



USAID
FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
Enterprise Energy Efficiency (3E)

IQC Contract # EPP-I-00-03-00004-00
Task Order # 12

USAID 3E Presentation at the FBiH Parliament
Authors: Project Team
January 31, 2014

Implemented by:
Advanced Engineering Associates International, Inc. (AEAI)



USAID
FROM THE AMERICAN PEOPLE

“This Presentation at the FBiH Parliament is made possible by support from the American People sponsored by United States Agency for International Development (USAID). The contents of this presentation were prepared by and are the sole responsibility of Advanced Engineering Associates International, Inc., and do not necessarily reflect the views of USAID or the United States Government.”



USAID
FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

USAID

Enterprise Energy Efficiency (3E)

Mak Kamenica
Deputy Chief of Party

January 31, 2014



USAID
FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

USAID 3E aims:

- **Implementation of 17 energy efficient pilot projects throughout BiH**
- **Increase public and private sector capacity to implement EE projects**
- **Raise public awareness of EE potential**



USAID
FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

USAID 3E – Approved Pilot Projects

- 1. Sarajevo, Mechanical Engineering Faculty**
- 2. Tuzla, Primary School „Pazar“**
- 3. Mostar, Gimnasium**
- 4. Sarajevo and Tuzla regions, 20 private houses**
- 5. Foča, apartments for returnees (3 buildings)**
- 6. Rogatica, apartments for returnees**
- 7. Gradiška, Kindergarten „Lepa Radić“**
- 8. Bihać, Cultural Centre Complex**
- 9. Livno, Sports hall**



USAID
FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

USAID 3E – Approved Pilot Projects

- 10. Prijedor, Primary School „Branko Ćopić“**
- 11. Gračanica , SOS Kinderdorf**
- 12. Olovo, Primary School „Olovo“ and
Secondary School „Musa Ćazim Ćatić“**
- 13. Travnik, municipality building**
- 14. Bijeljina, LED street lighting**
- 15. Srebrenica, LED street lighting**
- 16. Trebinje, LED street lighting**
- 17. Banja Luka, Student Centre „Nikola Tesla“**



USAID

FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

Pilot project – Mechanical Engineering Faculty Sarajevo (MEF)

- Partners on project:
 - UNDP BiH, MEF
- Implemented EE measures:
 - New gas condensing boiler
 - Window replacement
 - Thermal insulation of the facade
 - Monitoring and verification system

Value of the PP:	561,500 KM
UNDP	375,000 KM
MEF	56,500 KM
USAID 3E	130,000 KM

Energy saved:	50% ili 412 MWh/per year
Money saved:	56,000 KM/per year
Payback period:	10 years



MEF building *before* and *after* implementation of the EE measures



System for monitoring and verification at MEF



1 mjerilo utroška prirodnog gasa



3 vodomjera



9 senzora temp. (1 vanjski)



6 mjerila utroška elektr. energije



3 mjerila utroška toplotne energije





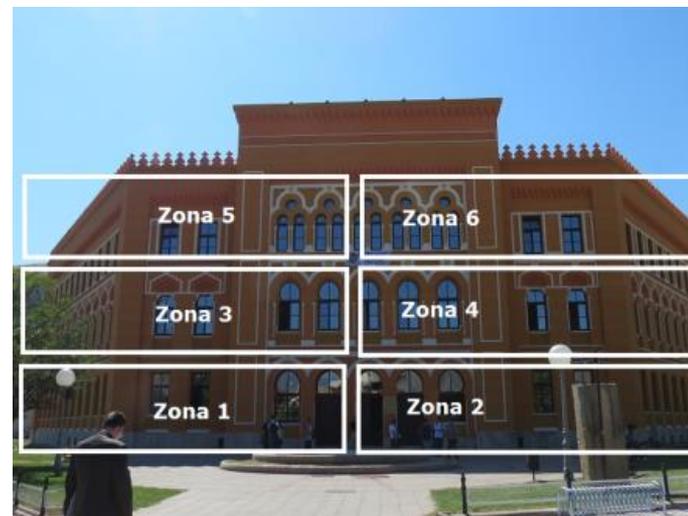
System for monitoring and verification at MEF





