



ENERGY COOPERATION BETWEEN THE EU, THE LITTORAL STATES OF THE BLACK & CASPIAN SEAS AND THEIR NEIGHBOURING COUNTRIES



## **REPORT ON THE STUDY TOUR ON BIO-ENERGY**

*by Component C of the New ITS Project*

**16-18 October 2012, Slovakia**

**“INOGATE Technical Secretariat & Integrated Programme in  
support of the Baku Initiative and the Eastern Partnership energy  
objectives”**

**Contract No 2011/278827**

**A project within the INOGATE programme**

**Implemented by:**

Ramboll Denmark A/S (lead partner)  
EIR Development Partners Ltd.  
The British Standards Institution  
LDK Consultants S.A.  
MVV decon GmbH  
ICF International  
Statistics Denmark  
Energy Institute Hrvoje Požar

**December 2012**

## Table of contents

Table of contents .....	ii
1. Introduction .....	1
2. Preparation for the Event .....	2
3. Implementation of the Event.....	2
3.1 The event.....	2
3.2 The participants.....	5
4. Evaluation of the Event.....	7
4.1 General knowledge and specific skills.....	7
4.2 Objectives.....	10
4.3 Event organisation.....	11
5. Conclusions.....	12
6. Annexes.....	14
6.1 List of participants.....	14
6.2 Agenda .....	14
6.3 Evaluation questionnaires .....	14
6.4 Photos.....	14
6.5 Presentations .....	14

## 1. Introduction

This report examines the bio-energy study tour implemented under the EU funded project “INOGATE Technical Secretariat & Integrated Programme in support of the Baku Initiative and the Eastern Partnership energy objectives”. The study tour took place in Banská Bystrica in central Slovakia from October 16 to 18. The study tour was linked with a conference on sustainable use of natural energy resources, covering a range of topics including biomass production and its efficient use, bio-energy sources and facilities from the viewpoint of environmental protection, biofuels as an alternative for the municipal energy sector and success stories of bio-energy projects. The INOGATE delegation focused on the bio-energy topics. The conference gathered energy producers, suppliers and consumers, energy managers and entrepreneurs, energy service companies, state regional and municipal authorities, owners and administrators of industry, NGOs and research institutes. In addition, the INOGATE participants had guided plant tours of two operating bio-energy installations – a large biogas plant on a farm that cogenerates electricity and heat, and a biomass district combined heat & power (CHP) plant.

*ITS participants  
with conference  
co-organisers*



The main objectives of the bio-energy study tour were

- Decision making - to equip participants with improved knowledge and skills for making better investment decisions in the area of bio-energy;
- Best practice - to facilitate transfer of best practices on bio-energy, including biofuels, biomass production and its efficient use to the study tour participants;
- Operations - to improve capacity of the participants to develop and to carry out effective and profitable operations in the area of bio-energy;
- Actual demonstrations- to promote effective approaches and systems for bio-energy including demonstration of working examples.

## **2. Preparation for the Event**

The ITS project organised the bio-energy study tour in order to address the interest of stakeholders in PCs in this area.

The conference on sustainable use of energy resources was a good opportunity to familiarise the participants with some of the best practices in the field of bio-energy, show them concrete activities and allow them to network with their peers from other countries. INOGATE was the co-organiser of the conference. During preparation of the study tour, the ITS experts worked closely with the lead co-organiser of the conference to ensure effective participation of the INOGATE delegation.

In order to recruit candidates for participation in the study tour, the ITS project conducted a selection process. Based on the applications received from 6 PCs, 21 participants were invited to take part in the study tour. The ITS experts liaised closely with the invited participants during the preparatory stage of the study tour to make necessary arrangements.

## **3. Implementation of the Event**

### ***3.1 The event***

The study tour took place on 16-18 October 2012 in Banská Bystrica, Slovakia. The event was effectively implemented. All but three invited participants came to Banská Bystrica. The participants were relevant specialists of the organisations and companies dealing with SE issues in PCs.

