

Questionnaire for preparation of the national background report

This questionnaire aims at producing an inventory of research structures, current and future R&D priorities, and policies for cooperation between Western Balkan Countries in the field of R&D in the domain of *Energy*.
Please use data of the closest year available.

Theme: Energy

Country name: Albania

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Section A: Main R&D resources in the field of Energy

In this section please provide data necessary for identification of main actors.

A 1. List of institutions / organisations: main RESEARCH PERFORMERS in the PUBLIC sector in the S&T field of Energy (*such as national universities, government laboratories, institutes etc.*):

	Name	Postal address	Web-site
1.	National Agency of Natural Resources	Blloku "Vasil Shanto" Tirana, Albania	www.akbn.gov.al
2.	Albania Geological Survey of Albania	Rruga Kavajes, Nr.153, Tirana, Albania	www.gsa.gov.al
3.	Faculty of Geology and Mining/ Dept. Energy Resources	Rr. Elbasanit 100 Tirana, Albania	http://www.enres-tur.org
4.	Faculty of Electrical Engineering	Sheshi Nene Tereza, nr 4, Tirana, Albania	http://www.fie-dsef.net/
5.	Faculty of Maths and Physics Engineering	Sheshi Nene Tereza, nr 4, Tirana, Albania	http://www.fim.edu.al/
6.	Institute of Geosciences, Energy, Water and Environment (IGJEUM)	Rr. M. Gjollësha 52, Tirana, Albania	http://www.geo.edu.al/
7.	Polytechnic University of Tirana	Sheshi Nene Tereza, nr 4, Tirana. Albania	www.upt.al
8.	Faculty of Natural Science/Center of Nuclear Physics	Sheshi Nene Tereza, nr 4, Tirana, Albania	www.unitir.edu.al
9.	Faculty of Agriculture And Environmental	Kamez, Center, Tirana, Albania	www.ubt.edu.al

A 2. List of institutions / organisations: main RESEARCH PERFORMERS in the PRIVATE sector in the S&T field of Energy (*such as national universities, government laboratories, institutes etc.*):

	Name	Postal address	Web-site
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1.	Center for Efficiency Energy	Bulevardi "Gjergj Fishta", No. 10, P.O.Box: 2426, Tirana, ALBANIA	http://www.eec.org.al/
2.	Co-PLAN	Universiteti POLIS Rr. "Bylis" 12, Tirana, Albania	http://www.co-plan.org/
3.	POLIS University	Universiteti POLIS Rr. "Bylis" 12, Tirana, Albania	www.universitetipolis.edu.al/
4.	Harry Fultz Institute in Tirana	Rr "Mine Peza", Tirana, Albania	www.harryfultz.edu.al
5.	Albanian University	Rr. Kavajes, Tirana, Albania	http://www.albanianuniversity.al/
6.	EPOKA University	Rr. Tiranë-Rinas, Km.12, Tirana, Albania	http://www.epoka.edu.al/
7.	Albanian Energy Association (AEA)	P.O. Box: 2424/1, Tirana, Albania	http://aea-al.org
8.	Tirana European University	Bulevardi "Gjergj Fishta", Nd.70, H.1, Njësia Bashkiake Nr.7, Kodi Postar 1023	http://www.uet.edu.al
9.			
10.			
11.			
12.			

A 3. Which organisations are responsible for financing R&D in the field of Energy?

