified during the consultation session in the field of Energy are (no preference is given by the order):

- Integral management of river basins
- Bio gas production from waste
- Second generation bio-fuels
- Small hydro–grid connection, system integration, operation and control
- Geothermal heat-pumps in energy efficient buildings
- Zero energy buildings

Cross-Cutting Priorities identified are:

- Coordination of national R&D projects – regional Research & Development/Demonstration Fund according to Era-Net model
- [Regional Cooperation Council \(RCC\)](#) – [Western Balkans Investment Framework \(WBIF\)](#) coordination

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<sup>1</sup> <http://wbc-inco.net/object/document/7296>

<sup>2</sup> <http://wbc-inco.net/object/document/7950>

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# 1 Introduction

WBC-INCO.NET's Work Package 2 (Priority setting) aims at the identification of regional research priorities of common interest with and within the Western Balkan countries (WBC). A number of Tasks contribute to this aim, namely the

- development of a conceptual approach to the consultation process,
- screening of other FP7 projects identifying priorities,
- analysis of the national research priorities in the WBC,
- dialogue with the respective thematic Cooperation Directorates in DG RTDI,
- implementation of the consultation process, and
- reflection of the identified priorities by the civil society.

The following FP7 Themes were chosen for the consultation process in the project from 2008-2012: ICT, AgroFood, Health, Transport, Environment, Social Sciences and Humanities as well as Energy.

In order to identify the regional research priorities in the field of energy, a consultation session was organised in the frame of the European Energy Conference "E2C" held in Maastricht/The Netherlands from April 17 -20, 2012<sup>3</sup>.

The Conference E2C was chaired by Professor Harald Bolt, Research Centre Jülich/Germany and provided participants with a view and a vision on how the future of energy in Europe could look like. It was a forum to define the role of energy science and research in the transformation process towards the future sustainable European energy system. In the Conference, around 350 participants were registered.

E2C combined in its conference programme plenary keynote presentations on different energy topics with devoted symposia in specialised fields. Keynote lectures were given on overarching subjects of energy and associated climate research topics. Thematic symposia addressed more specific topics of the symposia.

WBC-INCO.NET participated in the Conference by supporting the participation of 18 energy researchers from the Western Balkan countries (see list of participants in Appendix A). Two side events were organised during the Conference. In the preparations, the task leading partners MoS-ME and the Work Package leading partners BMBF/DLR were supported by UNU-MERIT with the contribution by all the WBC partners. The latter organised the national consultation processes by nominating experts to take part in the consultation session and the Conference and to draft the background reports provided for the meeting. Furthermore, information on [wbc-inco.net](http://wbc-inco.net) was provided at an exhibition stand in close cooperation with partners from Work Package 5 (the Serbian MSTD) to showcase energy research excellence in the region.

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<sup>3</sup> <http://www.energy-conference.eu/>

## 2 Consultation Session in the field of Energy

WBC-INCO.NET contributed to the E2C Conference in Maastricht with 2 sessions within its WP 2:

- a public session (April 17, 2012) informing about **cooperation possibilities** with the region and research excellence (public session for all participants); the Energy NCP-Network C-Energy+ contributed to this session by presenting funding possibilities in the frame of the FP7 and the CIP-Programmes;
- a closed session (April 18, 2012) for the participants from the Western Balkan countries ("**Consultation session**") on the identification of regional research priorities as an input to regional specialisation and to strategy development.

The agendas as well as the list of participants of the closed session can be found in Appendix A.

In the preparatory phase of the two events, the WBC-INCO.NET Executive Steering Board and the project coordinator were informed and involved as necessary. This included some overall feedback and involvement in the planning of the Maastricht conference as well as discussions between the Work Package leader and the coordinator.

For the meetings, energy experts were nominated by the WBC project partners (mainly the Ministries in charge of Science/Innovation/Energy) and background reports on the energy S&T systems of the WBC were prepared by the nominated experts. The comprehensive reports are available at the project's website<sup>4</sup>. In these background reports, the national priorities in Energy research of the Western Balkan countries are presented. Table 1 gives an overview on the priorities on the basis of the country's readiness and on the country's future potential.