The conference on sustainable use of natural energy resources co-organised by INOGATE gathered energy professionals who presented and discussed options and experiences for a better and more efficient use of energy to foster sustainable development. The 3-day programme included a plenary session and several dedicated sessions. The plenary covered more general issues of sustainable energy followed by more focused sessions on bio-energy, solar energy, energy and environmental issues,

energy efficiency and energy intensity. For the thematic sessions, the INOGATE delegation participated in the bio-energy related sessions. The presentations covered issues such as biomass plantations and production, economic and ecological analysis of biomass, biomass technologies, experiences and opportunities for international cooperation on the example of Germany, construction and operation of heating plant, development of wood pellets and their use in Slovakia, development of biogas plants, quality of biogas, use of biofuel in public transport, biomass and municipal waste, biomass and biofuel projects and other, The ITS experts were among presenters of the conference and made presentations on OECD carbon reduction plan and the new ITS project.



*Part of INOGATE delegates at the conference in Banska Bystrica*

During the conference, the INOGATE participants had several networking opportunities. This was particularly important for establishing contacts with peers from other participating countries including Slovakia, the Czech Republic, Poland, Germany, sharing experiences and learning more about the tendencies and some of the best practices in the EU in the area of bio-energy.



*Participants from Georgia and Ukraine during networking*



At the conference, a number of companies organised stands exhibiting their products so that the conference participants could familiarise themselves with the products as well as ask some questions.



*Participant from AZ  
having discussion  
with conference  
participants*

Different information materials were made available for the participants during the conference. This included brochures, leaflets, flyers etc. Over 400 INOGATE information brochures were also distributed among the participants. The INOGATE participants received access to conference proceedings electronically after the completion of the event.

In addition, the INOGATE delegation had two plant tours. The plant visits helped to familiarise the participants with concrete, implemented, bio-energy projects and to find out about challenges and successes of operating such bio-energy facilities. One of the sites was a district heating plant in Banska Bystrica with 8 MW thermal capacity, using wood chips and dendromass for biofuel. The INOGATE participants were able to see the operating cycle of the plant and receive answers to their specific questions. During the second plant tour, the participants visited a biogas cogeneration plant using cow manure as input. The plant outputs are electricity, hot water for domestic use and heat. The walking tour around the plant was followed by a roundtable between the INOGATE delegation and the plant management. The management of the plant shared information

about their business model and operations and answered questions from the INOGATE participants.



*Plant tours during the study visit  
in Banská Bystrica, Slovakia*

### 3.2 The participants

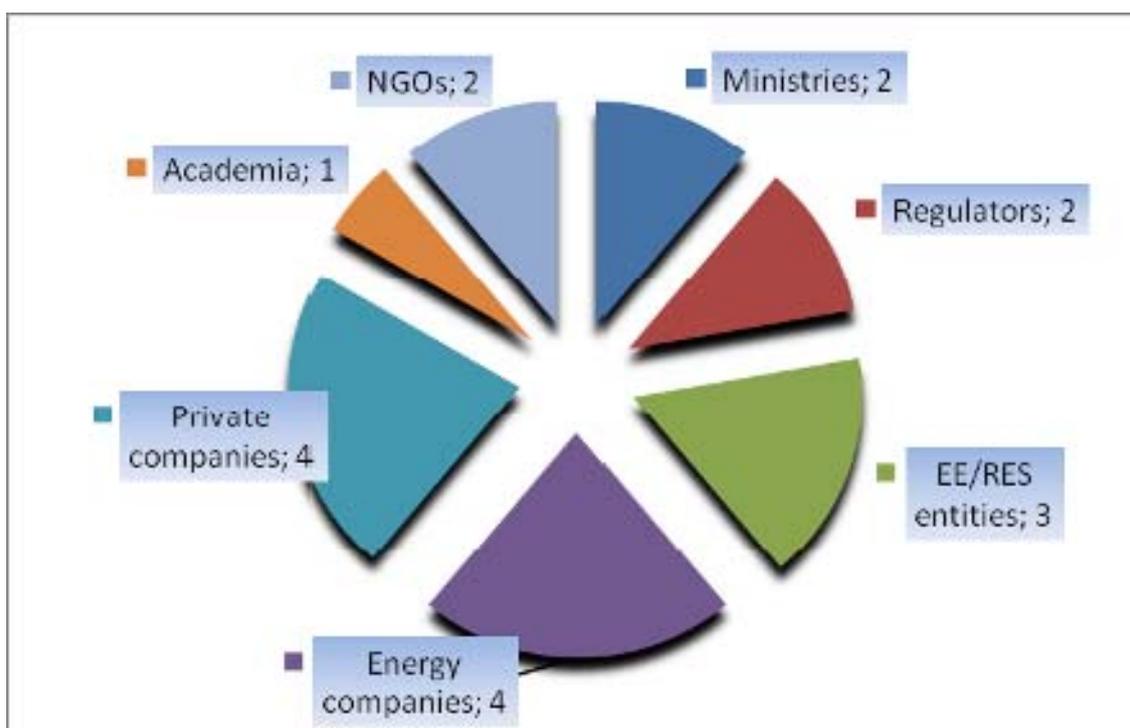
ITS experts received a total of 40 applications or expressions of interest from the 6 PCs to participate in the study tour. The questionnaire used for recruitment of candidates is provided in Appendix 1. Based on evaluation of the information received, ITS experts invited 21 participants from PCs. In the end, 18 actually attended.

