



# CAPACITY BUILDING ACTIONS - POLAND

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## Summary

The Capacity building Actions (CBA) have been based on results of the task 4.1 (National Surveys), took into account the outcomes of WP2 (Integrated Support Schemes) and D4.4 (Recommendations for promoting transparency of energy costs). In the case of Poland, it has been considered the importance of inclusion in the agendas info on LCoHC (Levelised Cost of Heating Cooling) to the target group. The methodology of LCoHC calculations is not well known enough among target groups and not commonly used. Capacity Building Actions has been considered, therefore, the perfect forum to spread the knowledge of its possibilities. The main target groups of four CB events, to whom CBA were addressed are: local authorities (13.09.2016), branch associations (30.03.2016) and architects and engineer (12.04.2016). In case of one largest CB event (21.10.2016) the message was addressed to mix audience, including also final end users.

Finally, a wide range of stakeholders was reached with info on FROnT project and its results. The agenda of each meeting was prepared accordingly target group expectations and needs, generally investigated in preparation phases. The participants of the CB events are able to further disseminate FROnT results to be widely utilised by end consumers and other stakeholders. Totally 67 people, including end consumers, engineers and architects, representatives of local authorities, branch associations, and others of strong multiplications potential, attended CB events.

## Table of contents

### Spis treści

<b>1</b>	<b>CB CONFERENCE ON THE 21<sup>ST</sup> OCTOBER 2016.....</b>	<b>4</b>
1.1	AIM.....	4
1.2	AGENDA.....	4
1.3	THE COURSE AND RESULTS .....	7
1.4	LIST OF PARTICIPANTS .....	8
<b>2</b>	<b>CB WORKSHOP ON 13<sup>TH</sup> SEPTEMBER, 2016.....</b>	<b>16</b>
2.1	AIM.....	16
2.2	AGENDA.....	16
2.3	COURSE AND RESULTS .....	16
2.4	LIST OF PARTICIPANTS .....	18
<b>3</b>	<b>CB WORKSHOP ON 12<sup>TH</sup> APRIL 2016 .....</b>	<b>19</b>
3.1	AIM.....	19
3.2	AGENDA.....	19
3.3	THE COURSE AND RESULTS .....	20
3.4	LIST OF PARTICIPANTS .....	21
<b>4</b>	<b>CB ON 30TH MARCH, 2016.....</b>	<b>22</b>
4.1	AIM.....	22
4.2	AGENDA.....	22
4.3	THE COURSE AND RESULTS .....	23
4.4	LIST OF PARTICIPANSTS.....	24

## **1 CB CONFERENCE ON THE 21<sup>ST</sup> OCTOBER, 2016**

### **1.1 Aim**

The CB event was organized on 21<sup>st</sup> of October 2016, during the International Trade Fair and Conferences for Renewable Energy and Energy Efficiency RENEXPO POLAND 2016 in Warsaw. The RENEXPO (Renewable ENergy EXPOsition) Poland is not only one of Poland's largest and most significant event on renewable energies, but also creates an energy platform in the country. The event focuses on some of the main renewable energy sources of the country: solar, biogas, hydropower, heat pumps, biofuels and wood energy. In 2016 RENEXPO lasted from 19th to 21st October. 39 people attended the event, representatives of scientific institutions, branch associations, industrial companies, banks. Many other people visited the conference for shorter time. Hundreds of RENEXPO guests were aware of the topic and FROnT project seeing posters and hearing announcements.

Title of FROnT CB action was „Energy efficiency and the use of heat from renewable energy sources (RES) in buildings”. Conference was organised by Polish National Energy Conservation Agency (KAPE). The event was addressed to mix audience (Fair specific), including directly and energy consumers visiting RENEXPO. The main idea was to point out the coherency between RES deployment and energy efficiency in and of buildings. The slogan “Energy efficiency and renewables go hand in hand” is not sufficiently strengthen in the awareness of society that came out from many FROnT previous activities.

### **1.2 Agenda**

Conference was entitled „Energy efficiency and the use of heat from renewable energy sources (RES) in buildings. FROnT Project”.