Pilot project – Old High School in Mostar

- Partners on project:
 - UNDP BiH, City of Mostar
- Implemented EE measures:
 - Heating system divided in zones
 - Automatic control of heating water temperature
 - New windows
 - Monitoring and verification system



Heating zones

Value of pilot project:	56,000 KM
UNDP	26,500 KM
USAID 3E	29,500 KM
City of Mostar*	350,000 KM

Energy saved:	20% ili 50 MWh/per year
Money saved:	9,700 KM/per year
Payback period:	5,7 years



Pilot projekat – 20 private houses in Sarajevo and Tuzla regions

- **Partners on project:**
 - **Homeowners and Suisse Caritas**
- **Implemented EE measures:**
 - **Thermal insulation of facade (10cm EPS)**

Value of pilot project:	180,000 KM
Homeowners	145,000 KM
Suisse Caritas	non currency
USAID 3E	35,000 KM

Energy saved:	45% ili 550 MWh/per year
Money saved:	22,000 KM/per year
Payback period:	8,1 years



Before and after implementation of EE measures



Pilot project – SOS Kinderdorf in Gračanica

- **Partners on project:**
 - **SOS Kinderdorf**
- **Implemented EE measures (two out of twelve houses):**
 - **Window repair**
 - **Installation of solar thermal collectors for PTV preparation**



Value of project:	28,000 KM
SOS Kinderdorf	8,000 KM
USAID 3E	20,000 KM
Energy saved:	25% or 25 MWh/per year
Money saved:	3,600 KM/per year
Payback period:	7,7 years



Pilot project – Sports Hall in Livno

- **Partners on project:**
 - **Municipality Livno, UNDP, GIZ**
- **Implemented EE measures:**
 - **Replacement of windows and part of the roof / facade cover**
 - **Connection to the remote district heating**
 - **Reconstruction of the heating and ventilation system**
 - **Monitoring and Verification system**

Value of pilot project:	330,000 KM
Municipality Livno	145,000 KM
GIZ	6,000 KM
UNDP	7,000 KM
USAID 3E	172,000 KM
Energy saved:	40% or 80 MWh/per year
Money saved:	21,000 KM/per year
Payback period:	11 years





Pilot project – Trebinje LED street lighting

- **Partners on project:**
 - **UNDP and City of Trebinje**
- **Implemented EE measures:**
 - **Replacement of the existing mercury vapour bulbs with LED bulbs**

Value of pilot project:	111,000 KM
City of Trebinje	31,000 KM
UNDP	40,000 KM
USAID 3E	40,000 KM
Energy saved:	70% or 158 MWh/per year
Money saved:	28,000 KM/per year
Payback period:	4 years





USAID
FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

Capacity strengthening – Energy Management and Green Office courses

- **5** locations in BiH (Banja Luka, Bihać, Mostar, Sarajevo and Tuzla)
- More than **270** participants in total