PCs	Participants planned	Participants actually invited	Participants actually attending
Armenia	1	2	1
Azerbaijan	2	3	3
Belarus	3	3	2
Georgia	1	1	1
Moldova	2	6	6
Ukraine	4	6	5
<b>Total</b>	<b>13</b>	<b>21</b>	<b>18</b>

Unanticipated co-funding of expenses by a majority of participants allowed for a 50% increase in participation as well as savings in the planned budget. The New ITS Project will aim to pursue this strategy of cost sharing for its future capacity building events, also. The table below shows cost contribution of participants in this Slovakian bio-energy study tour. In some cases, choice of travel arrangements allowed further reduction to the budget, e.g., travel from Belarus by car instead of by air.

PC	Type of cost self-financed	Number of participants with cost sharing
AZ	Travel, accommodation, per diem	1
MD	Travel, accommodation, per diem	2
MD	Travel	4
UA	Travel	4

Appendix 2 shows the list of participants. The graph below shows the group's composition. Fig. 3.1.



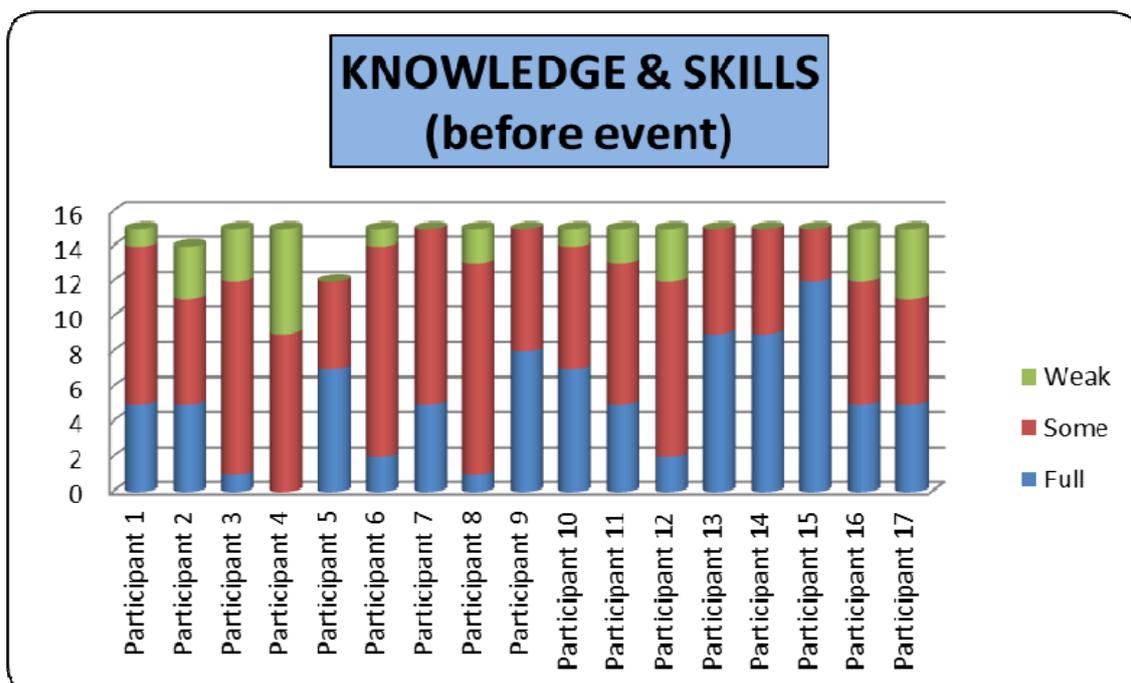
## 4. Evaluation of the Event

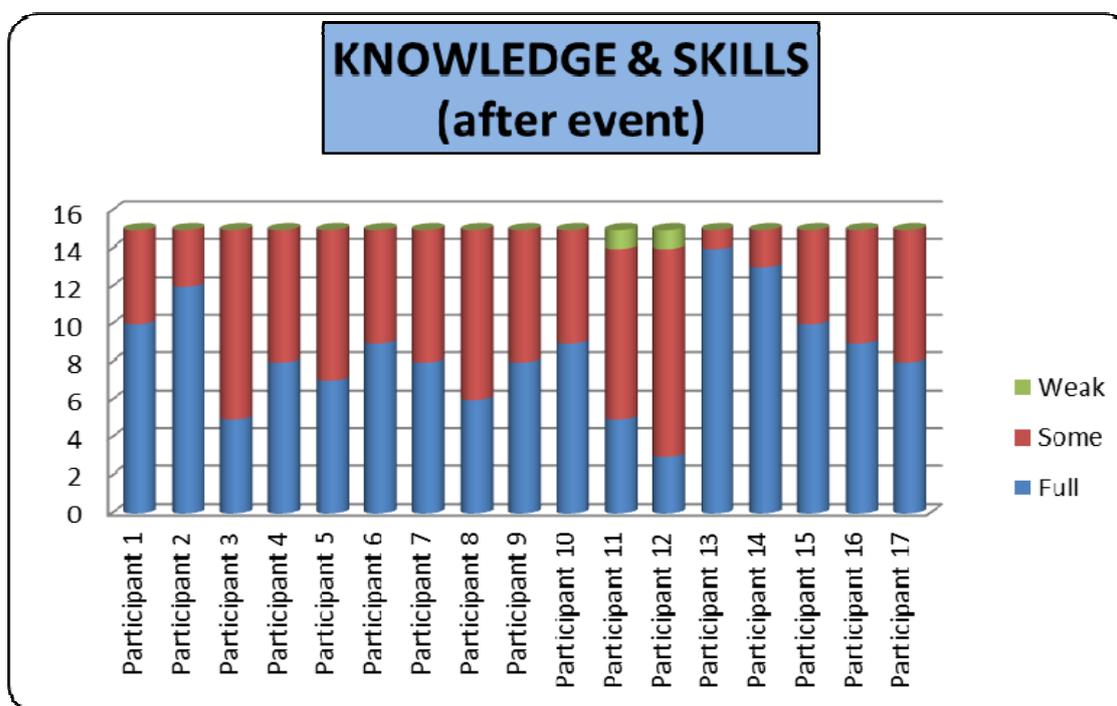
The ITS experts developed a set of questionnaires to evaluate the study tour (Appendix 3). All 18 participants were asked to fill in the questionnaires before and after the event. Only one participant did not submit the completed post-evaluation questionnaire. The level of detail in the answers received varies with some very short responses.

### 4.1 General knowledge and specific skills

The participants were asked a set of questions and requested to rate their general knowledge and specific skills before and after the event. The 15 questions asked concerned knowledge of investment in bio-energy projects, development and implementation of bio-energy projects, best practices on bio-energy, bio-energy technologies, networking skills, etc. According to their answers, over 75% of the participants reported improvement in their knowledge and skills (from medium to good and from low to medium).

Questions rated participant knowledge and skills (full, some, weak). Figures 4.1 and 4.2 show the quantities of each type of answer before the event and after completion. The graphs demonstrate the trend, showing more “full” and less “weak” after the event.