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<sup>4</sup> <http://wbc-inco.net/object/document/9828>

	<p align="center"><b>Priorities on the basis of the country's readiness</b></p>	<p align="center"><b>Priorities on the basis of the country's future potential</b></p>
<p><b>Albania</b></p>	<ul style="list-style-type: none"> <li>• Strengthening the international dimension of Albania to the European Research Area (ERA)</li> <li>• Improving the framework conditions for international S&amp;T cooperation</li> <li>• Widening the ERA and making it more open to the world, especially to our neighbours and key international partners.</li> <li>• Ensuring coherence of policies and complementarities of programmes by contributing to the EU's main policy objectives such as fighting climate change or securing energy supplies.</li> <li>• Fostering strategic S&amp;T cooperation with key third countries to guarantee a critical mass of resources.</li> <li>• Developing the attractiveness of Europe as a research partner.</li> <li>• Launching results-oriented partnerships on information society regulation.</li> </ul>	<ul style="list-style-type: none"> <li>• establish a strong voice for university energy research and education at the European level;</li> <li>• ensure that characteristic university attributes such as fundamental research and training, and collaborative activities with industry partners, are properly included in forthcoming EU energy activities in the next Research Framework Programme, entitled Horizon 2020;</li> <li>• facilitate competitive European university groupings to participate in the realisation of the Strategic Energy Technology Plan (SET-Plan) in cooperation with the European Energy Research Alliance;</li> <li>• bind more strongly the various disciplines ranging from natural sciences, engineering to social sciences and arts/humanities to best fulfill the needs of society in energy research;</li> <li>• speak for long term thinking in European research agendas and initiatives, with due consideration given to a balance between top-down and bottom-up research strategies;</li> <li>• to develop environmental technologies and eco-design to design products, services competitive with low environmental impact, if any, throughout their life cycle;</li> <li>• to invent models of buildings and sustainable cities by rethinking the architecture and planning and developing the technologies of energy storage.</li> <li>• The future carbon-free energy with a balance between energy research and research on renewable energy in order to preserve the environment;</li> <li>• enhance the whole plant, not just the edible portion in the new methods of producing biofuels in order to avoid harmful competition in the use of agricultural land; develop services and</li> </ul>



		technologies cities and sustainable energy, <ul style="list-style-type: none"> <li>• improve engine combustion vehicles and preparing the transition to the vehicles with low emitters of CO2</li> </ul>
<b>Bosnia and Herzegovina</b>	<ol style="list-style-type: none"> <li>1. Establishment of a functional legal framework in the field of energy on the state and entity levels in accordance with the <i>EU Acquis</i> - fulfilling obligations under the Treaty establishing the Energy Community: <ul style="list-style-type: none"> <li>• Energy Sector Development Strategy of Bosnia and Herzegovina</li> <li>• Law on Gas</li> <li>• Law on compulsory stocks of oil</li> </ul> </li> <li>2. Clean Development Mechanism</li> <li>3. Attracting investment to Bosnia and Herzegovina</li> </ol>	<ol style="list-style-type: none"> <li>1. Energy Efficiency</li> <li>2. Structural reforms</li> <li>3. Renewable Sources of Energy</li> <li>4. Modernisation of the Coal Sector</li> <li>5. Natural Gas Sector progress</li> <li>6. Oil Industry Sector Promotion</li> <li>7. Resolving open questions with neighbouring countries</li> </ol>
<b>Kosovo</b> <sup>5</sup>	<ol style="list-style-type: none"> <li>1. Energy security</li> <li>2. Renewable electricity generation</li> <li>3. Renewable fuel production</li> <li>4. Renewable for heating and cooling</li> <li>5. CO2 capture and storage technologies for zero emission power generation</li> <li>6. Clean coal technologies</li> <li>7. Smart energy networks</li> <li>8. Energy efficiency and energy storage</li> </ol>	

<sup>5</sup> This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.