RENEXPO Poland 2016 Trade Fair and Conferences

EXPO XXI, Prądzyńskiego Street 12/14, Warsaw, and Hall C3 – I floor

21<sup>st</sup> of October 2016; hours. 13.30 - 17.30

Conference agenda:

Chairman: Ryszard Wnuk KAPE S.A.		
13:30-13:45	Introduction Presentation of computational tools - the results of the FROnT project	Ryszard Wnuk Chief Adviser for RES, KAPE S.A.
13:45-14:10	Polish realities of energy generation from RES, on the base of PV example, versus energy efficiency of buildings	Artur Pawelec Photovoltaic Project Manager in General Realisation Investment Department, Energoprojekt Katowice SA
14:10-14:30	Why heat pump and what is the real heat pumps energy efficiency?	Paweł Lachman President, <b>Polish Organization of the Heat Pump Development PORT PC</b>
14:30-14:40	Monitoring and measures to improve the energy efficiency of buildings in selected EU countries - Request2Action Project	Ryszard Wnuk RES Board Advisor KAPE S.A.
14:40-14:50	Solar Houses and low energy buildings – designing and practice	Janusz Starościk Board President, Association of Heating Appliances Manufacturers and Importers (SPIUG)
14:50-15:10	Energy efficiency in buildings, and practice of the RES-H in buildings	Michał Ościłowski Energy-Efficient Buildings Specialist, KAPE S.A.
15:10-15:30	Energy efficiency and Renewable Energy Sources in the design of buildings, with example	Michał Pierzchalski Architect, Director of Energy- Efficient Building Design Studio, KAPE S.A.
15:30-17:30	<b>Discussion and dinner</b>	

*Selected photos form the meeting*



*Audience*



*Artur Pawelec - Energoprojekt Katowice SA*



*Paweł Lachman - Polish Organization of the Heat Pump Development*



*Michał Ościłowski - KAPE*

### 1.3 The course and results

At the beginning Ryszard Wnuk from KAPE declaimed a speech about results of the FRONt project and showed to participants computational tools.

Another presentation was prepared by Artur Pawelec from Energoprojekt. In his speech pointed out the necessity of proper adaptation of RES systems to building's needs. At the end of his presentation, he asked the question: "Should not we sell kWh instead of kW?" This question provoked debate.

The subject of a president of Polish Organization of the Heat Pump Development - Paweł Lachman was "Why heat pump? What is the real heat pumps energy efficiency?". He showed heat pump market in Poland in the years 2010 – 2015 and the division of final energy consumption in Poland. He claimed that heat pumps are an important part of climate policy and an important element of future energy development. He was confident that in the near future, heat pumps will replace coal boilers, because of falling prices of air heat pumps, operating costs of heat pumps in many cases are lower than coal-fired boilers and high cost of the purchase of solid fuel boilers Class V.

Then Ryszard Wnuk did a talk about monitoring and measures to improve the energy efficiency of buildings in selected EU countries. He told about Request2Action Project and tools which help to make energy performance certificates in selected European countries. He also showed energy efficiency advice tools in Austria and other countries.

Janusz Starościk from Association of Heating Appliances Manufacturers and Importers declaimed a speech about Solar Houses. His presentation contained: concept of building the Solar house – example; basic assumptions and components of solar heating; location of the Solar House; Energy efficiency; comparison between solar collectors and heat pumps; one of the results: year-round house with a 90% coverage of heat from solar energy.

Next speaker Michał Ościłowski from KAPE began his speech by telling basic information about losses and gains heat in the buildings. He informed the participants about provisions relating to energy-efficient construction and gave some examples of the quality of energy performance of buildings. He pointed out still very minor RES deployment during thermos-modernisation activities.

The subject of a messenger of KAPE Michał Pierzchalski was “Energy efficiency and renewable energy in the design of buildings - examples of solutions.” He presented many innovative results of solar energy deployment, e.g. first algae-powered (PIQ) building in the world and Pixel building. He also provided much information about integrated design.

The CB created the opportunity to present the FROnT project results. The event was organised to present importance of energy efficiency and using renewable energy in buildings. The experts from many institutions showed to participants what are the ways to use heat from renewable energy sources in buildings.

#### **1.4 List of participants**



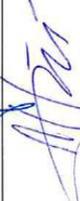
Funded by the European Union

## „Efektywność energetyczna, a wykorzystanie ciepła z odnawialnych źródeł energii (OZE) w budynkach” Projekt FRONt

Targi RENEXPO Poland  
Warszawskie Centrum EXPO XXI, ul. Prądyńskiego 12/14, Warszawa  
21 października 2016  
godz. 13.30 – 15.30

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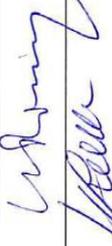
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## 2 CB WORKSHOP ON 13<sup>TH</sup> SEPTEMBER, 2016

### 2.1 Aim

The Capacity Building event was agreed with authority of Józefów city (20,132 inhabitants). City is located near Warsaw but is famous of healthy microclimate. The authority is strongly interested in RES development to protect environment. Policy-makers at the national, regional or local levels: the capacity building sessions will aim to raise awareness of politicians at different levels, of the strategic policy priorities for the RHC sector in Europe and the key success factors for RHC integrated support schemes.

