

REPORT OF VEGTP AND CEGE TRAININGS SUPPLIED TO BUILD ENERGY EFFICIENT MANAGEMENT CAPACITIES OF SENIOR ENERGY GUARDIANS

D.T.3.2.3 Report of VEGTP and CEGE trainings

01.03.2019

Edited by PP4 KSSENA



MESTNA OBČINA CELJE





Introduction

This is a report of two implemented training programs in Energy@school project. First it was Vocational energy guardian training program - VEGTP which was intended for Senior energy guardians and other school staff, energy managers and municipality employees. And the second was Continuous energy guardian training program - CEGE intended for all that have already received first part of the training and also for all interested in learning more about energy management, energy efficiency and the use of renewable energy sources in schools and public buildings.

List of project partners

1. Union of Municipalities of Low Romagna Region, Lead Partner - Italy
2. CertiMaC s.c.r.l. - Italy
3. City of Bydgoszcz - Poland
4. ENERGY AGENCY OF SAVINJSKA, ŠALEŠKA AND KOROŠKA REGION - Slovenia
5. City of Karlovac - Croatia
6. University of Bologna - Dept of Industrial Chemistry - Italy
7. Municipality of the CITY Szolnok with County Rank - Hungary
8. Local Government of Town Újszilvás - Hungary
9. City of Stuttgart - Germany
10. Klagenfurt - Austria
11. Graz Energy Agency - Austria
12. City municipality of Celje - Slovenia



A. Report on VEGTP trainings

1. Executive summary

On the 15th November PP12 Municipality of Celje and PP4 KSENA have organized seminars for implementation of VOCATIONAL ENERGY GUARDIAN TRAINING PROGRAMME, one in each of seven schools, involved in the project. We invited the Senior energy guardians, headmasters, teachers and janitors. Besides the team from Kssena and Municipality of Celje the total number of participants in all seven schools was 21.

We started the training with a presentation of general facts about the project Energy@School, we also described and explained the activities that are foreseen in the future within the project.

Additionally the investment contractor was invited to prepare a presentation of the installed equipment. He explained the correct use of thermostatic valves that are connected to newly installed window-opening sensors. Step by step he familiarized participants with the application that monitors the energy use. The main point of presentation was that all SEGs will be independently able to operate with the monitoring system and understand all the parameters that are constantly measured (noise, humidity, temperature, light/electricity, CO₂ and VOC) so the actions can be taken in advance.

After a short break we started with the e-learning course, which was related to the document D.T3.2.1 Vocational energy guardian training programme. The main goal of this training was to educate Senior energy guardians to become more energy efficient and to be aware of the importance of reducing the energy use. First, we started with basic terminology for them to understand the energy efficiency. We explained and represented the actions how to reduce energy use in different areas such as heating, ventilation, lighting, the use of electric appliances and the use of sanitary water. With this knowledge Senior energy guardians can now mentor and help Junior energy guardians to reduce energy use, to become more aware of energy efficiency and to encourage other schoolmates to behavioural change in school and in their homes.



2. Official agenda of event/seminar



Agenda

Sreda 15.11.2017

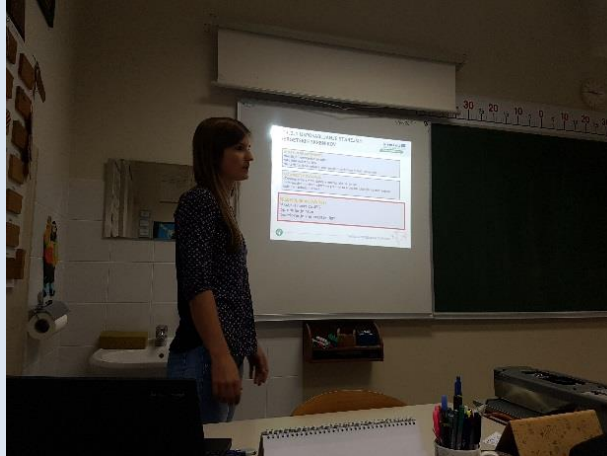
1. Predstavitev projekta
2. Investicija - uporaba nameščene opreme
 - Pravilna uporaba termostatskih ventilov in ostale vgrajene opreme
 - Predstavitev in razlaga sistema avtomatike in energetskega monitoringa
 - Podrobna razlaga delovanja senzorja za merjenje parametrov v učilnici (hrup, temperatura, vlaga, CO₂, VOC in svetloba)
3. D.T3.2.1 Priročnik za izvajanje trening programa za SEG
 - Kaj je energija?
 - Osnovna terminologija za razumevanje energetske učinkovitosti
 - Raba energije v šoli - ukrepi za zmanjšanje rabe energije na področjih:
 - ogrevanja,
 - prezračevanja,
 - razsvetljave,
 - rabe električnih naprav ter
 - rabe tople sanitarne vode
 - Diskusija