	Name	Web-site	Financing R&D– Year 2010: Total amount in national currency (000)	Financing R&D– Year 2010: Total amount in EUR (000)
1	Ministry of Economy Trade and Energy	www.mete.gov.al		3000
2	Ministry of Education and Science	http://www.mash.gov.al		12000
3	Ministry of Integration	http://www.mie.gov.al/		500
4	National Agency of Natural Resources	www.akbn.gov.al		400
5	Albania Geological Survey	www.gsa.gov.al		600
6	Institute of Geosciences, Energy, Water and Environment	http://www.geo.edu.al		300
7	Agency for Research, Technology and Innovation (ARTI)	http://www.akti.gov.al		300
TOTAL::				17100

A 4. How is research performed? (please indicate all that apply)

	Lead participating body (please use numbers from question A 3)	Other relevant bodies (please use numbers from question A 3)
In own institutions	Yes	

Published calls for tenders, open to all researchers		
Restricted tenders to preferred suppliers		
Co-funding with other national bodies	Yes	
Co-funding with other countries		
Other approaches – please fill in: _____		
Other approaches – please fill in: _____		
Is support restricted to national bodies (Y / N)		

A 5. R&D capacity* in S&T field: ENERGY

	1990	2005	2010	2015
Total number of research organizations	34	20	16	24
Of which universities	10	10	13	17
Of which public research organizations	24	6	3	7
Of which private research organizations	0	4	3	10
Number of PhD students graduated	15	13	29	36
Total number of R&D personnel	35	49	80	85
Percentage of women in the total number of R&D personnel	23	20	25	25
Total number of employees on a Full-Time-Equivalent (FTE) basis	7	12	22	23
Total number of researchers	15	14	25	30
Percentage of women in the total number of researchers	13	21	20	20
Total number of researchers on a FTE basis	3	4	7	10
Number of researchers with Ph.D. degree or higher	15	14	22	25
Number of researchers with Ph.D. degree or higher on a FTE basis	6	5	9	11
Number of researchers under the age of 35	3	1	4	6
Number of researchers under the age of 35 on a FTE basis	3	1	3	5

* Please use OECD - Frascati Manual definitions if possible.

A 6. Research infrastructure in S&T field of Energy:

(a) Please assess the physical research infrastructure (without office equipment)

The R&D institutions in general have an internationally competitive research infrastructure and are able to conduct top research in cutting-edge research topics	<input checked="" type="checkbox"/> <input type="checkbox"/>
The R&D institutions in general have top research infrastructure, the infrastructure enables regular international research co-operation but are not competitive if compared with the 'best in this research field'	<input type="checkbox"/>
The R&D institutions in general have good quality research infrastructure, probably one of the most up-to-date in the country, but are not good enough to join in international research on a regular basis	<input type="checkbox"/>
The R&D institutions in general have a rather obsolete research infrastructure if compared with international organisations and this is an obstacle to international research co-operation	<input checked="" type="checkbox"/> <input type="checkbox"/>
The R&D institutions in general have a rather obsolete research infrastructure and it is an obstacle to more domestic contracts	<input type="checkbox"/>
The R&D institutions in general have no substantial infrastructure, but they have access to it and can participate in top research both nationally and internationally	<input type="checkbox"/>

(b) Please indicate most important physical research infrastructure in S&T field of [ENERGY]:

(c)

<ol style="list-style-type: none"> 1. Lab. Solar Energy, 2. Lab. of Solar Photovoltaic, 3. Lab. of Analysis of Dynamics of Electrical Systems , 3. Qualities control of fuels, 4. Lab. of Geothermal Energy, 5. Lab. of Thermal Energy, 6. Lab. of Technology of Energy,

A 7. Large and/or National R&D projects in S&T field of Energy (Please provide a list of large national R&D projects in S&T field in annex of this report):

	ongoing /started in 2010	completed in 2010
Number of large R&D projects**	12	10
Of which: the number of projects in collaboration with industry		
the number of projects in which the national organisation co-ordinates	10	10
the number of EU FP projects in which national institutions participate	1	
the number of EU FP projects in which national institutions coordinate	1	
Number of national R&D projects***	8	8
Of which: the number of projects in collaboration with industry	8	8

** the total project budget is above EUR 100 thousand and the national institutions' share is at least EUR 20 thousand

*** projects funded in some proportion (10-100%) by the national agency / ministry

A 8. Source of financing of R&D activities in S&T field of Energy:

	Year 2010– Share in %:
a) Private companies?	10
b) International sources (such as the EU, UN, OECD, NATO etc.)?	20
c) Not competitive* government financing?	
d) Competitive* government financing?	30
e) Other sources (foundations, non-profit organisations, etc.)?	40

*Projects won after competitive bidding procedures – so that the organisation can actually lose the funding targeted at the end of the procedure – count as source on a competitive basis. If the organisation participates in a money-allocation mechanism so that the money cannot be lost (but e.g. 'only' reduced), it counts as source on a non-competitive basis of research funding even if the procedure itself is called 'competitive bidding'.