### 2.2 Agenda

Date: 13<sup>th</sup> September, 2016

Location: Office of the Józefów City, Kardynała Stefana Wyszyńskiego Street 1, 05-420 Józefów

The CB workshop agenda:

10:00 – 10:15	Józefów Energy Policy. Commune expectation regarding the meeting	Joanna Iwanik – Józefów authority
10:15 – 10:40	Presentation of FROnT project: tools, surveys results and Recommendations for Promoting Transparency of Energy Costs	Bartłomiej Asztemborski Ryszard Wnuk, KAPE
10:40 – 11:00	Review of RES-H systems	Ryszard Wnuk, Bartłomiej Asztemborski, KAPE
11:00 – 11:20	Biomass for Energy. Best practices. Discussion of local circumstances	Bartłomiej Asztemborski, KAPE All
11:20 – 11:50	Solar systems for individual and public buildings. Discussion	Ryszard Wnuk, KAPE All
11:50 – 12:20	Heat pumps. Technology. Requirements for buildings and heating systems. Environmental aspect. Discussion	Ryszard Wnuk, KAPE All
12:20 – 13:00	Financial support possibilities. Discussion on Regional Operational Fund requirements and system of applications evaluation	Bartłomiej Asztemborski All

### 2.3 Course and results

Talking into account local biomass shortage, the policy to avoid low emissions, the development of such systems is not expected. Considering solar energy utilization, the location of the roofs and their shading by trees should be specially taken into account, in

case of Józefów, where the density of coniferous is high. Effective utilization of heat pumps needs low temperatures heating systems and buildings of low energy demand. As many inhabitants express interest in this technology, KAPE pointed out the necessity of individual assessment of each building's energy performance characteristic. In Józefów natural gas is the main conventional energy source. The possibilities of renewables utilization should be very deeply investigated to compete with natural gas in environmental and economic aspects (support possibilities). The discussion was focused on those points. KAPE presented computational tools and other FRONt tools helping to choose RES and compare them with gas reference system, that have been worked out in framework of FRONt project. The representatives of municipality pointed out the usefulness of workshop, which enabled them the better understanding of RES-H nature, pro and cons of RES utilization in specific circumstances, in aspect of RES competitiveness.

## 2.4 List of participants



### "Capacity Building"

13.09.2016 r. Miasto Józefów

L.p.	Nazwisko	Imię	Instytucja	Podpis
1	Chlebicki	Marek	Urząd Miasta Józefów	
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4	Santorski	Adam	- / -	
5	Linowska	Marta	- " -	
6	Asztaloski	Bartłomiej	KAPE	
7	WNUK	RYSHARD	KAPE	
8				
9				
10				
11				



Co-funded by the Intelligent Energy Europe Programme of the European Union

### 3 CB WORKSHOP ON 12<sup>TH</sup> APRIL 2016

#### 3.1 Aim

Initial talks with architects confirmed strong interest of this group in RES-H. The knowledge of all RES aspects (technologies, economic, environment, and support systems) is valuable and should be systematically deepened. On the base of such talks, KAPE prepared agenda as below.

The workshop was addressed to technical staff and energy experts (architects, engineers working, training and teaching about heating and cooling systems, energy consultants). The event aimed to raise awareness about RHC and to present the common methodology for estimating the value of energy supplied by energy systems (solar, heat pumps, bioenergy) and the assessment of the costs for heating and cooling, and to present and discuss the key decision factors of end-users and the tools tailored to empower them.

#### 3.2 Agenda

Date: 12<sup>th</sup> April, 2016

Location: KAPE, Nowowiejska Street 21/25, 00-665 Warszawa

The CB workshop agenda:

10:00 – 10:30	Presentation of FROnT project Presentation of FROnT tools	Bartłomiej Asztemborski, KAPE Ryszard Wnuk, KAPE
10:30 – 11:00	Presentation of Recommendations for Promoting Transparency of Energy Costs. Lessons Learned.	Bartłomiej Asztemborski, KAPE
11:00 – 12:00	Block of RES-H technologies: Solar systems; Heat pumps. Technology. Requirements for buildings and heating systems. Environmental aspect; Best and bad practices. Common mistakes errors in RES planning and how to avoid them. Discussion	Ryszard Wnuk, Bartłomiej Asztemborski, KAPE       All
12:00 – 12:20	Coffee break	
12:20 – 12:50	Innovative solutions of RES utilisation in buildings architecture. Discussion on Innovative solutions.	Michał Pierzechalski, Architektura
12:50 – 13:10	Most common hybrid systems.	Ryszard Wnuk, KAPE
13:10 – 13:30	Financial support possibilities	Bartłomiej Asztemborski



**Discussion with architects**

### **3.3 The course and results**

Architects pointed out that commonly in their practice, RES are being introduced in planning to increase chance of application in tender procedures required by different support systems. The RES systems planning is not based on proper calculations or RES are being planned without calculations at all. The real energy are not know and such situation is caused many and different problems during projects realisation and functioning. FRONt is bringing answers on many questions.