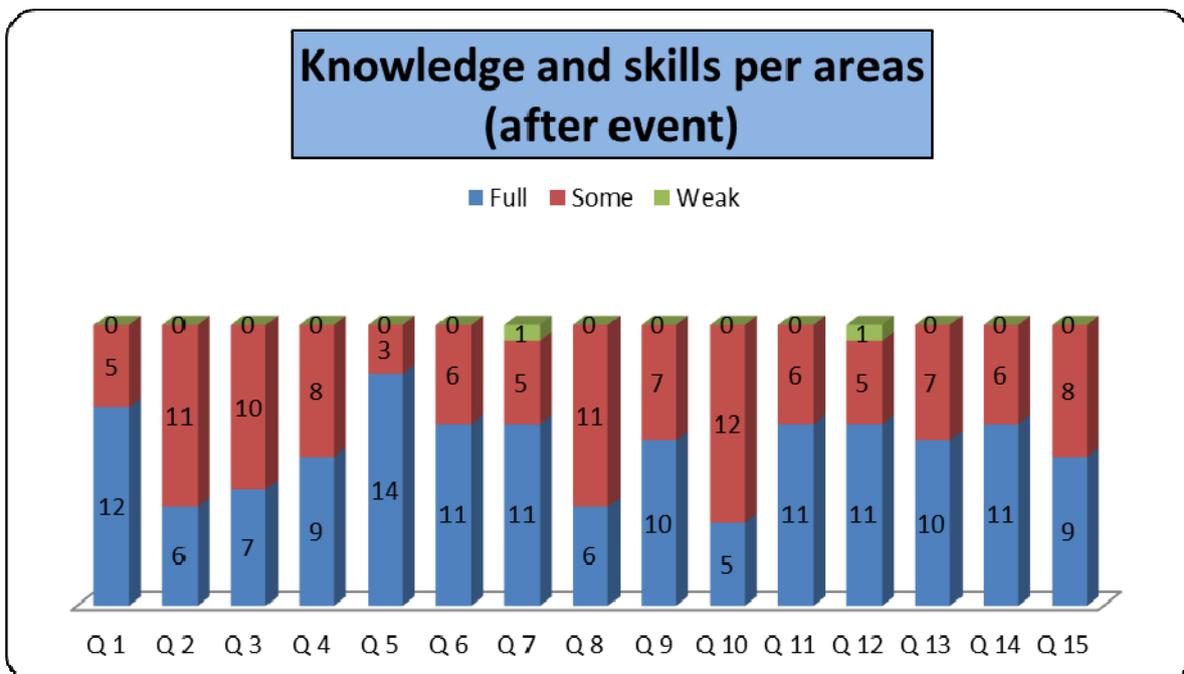
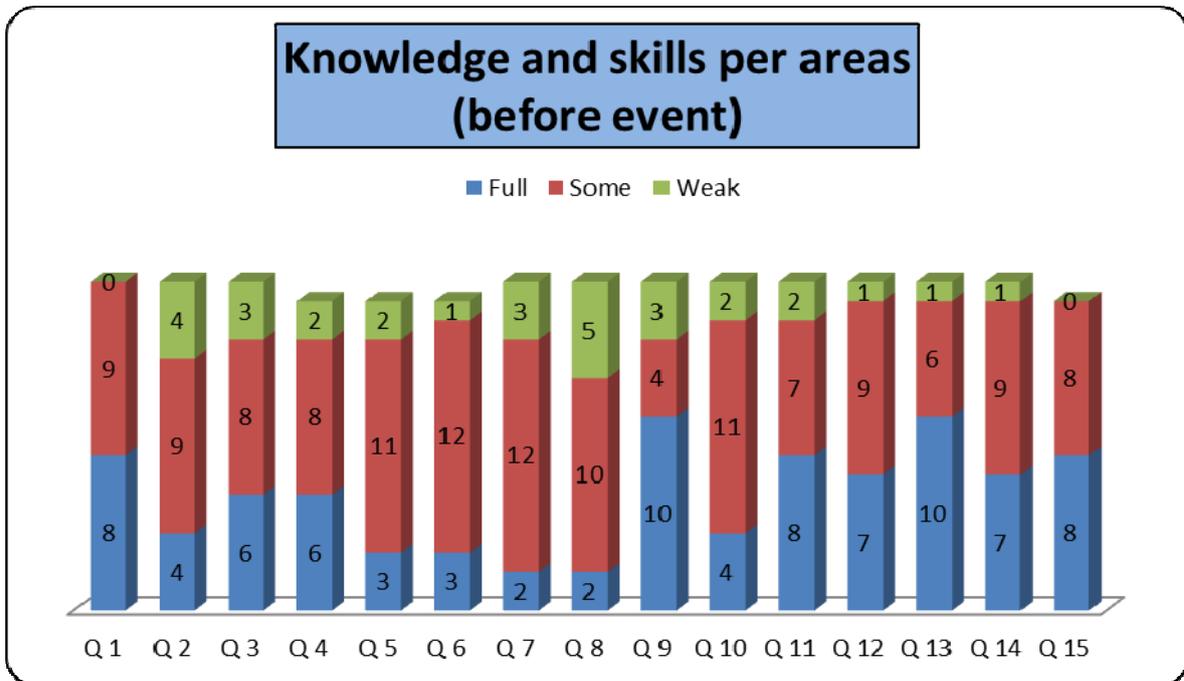