Section B: Qualitative assessment of the S&T field

In this section please provide comprehensive description of the following issues:

B 1. Current situation, priorities and co-operation in S&T field: ENERGY

B 1.1 Current situation:

a) What are the main national development policy priorities?

Albania is working for a reliable and sustainable energy sector, development of which shall be based on using all energy options in order to meet own energy demand and to create added value for Albania citizens, in alignment with principles of environmental, economic and social responsibility.

The resource: this may vary widely and be more difficult to assess in certain environments, climate change may change the resource in the future;

The technology: in some cases, this is mature and needs to be made more reliable or more cost effective, but in other cases, it is not yet proven and requires further development;

The interaction with the grid: how each form of generation may interact with the electricity network is critical if large penetrations of renewable energy are to be realised.

b) What are the main R&D priorities?

- Efficient and optimal use of energy by ensuring its lowest possible impact on the environment, which could render the energy sector a supporting sector for the sustainable development of all other economic and social sectors;
 - Creation of an effective regulatory and institutional framework in line with EU standards and pursuant to the international agreements signed by Albania;
 - Continuation of the restructuring of the Albanian energy sector, based on market economy principles and on the development of a contemporary energy policy, as well as on the complete restructuring of public energy companies, in view of their rapid and effective privatization;
 - Energy system orientation towards the consumer and the optimization of the energy supply based on the planned use of energy at a low cost and minimum impact on the environment;
 - Further liberalization of the market of oil products and the improvement of the state's regulatory role in this regard;
 - Encouragement of the use of renewable energy sources (solar, small hydro power plants (HPP), wind and biomass) to ensure the maximum use of local energy sources;
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c) How would you put identified R&D priorities in EU research topics?

- Smart, sustainable and inclusive growth of European Economy.
 - Convergence and closer coordination of Framework Programme (FP),
 - Competitiveness and Innovation Programme (CIP), European Institute for
 - Innovation (EIT) and other relevant European initiatives.
 - Establishment of coherent set of funding instruments (from basic research to technology, pilot lines, products, manufacturing and market).
 - Focus of R&D objectives on major societal challenges; European industry needs; market requirements; and strengthening the science base of ERA.
 - In the CSF, the Key Enabling Technologies (KETs) are recognised as a crucial factor in increasing the competitiveness and innovation capabilities of Europe.
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B 1.2 Future priorities:

Describe how your future R&D priorities are selected and priorities agreed (e.g. foresight)? Are these driven by national policy priorities?

Strategic governance of research policies requires a range of skills, capabilities and organisations. At a minimum, the research policy and funding system need to be able to do the following:

- recognise the strengths and weaknesses of the system (policy intelligence),
 - define the focus and topic of political action (agenda setting),
 - ensure co-ordination of activities beyond the research policy field (horizontal linkages to other policy fields),
 - implement policies cost-effectively,
 - learn from past experience (evaluation) or good practice elsewhere,
 - make adjustments to the whole policy cycle.
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- a) Over the next 10 years, what will be the main R&D policy issues in this S&T field?
- Key Enabling Technologies Enabling Technologies are research & development-intensive
 - Key Enabling Technologies Enabling Technologies are capital-intensive
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- Key Enabling Technologies require a highly-skilled work force
- Key Enabling Technologies are subjected to rapid innovation cycle
- strategic and operational management of research and technological development (RTD) programs
- systems and methods for carrying out the selection, monitoring and evaluation of such programs and of projects funded
- techniques for appraising and accrediting of management and activities carried out by research and technology organisations (public, academic and potentially private), which are the direct beneficiaries of the programs.