### 3.4 List of participants



#### “Capacity Building”

KAPE S.A. Warszawa 12.04.2016 r.

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7	GURGAŁ	SEBASTIAN	WYDZIAŁ ENERGETYKI I PALIW AKADEMIA GÓRNICZO-HUTNICZA	Sy
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9	Palucaj	Michał	Politechnika Warszawska	Palucaj
10	Asztemborski	Bartłomiej	KAPE S.A.	Asztemborski B.
11	Wnuc	Ryszard	KAPE S.A.	Wnuc



Co-funded by the Intelligent Energy Europe  
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## 4 CB ON 30TH MARCH, 2016

### 4.1 Aim

The CB was dedicated mainly to relevant associations.

Utilising the presence of target group (representatives of associations) during 14<sup>th</sup> Fair and Exhibition of Renewable Sources of Energy ENEX in Kielce, the FROnT CB action was organised during the 1<sup>st</sup> day of this event. The ENEX event gathered 150 companies (exhibitors) and 4.5 thousands of visitors. Associations (biomass, heat pumps) are very active during this event. The workshop was aimed to present FROnT recommendations for promoting transparency of energy costs, discussion of results of FROnT end-users survey. The workshop was aimed to present FROnT recommendations for promoting transparency of energy costs, discussion of results of FROnT end-users survey.

Consumer and environmental NGOs at the national, regional and local level, energy agencies (management level): the capacity building sessions will aim to present and discuss key decision factors of end users and the tools tailored to empower them. They will also include the presentation of the common methodology for estimating the value of energy supplied by RHC systems and the assessment of levelised costs for heating and cooling.

### 4.2 Agenda

Date: 30<sup>th</sup> March, 2016

Location: Kielce, ENEX, Centrum Kongresowe Targi Kielce, Zakładowa Street 1, 25-672 Kielce

Workshop agenda:

12:00 – 12:15	Presentation of FROnT project Announcement of FROnT tools	Ryszard Wnuk, Bartłomiej Asztemborski, KAPE
12:15 – 12:45	Presentation of FROnT of important FROnT survey results and Recommendations for Promoting Transparency of Energy Costs	Bartłomiej Asztemborski, Ryszard Wnuk, KAPE
12:45 – 13:00	News on heat pumps market. Heat Pumps Associations in RES-H promotion	Paweł Lachman
13:00 – 13:15	Role of Polish Chamber of biomass in promotion of biomass for energy technologies	Karolina Petryka, Polish Chamber of Biomass
13:15 – 14:00	Discussion. Role of media. Role of branch associations. Effective means of RES-H promotion.	All

### **4.3 The course and results**

Participants highly evaluated the FROnT results, in particular results of survey on end-users awareness. Participants pointed out the importance of costs calculation harmonisation and fair comparison of different fuels. There is huge role of media in RES-H promotion and RES fair presentation. It is important that FROnT gives tools and info for associations to be effectively utilised by them and also via different associations the message could be addressed to end-users. Branch organisations are really effective multipliers of FROnT concept and tools.

#### 4.4 List of participants



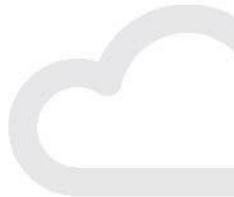
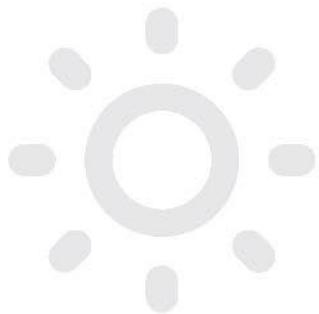
#### “Capacity Building”

30-31.03.2016 r. Kielce Targi ENEX

Lp.	Nazwisko	Imię	Instytucja	Podpis
1	KIRYKA	Wojciech	Instytut geologii i karterologii IGIK	Wojciech Kiryka
2	GATKOŁSKA	MARTYNA	— / —	Gatkołska
3	STANISŁAW	DANIEL	SPUG	Stanisław
4	PETRYKA	KAROLINA	POLSKA IZBA BIOMASY	Petryka
5	TOMASZEK	MARTYNA	POLSKA IZBA BIOMASY	Tomaszek
6	CHŁOPIŃSKI	RYSZARD	POLSKA IZBA BIOMASY	Chłopiński
7	Asztemborski	Barbara	KAPE	Asztemborski B.
8	Lachmann	Paul	PORT BC	Lachmann
9	BURZEL	Georg	GLOBEWORK	Burzel
10	Wnuk	Ryszard	KAPE	Wnuk
11				



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