<b>FYRof Macedonia</b>	<ol style="list-style-type: none"> <li>1. Knowledge tools for energy related policy making</li> <li>2. Flexible use of coal</li> <li>3. Energy efficiency</li> <li>4. Renewable energy sources</li> <li>5. Smart grids</li> </ol>	<ol style="list-style-type: none"> <li>1. Innovative R&amp;D addressing specific components or technologies</li> <li>2. Developing interconnections among national systems of network energies</li> </ol>
<b>Montenegro</b>	<ol style="list-style-type: none"> <li>1. Renewable electricity generation</li> <li>2. Innovative Integration of Renewable Energy Supply and Energy Efficiency in Large Buildings</li> <li>3. Renewables for Heating and Cooling</li> <li>4. Solar energy</li> </ol>	<ol style="list-style-type: none"> <li>1. Coal for cogeneration</li> <li>2. Fossil fuels from domestic sources</li> <li>3. Cogeneration and gas</li> <li>4. Energy efficiency in the building sector</li> </ol>
<b>Serbia</b>	<ol style="list-style-type: none"> <li>1. Energy security improvement</li> <li>2. Environmentally friendly Thermal Power Plants <ul style="list-style-type: none"> <li>• Co-combustion of selected renewable fuel SRF (selected industrial and municipal waste) and biomass in coal fired Thermal Power Plants</li> <li>• Energy efficiency and environmental impact improvement of the existing low quality coal fired TPP by co-combustion of pre-dried lignite</li> </ul> </li> <li>3. Sustainable renewable energy - Developing new technologies in using renewable energy sources and clean technologies with zero emission <ul style="list-style-type: none"> <li>• Small hydropower plants</li> <li>• Biofuels</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>1. Energy efficiency</li> <li>2. Renewable energy</li> <li>3. Smart grids and Information technologies implementation in energy sector</li> <li>4. Environmentally friendly Power Plants</li> <li>5. Energy storage systems</li> <li>6. Power generation in the low temperature range</li> </ol>

	<ul style="list-style-type: none"><li>• Renewables for heating and cooling</li></ul> <p>4. Increasing the efficiency of energy production, distribution and usage, with special focus on the efficiency of buildings</p> <ul style="list-style-type: none"><li>• Energy efficiency improvement in the manufacturing industry</li><li>• Energy Systems Optimization in Smart Cities</li><li>• Zero net energy building</li></ul> <p>5. Smart grids and Information technologies implementation in the energy sector</p>	
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**Table 1: Overview of the national priorities of Energy research in the Western Balkan countries**

WBC-INCO.NET also participated in the E2C exhibition by presenting energy research and innovation excellence from the region and the background reports on the energy S&T systems for the WBC. The exhibition was supported in the frame of WBC-INCO.NET's WP5.

In the closed consultation session on April 18, Regional Research Priorities of common interest for the Western Balkan Countries were agreed upon among the participants. The meeting was attended by national expert delegations from Albania, Bosnia and Herzegovina, the FYR of Macedonia, Kosovo\*, Montenegro and Serbia, as well as representatives of WBC-INCO.NET and from the C-Energy + project (network of Energy-NCPs). The specific interest and the strengths of the Western Balkan countries to the priorities were highlighted.

The Regional Research Priorities identified during the consultation session in the field of Energy are (no preference is given by the order):

- Integral management of river basins
- Bio gas production from waste
- Second generation bio-fuels
- Small hydro–grid connection, system integration, operation and control
- Geothermal heat-pumps in energy efficient buildings
- Zero energy buildings

Cross-Cutting Priorities are:

- Coordination of national R&D projects – regional R&DD Fund according to Era-Net model
- RCC – WBIF coordination

Furthermore, the participants of the meeting discussed projects ideas and possibilities of participation in the Energy calls that were included in the draft Work Programme and to be published in July 2012 by the European Commission in the frame of the FP7 Cooperation Programme. Five topics were identified and follow-up coordinators among the participants chosen to continue on possible consortium building and potential proposal submissions.

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### **3 Conclusions**

The regional research priorities in the field of Energy conclude the series of consultation sessions with identification of research priorities in ICT, AgroFood, Health, Transport, Environment, Social Sciences and Humanities, as well as Energy.