The thematic focus of the pre- and post-event evaluation questionnaire appears below:

Q 1	Knowledge and understanding of bio-energy in general
Q 2	Familiarity, knowledge and understanding of the EU policies and instruments to facilitate energy efficiency (EE) and renewable energy sources (RES)
Q 3	Investment in bio-energy projects
Q 4	Development and implementation of bio-energy projects
Q 5	Best practices on bio-energy
Q 6	Efficient technologies used for bio-energy
Q 7	Networking opportunities/networks of experts on bio-energy
Q 8	Knowledge and understanding of policy/regulatory frameworks promoting investment in bio-energy
Q 9	Understanding of administrative barriers to investments in bio-energy projects
Q 10	Familiarity with and knowledge of efficient investment practices in bio-energy projects
Q 11	Skills in develop/implement viable bio-energy projects
Q 12	Personal/organization's potential to contribute to improving investment climate in bio-energy in your own country
Q 13	Skills in introducing/developing efficient bio-energy technologies at your place of work
Q 14	Personal/organization's potential to contribute to raising awareness on bio-energy in your own country
Q 15	Skills in networking with other experts in the same area

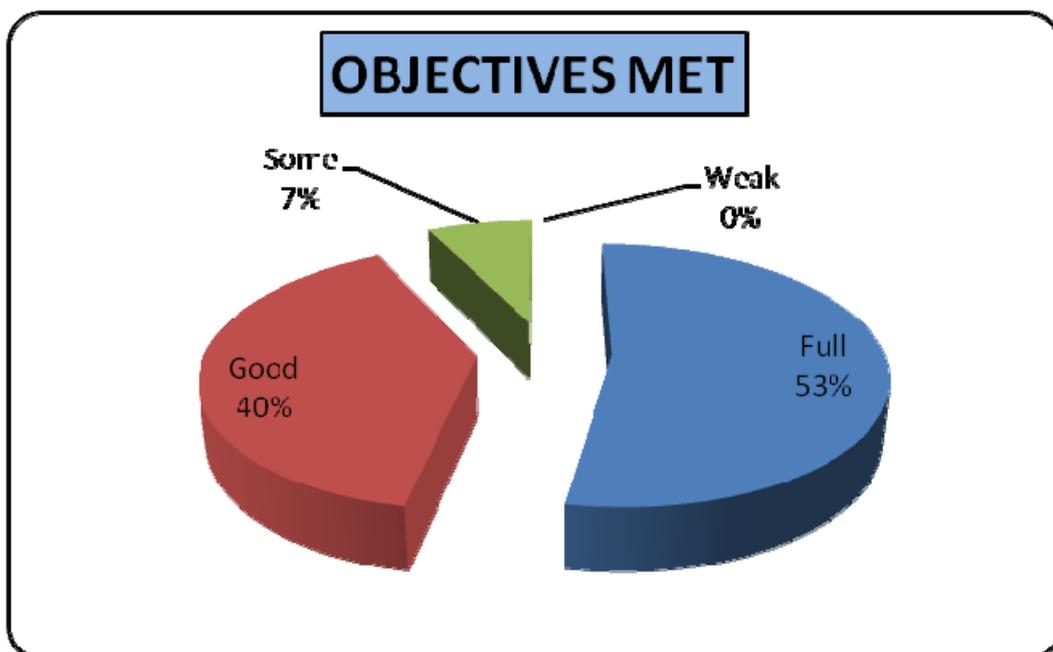
Figures 4.3 and 4.4 provide the total ratings (full, some, weak) given by the participants for each question, before and after the event.