3. Fact sheet

VENUE	Primary school Ljubecna		
DATE OF THE MEETING	15.11.2017		
NUMBER OF PARTICIPANTS	OF	6	
TOPICS DISCUSSED	<ul style="list-style-type: none"> ▪ About the project Energy@School ▪ Correct use of installed equipment ▪ Parameters for indoor air quality ▪ Energy monitoring system ▪ Energy efficiency ▪ Actions to reduce energy use in school 		

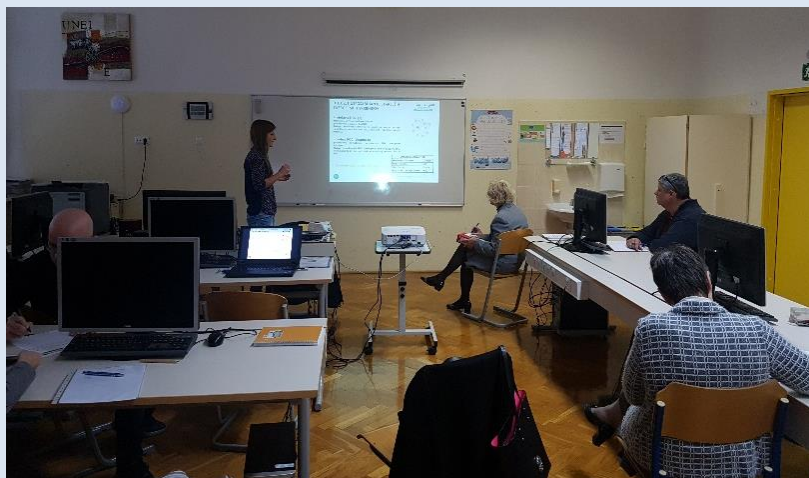
EVENT PICTURES





VENUE	IV. Primary school Celje
DATE OF THE MEETING	15.11.2017
NUMBER OF PARTICIPANTS	9
TOPICS DISCUSSED	<ul style="list-style-type: none"> ▪ About the project Energy@School ▪ Correct use of installed equipment ▪ Parameters for indoor air quality ▪ Energy monitoring system ▪ Energy efficiency ▪ Actions to reduce energy use in school

EVENT PICTURES





VENUE	Primary school Frana Kranjca
DATE OF THE MEETING	15.11.2017
NUMBER OF PARTICIPANTS	8
TOPICS DISCUSSED	<ul style="list-style-type: none">▪ About the project Energy@School▪ Correct use of installed equipment▪ Parameters for indoor air quality▪ Energy monitoring system▪ Energy efficiency▪ Actions to reduce energy use in school

EVENT PICTURES





VENUE	Primary school Lava
DATE OF THE MEETING	15.11.2017
NUMBER OF PARTICIPANTS	6
TOPICS DISCUSSED	<ul style="list-style-type: none">▪ About the project Energy@School▪ Correct use of installed equipment▪ Parameters for indoor air quality▪ Energy monitoring system▪ Energy efficiency▪ Actions to reduce energy use in school

EVENT PICTURES





VENUE	Primary school Hudinja
DATE OF THE MEETING	15.11.2017
NUMBER OF PARTICIPANTS	6
TOPICS DISCUSSED	<ul style="list-style-type: none">▪ About the project Energy@School▪ Correct use of installed equipment▪ Parameters for indoor air quality▪ Energy monitoring system▪ Energy efficiency▪ Actions to reduce energy use in school