These findings, together with the background reports on the respective S&T systems in the Western Balkan countries are very helpful and important not only for the national priority setting and strategy building processes in the region. In this context, the Regional R&D strategy on Innovation for the Western Balkan countries plays also an important role. Furthermore, as the results and the regional research priorities are oriented along the FP7 Cooperation ThemesTopics, they can give valuable input for the drafting of future Work Programmes in European and other Programmes, such as Horizon 2020 and others.

## Appendix A: Agendas and List of participants

### 1) Agenda for the open info session (April 17, 2012)



#### European Energy Conference E2C Breakout Session – Energy Research Opportunities in cooperation with the Western Balkans

Time and Location:

Date: April 17, 2012

Time: 15.30-18.00

Location: Maastricht Exhibition and Conference Centre, the Netherlands; Breakout Room Brussels

Participants: Participants of the European Energy Conference E2C interested to cooperate in and with the Western Balkans and other countries

Purpose: To inform on research opportunities and programmes for researchers interested to cooperate in and with the Western Balkan region in the field of Energy and potential joint activities

- |               |   |
|---------------|---|
| 15.30 – 15.40 | Welcome<br><i>CHAIR: Alma Hasanovic (MCA, Bosnia and Herzegovina)</i>   |
| 15.40 – 15.50 | The WBC-INCO.NET project<br><i>By Ulrike Kunze (Work Package leader, PT-DLR, Germany)</i>   |
| 15.50 – 16.20 | Energy Excellence in the Western Balkans – an overview<br><i>By Nikola Vujosevic (DDSME, Montenegro)</i>                                |
| 16.20 – 16.50 | Energy Research in FP 7 and Horizon 2020 – programmes and eligibility for the WBC<br><i>By Piotr Swiatek (NCP Energy, PTJ, Germany)</i> |
| 16.50 – 17.00 | European Network of Energy NCPs: C-Energy+<br><i>By Kasia Sobotka (NCP Research Programmes of the EU, Poland)</i>                       |
| 17.00 – 17.15 | CIP/IEE<br><i>By Claudia Häfner (NCP IEE, PTJ, Germany)</i>   |
| 17.15 – 18.00 | Q&A Session, Closing<br><i>By Chair: Alma Hasanovic (MCA, Bosnia and Herzegovina)</i>   |

## 2) Agenda for the closed consultation session (April 18, 2012)



### European Energy Conference E2C Breakout Session – Energy Research in the Western Balkans

Time and Location:

Date: April 18, 2012

Time: 14.00-18.00

Location: Maastricht Exhibition and Conference Centre (MECC), *the Netherlands*; WS Room Copenhagen

Participants: Invited experts for the European Energy Conference E2C from the Western Balkan Countries

Purpose: To discuss priorities of the region in the field of Energy Research and potential joint activities

- |               |   |
|---------------|---|
| 14.00 – 14.05 | Welcome<br><i>CHAIR: René Wintjes, UNU-MERIT, The Netherlands</i>   |
| 14.05 – 14.15 | The WBC-INCO.NET project and thematic activities on priority setting;<br><i>By Ulrike Kunze (Work Package leader, PT-DLR, Germany)</i>                                    |
| 14.15 – 14.30 | Tour de Table of Participants   |
| 14.30 – 15.15 | Energy – overview on the national background reports<br><i>By Nikola Vujosevic (DDSME, Montenegro)</i>  |
| 15.15 – 15.30 | Introduction to priority setting procedure<br><i>By Chair and Ulrike Kunze (Work Package leader, PT-DLR, Germany)</i><br>Q&A  |
| 15.30 – 16.00 | Coffee break & Conference Poster session  |
| 16.00 – 18.00 | Presentations by sub-groups and moderated discussion<br><i>By Chair: René Wintjes, UNU-MERIT, The Netherlands and Ulrike Kunze (Work Package leader, PT-DLR, Germany)</i> |
| 18.00         | Closure   |
| 20.30         | Working Dinner<br>Venue: Restaurant in Hotel Schaepekens, Valkenburg  |

### 3) List of participants in the closed consultation session (April 18, 2012)

#### ALBANIA

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\* This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.



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