USAID 3E Presentation at the FBiH
Parliament, January 31, 2014

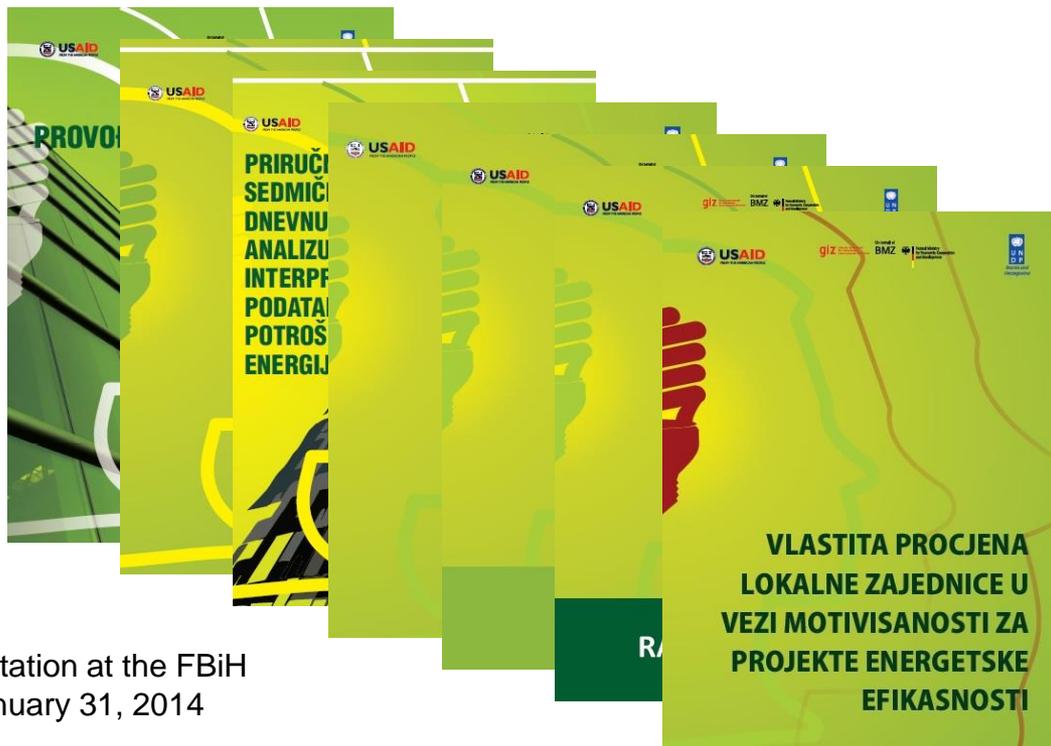


USAID
FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

Capacity strengthening – EE Library

- **7** brochures about different EE topics
- Jointly published by USAID 3E, UNDP and GIZ
- Published for interested citizens and EE experts



USAID 3E Presentation at the FBiH Parliament, January 31, 2014



Raising public awareness and capacity strengthening: EE Knowledge Days in Sarajevo

- **10** different locations
- **48** presentations
- More than **200** students attended
- More than **800** visitors in total
- **23** media houses followed the events
- “**20** EE tips brochure inserted in
120,000 copies of three daily newspapers
(Oslobodjenje, Avaz and Glas Srpske)





USAID
FROM THE AMERICAN PEOPLE

Enterprise Energy Efficiency (3E)

Raising public awareness and capacity strengthening : EE Knowledge Days in Sarajevo

Participation from following faculties:

- MEF, **40 students**
- Faculty of Economics, **30 students**
- Faculty of Civil Engineering and Architecture, **15 students**
- Electrical Engineering Faculty, **65 students**
- Faculty of Philosophy, **60 students**





USAID
FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

Raising public awareness – Energy Efficiency Festival

- **6** days Festival
- **14** events throughout the city (cultural and entertainment, concerts, street and sports events, art exhibitions and movies) with the aim of promoting energy efficiency
- More than **20,000** people visited different events





USAID
FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

Raising public awareness – EE Festival



ORGANIZER/ORGANIZATOR:



SPONSORS/SPONZORI:



SUPPORTED BY/POKROVITELJI:



PARTNERS/PARTNERI:



UNDER THE AUSPICES OF/ POČASNI POKROVITELJI:

FBiH MINISTARSTVO NAUKE I OBRAZOVANJA
FBiH MINISTARSTVO RAZVOJA, PODUZETNIŠTVA I OBRTA
FBiH MINISTARSTVO PROSTORNOG UREĐENJA



MEDIA SPONSOR/MEDIJSKI POKROVITELJI:





Energy Efficiency Year in Canton Tuzla (EE year in Canton Tuzla)



Energetska Povelja

Mi, načelnici općina Kantona Tuzla i premijer Kantona Tuzla, duboko smo zabrinuti zbog porasta potrošnje energije, povećanih troškova za energiju, povećane ovisnosti Bosne i Hercegovine o uvozu fosilnih goriva, te njihovim utjecajima na okoliš i privredu.