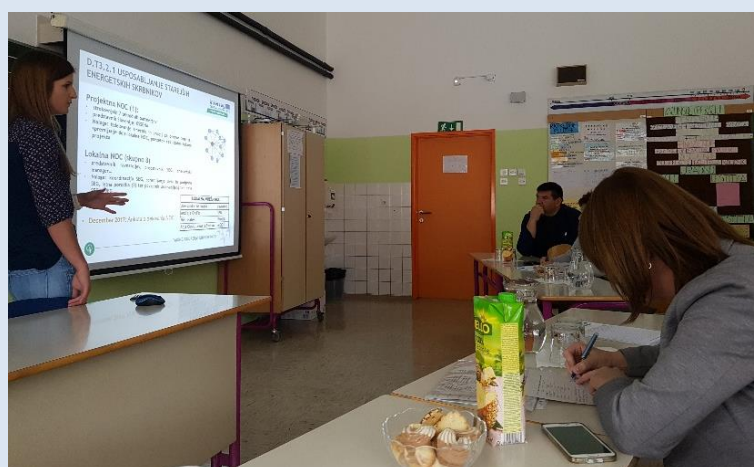
EVENT PICTURES





VENUE	Primary school Frana Roša
DATE OF THE MEETING	15.11.2017
NUMBER OF PARTICIPANTS	7
TOPICS DISCUSSED	<ul style="list-style-type: none"> ▪ About the project Energy@School ▪ Correct use of installed equipment ▪ Parameters for indoor air quality ▪ Energy monitoring system ▪ Energy efficiency ▪ Actions to reduce energy use in school

EVENT PICTURES





VENUE	III. Primary school
DATE OF THE MEETING	15.11.2017
NUMBER OF PARTICIPANTS	7
TOPICS DISCUSSED	<ul style="list-style-type: none"> ▪ About the project Energy@School ▪ Correct use of installed equipment ▪ Parameters for indoor air quality ▪ Energy monitoring system ▪ Energy efficiency ▪ Actions to reduce energy use in school


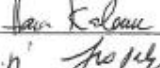
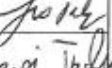

EVENT PICTURES



4. List of participants



Kraj: LJUBEČNA
Lokacija: OŠ LJUBEČNA
Datum: 15.11.2017
Naslov dogodka: Izobraževanje SEG

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Kraj: CELJE
Lokacija: IV. OŠ Celje
Datum: 15.11.2017
Naslov dogodka: Izobraževanje SEG

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Kraj: CELJE
Lokacija: OŠ FRANA KRANJCA
Datum: 15.11.2017
Naslov dogodka: Izobraževanje SEG

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4.	ŠTOR DANIJEL	C. S. Tavo Koroška	041 593 88F	daniyel.stor@gmail.com	<i>D. Štor</i>
5.	PREVODNIK CVETO	OŠ FRANA KRANJCA	031 645 735	cpredo@gmail.com	<i>M. A.</i>
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Kraj: CELJE
Lokacija: OŠ LAVA
Datum: 15.11.2017
Naslov dogodka: Izobraževanje SEG

Zap.št.	Priimek in ime	Organizacija	Telefon	E-mail	Podpis
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Kraj : CELJE
Lokacija : OŠ HUDINJA
Datum : 15.11.2017
Naslov dogodka : Izobraževanje SEG

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Kraj : CELJE
Lokacija : OŠ FRANA ROŠA
Datum : 15.11.2017
Naslov dogodka : Izobraževanje SEG

Zap.št.	Priimek in ime	Organizacija	Telefon	E-mail	Podpis
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3.	Gregor Podlogar	INAT	041 228 122	gregor.podlogar@inat.si	
4.	Mojca Kolenc	OŠ FRANA ROŠA	051 30 2274	mojca.kolenc@puc.vr.si	
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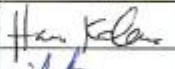

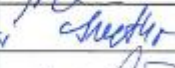
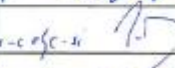
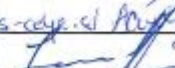




Kraj: CELJE

Lokacija: III. OŠ. CELJE

Datum: 15.11.2017

Naslov dogodka: Izobraževanje SEG

Zap.št.	Priimek in ime	Organizacija	Telefon	E-mail	Podpis
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4.	VERHOVŠEK ALEXANDER	III. OŠ. CELJE	031 243077	alexander.verhovsek@301-cefe.si	
5.	CVELFER ANDREJA	III. OŠ. Celje	031 268931	andreja.cvelfer@301-cefe.si	
6.	Jerman Robert	III. OŠ. Celje	070821706		
7	Gregor Pedago.	INAT	041 728722	gregor.pedago@inat.si	



B. Report on CEGE trainings

1. Executive summary

For the second part of education of Senior energy guardians we have prepared the program to upgrade the knowledge that they have gain throughout the first part of training, last year. We have prepared 7 trainings, one in each participating school. All together we have 15 participants, 10 of them was Senior energy guardians, 4 of them was teachers and 1 participant was from municipality.