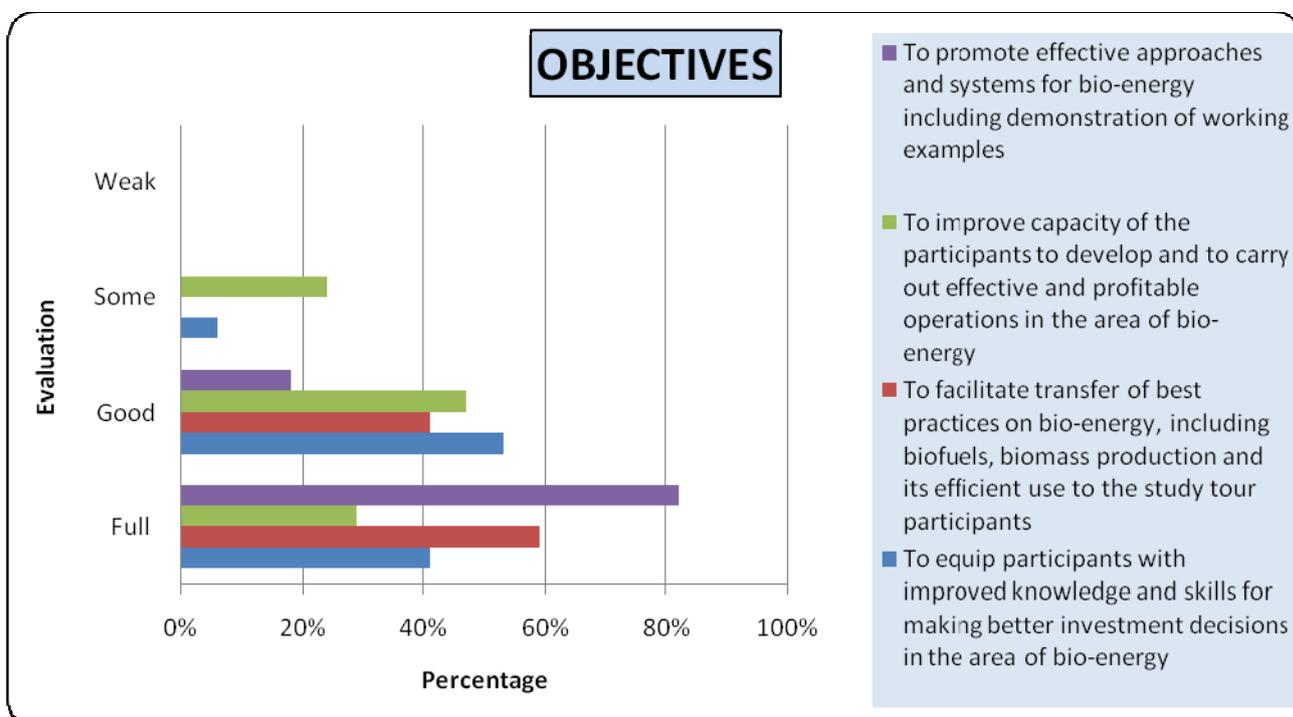
Most increases are observed in the areas of best practices in bio-energy (Q5), efficient technologies used for bio-energy (Q6) and networking opportunities for bio-energy (Q7), followed by more a moderate increase for development/implementation of bio-energy projects, contributing to improving investment climate and raising awareness on bio-energy.

#### 4.2 Objectives

The participants were also requested to rate how the event objectives were met using the following ratings: full, good, some and weak achievement. Figure 4.5 provides the ratings given by the participants