Prepoznajemo i razumijemo bitnu ulogu energije u kvaliteti življenja i stanju okoliša, te prednosti održive proizvodnje i održivog korištenja energije koji doprinose ekonomskom razvoju i očuvanju životne sredine.

Svrjsni smo da su energetska efikasnost i obnovljivi izvori energije jedan od najvažnijih faktora održivog razvoja. Stoga ćemo kontinuirano povećavati energetska efikasnost, koristiti obnovljive izvore energije, te sistematski upravljati energijom u našim općinama i Kantonu. Time ćemo poticati otvaranje novih radnih mjesta, regionalni ekonomski razvoj, te povećavati sigurnost snabdjevanja energijom.

Aktivno ćemo promovirati energetska efikasnost, obnovljive izvore energije i upravljanje energijom, kako u našim zgradama i komunalnim sistemima, tako i u domovima svih građana, te u poslovnom sektoru.

Potpisivanjem ove povelje želimo sa vna nastojanja usmjeriti ka boljoj i održivoj energetskej budućnosti u našim općinama i Kantonu, a na dobrobit svih naših građana.

Sead Čadević	Bego Beparić	Saša Muminović	Kajal Bratić	Nesret Heć	Edis Đeravić	Rasim Džerović
Josif Čadević	Dževad Mujkić	Ismet Džerović	Sanel Bajbulajić	Zajko Muminović	Jasmin Imamović	Rasim Maratović

Tuzla, 19.06.2013.

UZ PODRSKU



USAID
FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

JUNE 2013 – Start of EE year in Canton Tuzla

- Thirteen mayors of Canton Tuzla municipalities signed the Energy Charter by which they commit to promotion of sustainable energy future in their municipality and Canton.



USAID 3E Presentation at the FBiH
Parliament, January 31, 2014



USAID
FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

JULY 2013 – Student Energy Club Tuzla

- Connecting the students from Tuzla University, especially from Electrical Engineering Faculty, Mechanical Engineering Faculty, Civil Engineering and Architecture Faculty and Faculty of Economics.



USAID 3E Presentation at the FBiH Parliament, January 31, 2014



AUGUST 2013 – „EE on our lakes“

- The benefits of energy efficiency and renewable energy sources were practically presented to the visitors of Panonic lakes in Tuzla.





USAID
FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

SEPTEMBER 2013 – EE Info points in municipalities

- Info materials regarding energy efficiency that can assist citizens to educate themselves about EE and its benefits.





TUZLA CANTON



- **1x Info Center**
- **13x Info points**



USAID
FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

OCTOBER 2013 – „Think of tomorrow“ school hour

- Activities for children; they are developing the energy use awareness





USAID
FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

NOVEMBER 2013 – Technical workshop in Gradačac

- First workshop „Introduction of systematic energy management“ in Tuzla Canton municipalities.



USAID 3E Presentation at the FBiH
Parliament, January 31, 2014



USAID
FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

NOVEMBER 2013 – Coordination workshop about media activities

- Organized for municipality representatives in charge of public relations.



USAID 3E Presentation at the FBiH
Parliament, January 31, 2014



DECEMBER 2013 – Technical workshop in Gračanica

- Adoption of energy policy in the municipality.
- Work on EMIS software.





USAID
FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

DECEMBER 2013 – Start of Media Campaign

- Will cover TV, radio, billboard, paper media and web promotion with focus on Canton Tuzla.
- Media campaign active until May 2014.





Energy Efficiency Year in Canton Tuzla

January 2014	- Educational series about energy efficiency, in partnership with RTV TK
February 2014	- Launch of EE Info Center in Tuzla and free phone line
March – May 2014	- Regular activities in EE Info Center - EE series on RTV TK - Media Campaign - Technical Workshop - Final workshop for EE Year in Tuzla Canton



USAID
FROM THE AMERICAN PEOPLE

BOSNIA-HERZEGOVINA

THANK YOU!

Mak Kamenica
Deputy Chief of Party

mkamenica@eee.ba

www.eee.ba