We have started with more general but very crucial topics, energy consumption in school. Once again, we have emphasized the importance of the guidelines for efficient behavior in school and its benefits on energy savings.

Because energy management begins with getting to know the building, we have explained them the process and action that must be taken to prepare the energy audit and energy performance certificate. And since the big part of preparation of the energy audit and energy performance certificate is building physics, we have dedicated a short time on explaining what parameters can be shown in such computer model.

An to round all the mentioned topics above we have prepare the overall review of energy management which is the process of monitoring energy consumption, collecting and organizing the data, identifying opportunities to save energy and analyzing their impact, taking targeted action towards implementing technological and organizational measures that address these opportunities and monitoring the progress in terms of achieved energy savings.

After the educational part we have also prepared an opened discussion.



2. Official agenda of event/seminar



Agenda

1. Povzetek aktivnosti projekta
2. Raba energije v šoli
 - > Ukrepi za zmanjšanje rabe energije
3. Energetski pregledi in energetske izkaznice
 - > Energetski pregled:
 - Termografija
 - Mikroklimatski parametri
 - > Energetska izkaznica:
 - Računska energetska izkaznica
 - Merjena energetska izkaznica
4. Gradbena fizika
 - > Toplota
 - > Zrak
 - > Vlaga
5. Energetski management - EMIS
 - > Izhodiščna raba
 - > Osnovni in napredni sistemi za vodenje energetskega managementa
6. Diskusija



3. Fact sheet

VENUE	Primary school Ljubečna
DATE OF THE MEETING	12.12.2018
NUMBER OF PARTICIPANTS	3
TOPICS DISCUSSED	Energy consumption in schools Energy audit Building physics Energy management

VENUE	Primary school Hudinja
DATE OF THE MEETING	12.12.2018
NUMBER OF PARTICIPANTS	1
TOPICS DISCUSSED	Energy consumption in schools Energy audit Building physics Energy management

VENUE	III. Primary school Celje
DATE OF THE MEETING	12.12.2018
NUMBER OF PARTICIPANTS	2
TOPICS DISCUSSED	Energy consumption in schools Energy audit Building physics Energy management

VENUE	Primary school Frana Roša
DATE OF THE MEETING	12.12.2018
NUMBER OF PARTICIPANTS	2
TOPICS DISCUSSED	Energy consumption in schools Energy audit Building physics Energy management



VENUE	IV. Primary school Celje
DATE OF THE MEETING	13.12.2018
NUMBER OF PARTICIPANTS	2
TOPICS DISCUSSED	Energy consumption in schools Energy audit Building physics Energy management

VENUE	Primary school Lava
DATE OF THE MEETING	13.12.2018
NUMBER OF PARTICIPANTS	1
TOPICS DISCUSSED	Energy consumption in schools Energy audit Building physics Energy management

VENUE	Primary school Frana Kranjca
DATE OF THE MEETING	13.12.2018
NUMBER OF PARTICIPANTS	4
TOPICS DISCUSSED	Energy consumption in schools Energy audit Building physics Energy management



4. Pictures of events





5. List of participants

TARGET GROUP	NUMBER OF PARTICIPANTS - CEGE (number of participants that have already participated at VEGTP trainings)	NUMBER OF PARTICIPANTS - CEGE (number of participants that have only participated at CEGE trainings)	TOTAL (total number of participants from)
Senior energy guardian	10	0	10
Teachers	2	2	4
Energy managers	0	0	0
Municipalities employees	1	0	1

TARGET GROUP	NUMBER OF PARTICIPANTS - VEGTP
Senior energy guardian	13
Teachers	8
Energy managers	0
Municipalities employees	2