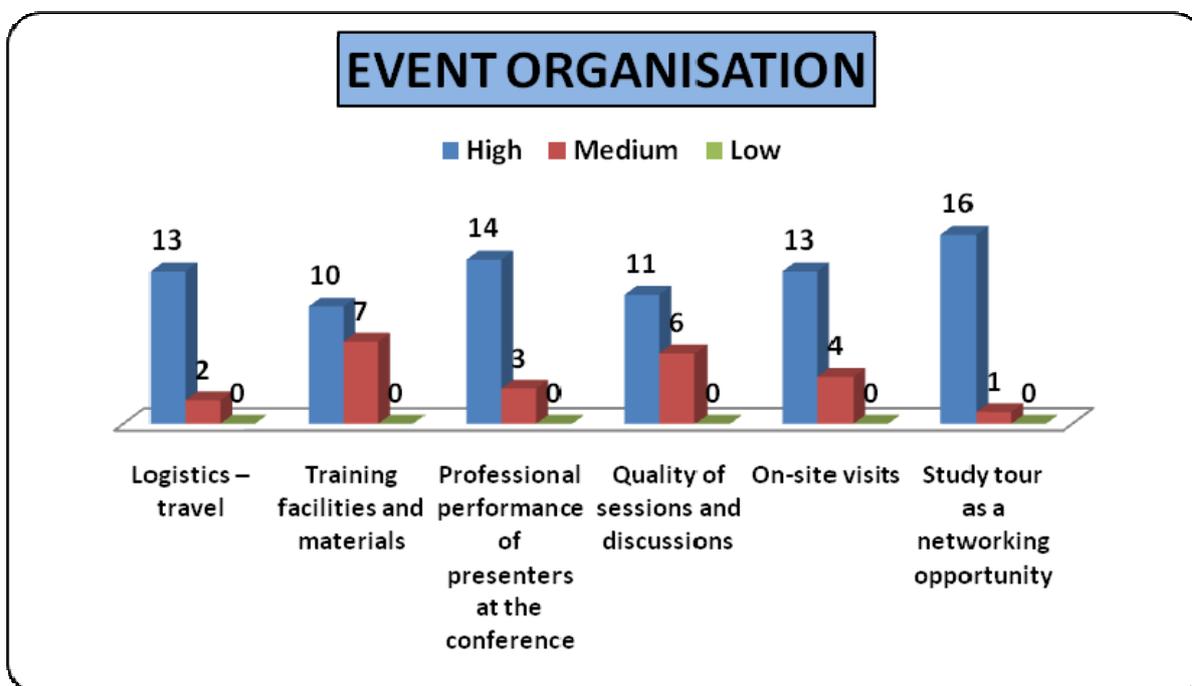
The majority of participants said that there was full and good achievement of objectives with around 7% of “some” achievement. Figure 4.6 gives additional information on the components of objectives and their respective shares in the ratings of participants.



All participants found the study tour helpful for raising their awareness on bio-energy and the information acquired useful for their work. Three participants described the study tour as particularly “very useful.” Some of the participants would like to see more in the area of effective operations in bio-energy; some wished to improve the quality of translation into the Russian language.

### 4.3 Event organisation

Satisfaction of the study tour participants about the organisational side of the event was evaluated with a separate set of questions. The questions concerned the different aspects of the event organisation and asked participants to rate each component to demonstrate “high,” “medium” or “low” satisfaction. Figure 4.7 shows how participants rated each organisational aspect.



Based on this data, the highest satisfaction was expressed for the networking opportunity provided by the study tour, professional performance of presenters and on-site visits.

## 5. Conclusions

Overall, the study tour contributed to enhancing the knowledge of participants on bio-energy issues. The participants learned more about the best practices in the area of bio-energy, how to implement bio-energy projects, what to take into account when making investment decisions. The event also offered opportunities to visit two bio-energy installations and see their operation in practice.

Furthermore, the study tour was an excellent networking opportunity for peers from the PCs to meet and establish contact. Most participants highlighted this in their evaluations.

Participants said they would use the knowledge acquired during the study tour in their daily work, taking into account the specific focus of their work. The knowledge is particularly useful for assessment and implementation of bio-energy projects, developing recommendations for legislation, sharing knowledge with colleagues at work, dealing with

investors, successful implementation of existing bio-energy projects or ideas (e.g., the national bio-mass project in Ukraine) and organising similar bio-energy seminars. Some participants gave recommendations for further activities in the area of bio-energy such as organising more roundtables, involving more EU countries for best practices, providing more specific examples.

In the follow up to the bio-energy study tour, the ITS experts will maintain contact with the participants of the study tour to enhance peer-to-peer networking and to provide them with additional support, to the extent possible. The ITS team will approach the participants with the specific questionnaire within 6 months of the study tour to find out how the participants have utilised or plan to use the acquired knowledge in the area of bio-energy.

## **6. Annexes**

*6.1 List of participants*

*6.2 Agenda*

*6.3 Evaluation questionnaires*

*6.4 Photos*

*6.5 Presentations*