B 1.3 What national policy and R&D priorities should be the subject for establishment of specific co-operation with other Western Balkan Countries?

Science, technology and innovation (STI) are clearly recognised as fundamental factors in a knowledge-driven economy and are important at all stages of development, albeit in different forms or modes. The capacities to undertake scientific and applied industrial research, to transfer them, to adapt and assimilate new technologies into economic structures and diffuse them into society, and to creatively develop new products and services using technologies (product and service innovation), as well as through marketing, design and organizational change (non-technological innovation), are fundamental to national competitiveness. The European Union (EU), which Albania aspires to join, has set clear objectives related to research and innovation as part of its 'Lisbon Strategy': to make the EU the most competitive economy in the world. Albania, like other Western Balkan candidate and associated countries, has lagged behind such developments due to the need to focus on laying the foundations for growth (through education, legal frameworks, alleviating poverty, etc.). However, the time has come to invest more in creating, diffusing and applying knowledge if Albania is to meet its long-term development goals.

- Proposes commonly accepted R&D priorities for EU-Western Balkan cooperation in the FP7 context that reflect the actual socio-economic needs and R&D capabilities of the Western Balkan countries. Moreover, it correlates/maps these priorities to FP7 ICT challenges.
- Identifies key problems and barriers faced by ICT R&D actors in the Western Balkan countries and proposes concrete recommendations for Western Balkan countries' decision-makers in order to address/minimise these.
- Makes specific recommendations for EU decision-makers which if implemented could facilitate the further integration of the Western Balkan region in the European Research Programmes

B 1.4 It is hoped that this exercise will identify areas for future collaboration and R&D co-operation in this S&T field, probably leading to a possible WBC R&D co-operation proposals under FP7. These projects foresee four levels of co-operation. They range from:

- a) The minimum – exchange of information and results;
- b) Systematic exchange and development of complementary programmes;
- c) Development of common approaches to agreed R&D priorities;
- d) The maximum – full joint approaches, common programmes and pooled funds with open access to researchers from participating countries.

So, with this in mind, what levels of co-operative actions would your country be able to support in the future in this S&T field?

The international dimension is crucial in order to rapidly integrate into the national research system the principles of excellence and competence in STI that enable access to international co-operation and funding in this field. Albania has already experience in international cooperation in the broader fields of socio-economic development and higher education, through, e.g., EU

CARDS, Tempus Higher Education, World Bank support for Higher Education, an education development loan via the European Investment Bank's Innovation 2010 initiative, and multilateral cooperation with the United Nations (UN) family agencies (UNECE, UNESCO, UNIDO, and UNDP). Co-operation in the specific field of STI is as yet more limited, though a number of bilateral research co-operation agreements are important symbolically if not financially in creating the basis for exchange and partnerships. Full participation in the EU's 7th Framework Programme for R&D (since 2008) is a first step in the gradual integration into the European Research Area (ERA) and opens up the prospect of additional funding flowing into the research system in the medium term. Moreover, some other international organisations, such as UNESCO (support for R&D statistics and science policy expertise) and the World Bank, currently through its Higher Education Loan, are also providing support. The potential for sourcing future support for implementing the strategy through the EU's Instrument for Pre-Accession (IPA) will be examined and optimised. This strategy seeks to provide a framework through which the multilateral donors' forum and bilateral cooperation can contribute in a structured manner to the strengthening of Albania's R&D capacities.

B 1.5 A suggestion is to have a high level meeting once or twice a year; where WBC could decide upon themes on which to co-operate. This may lead to a proposal for a project or other forms of co-operation. Would your country be willing to participate in a high level meeting with other WBC to decide upon these themes?

Yes

Thank you very much for your effort!