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

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USAID 3E Presentation for Steve Burns, Pilot Projects

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USAID Enterprise Energy Efficiency – 3E

May 17, 2013



I. USAID 3E aims

- Implementation of more than **10 pilot projects** throughout BiH
- **Increase public and private sector capacity** to implement EE projects
- Raise **public awareness** of EE potential



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Ongoing 3E pilot projects:

Approved projects (17 projects in total):

- 1. Sarajevo, Mechanical Engineering Faculty**
- 2. Tuzla, Primary School „Pazar“**
- 3. Mostar, Gimnazija**
- 4. Sarajevo and Tuzla region, 20 private houses**
- 5. Foča, homes for returnees (3 buildings)**
- 6. Rogatica, homes for returnees**
- 7. Gradiška, Kindergarten „Lepa Radić“**
- 8. Bihac, Cultural Centre**
- 9. Livno, Sports Hall**



Ongoing 3E pilot projects:

Approved projects (17 projects in total):

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. Trebinje, LED street lighting
15. Bijeljina, LED street lighting
16. Srebrenica, LED street lighting
17. Banja Luka, Student centre “Nikola Tesla”



Pilot project – Mechanical Engineering Faculty Sarajevo (MEF)

- Partners on project:
 - UNDP BiH
 - MEF
- Measures implemented by 3E:
 - Monitoring and Verification System
 - New gas condensing boiler
- Measures implemented by UNDP
 - Replacement of windows
 - Thermal insulation of the facade



MEF building *before and after* implementation of EE measures



Pilot project – Elementary School “Pazar” in Tuzla

- **Partners in project:**
 - **UNDP BiH, Municipality of Tuzla and Tuzla Canton**
- **Implemented EE measures:**
 - **Windows replacement**
 - **Heating System Repair and Expansion**
 - **New thermal substation**
 - **Monitoring and Verification System**



Old heating substation

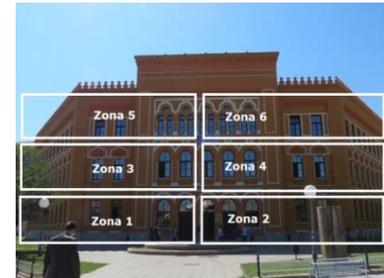


New heating substation



Pilot project – Old High School in Mostar

- **Partners in Project**
 - **UNDP BiH and City of Mostar**
- **Implemented Measures**
 - **New windows**
 - **Heating system divided in zones**
 - **Automatic control of heating water temperature**
 - **Monitoring and Verification System**



Zonal heating scheme





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Pilot project – 20 private houses Sarajevo and Tuzla regions

- **Partners in Project**
 - Homeowners and Suisse Caritas
- **Implemented EE Measures**
 - Thermal insulation of façade (10 cm EPS)



Before and after implementation of EE measures



Pilot project – Returnee housing in Foca

- **Partners in Project**

- **U.S. Embassy, Netherlands Embassy, Catholic Relief Services (CRS), RS Ministry of Refugees and Displaced Persons, Foca Municipality**

- **Implemented EE Measures**

- **Thermal insulation of façade**
- **EE light bulbs**
- **Completed in October 2011.**



Urban building design



Rural building design 10



Pilot project – Returnee housing in Rogatica

- **Partners in Project**

- **U.S. Embassy, RS Ministry of Refugees and Displaced Persons, Rogatica Municipality and Hilfswerk Austria**

- **Implemented Measures**

- **Thermal insulation of façade**
- **EE light bulbs**
- **Completed in October 2011**



Returnee housing in Rogatica



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Pilot project – Kindergarten „Lepa Radic“ in Gradiska

- **Partners in Project**
 - **UNDP and Gradiska municipality**
- **Implemented EE measures**
 - **UNDP and Gradiska municipality Thermal insulation of outside walls and top floor ceiling**
 - **Replacement of windows**
 - **Installation of a biomass (pellet) boiler with autom. control**
 - **Installation of solar thermal panels**
 - **Installation of a Monitoring and Verification System**





Pilot project – Cultural Centre in Bihać

- **Partners on project:**
 - **UNDP, Municipality Bihać and Una-Sana Canton**
- **Measures to be implemented:**
 - **Thermal insulation of the outside walls and ceiling on top floor**
 - **Window replacement**
 - **Biomass boiler installation and heating substation**
 - **Installation of Monitoring and Verification System**



Cultural Centre in Bihać



New boiler room



Pilot Project – Sports Hall in Livno

- **Partners on project:**
 - Municipality Livno, Esco Eco Energija d.o.o, UNDP and GIZ
- **Measures to be implemented:**
 - Replacement of windows and part of the roof/facade cover
 - Connection to remote district heating
 - Reconstruction of the heating and ventilation system
 - Monitoring and Verification System
- **Savings in energy and money:**
 - Inadequate existing heating
 - Increase in thermal comfort
 - Reduction of losses
 - Savings per MWh





Pilot project – Primary School „Branko Ćopić“ in

Prijedor

- **Partners on project:**
 - **Municipality Prijedor and RS Ministry for Culture and Education**
- **Measures to be implemented:**
 - **Thermal insulation of the outside wall and the top floor ceiling**
 - **Window replacement**
 - **Reconstruction of the heating and ventilation system**
 - **Monitoring and Verification System**



Before and after implementation of EE measures



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Pilot project – SOS Kinderdorf in Gračanica

- **Partners on project:**
 - **SOS Kinderdorf**
- **Measures to be implemented (2 of 12 houses):**
 - **Window repair**
 - **Installation of solar thermal collectors for PTV preparation**
 - **Installation of Monitoring and Verification System**





Pilot project – LED street lighting in Bijeljina, Srebrenica and Trebinje

- **Partners on project:**
 - **UNDP and municipalities of Bijeljina, Srebrenica and Trebinje**
- **Measures to be implemented:**
 - **Replacement of existing mercury vapour bulbs with LED bulbs**
- **Savings in energy and money:**
 - **Anticipated savings 50-70%**



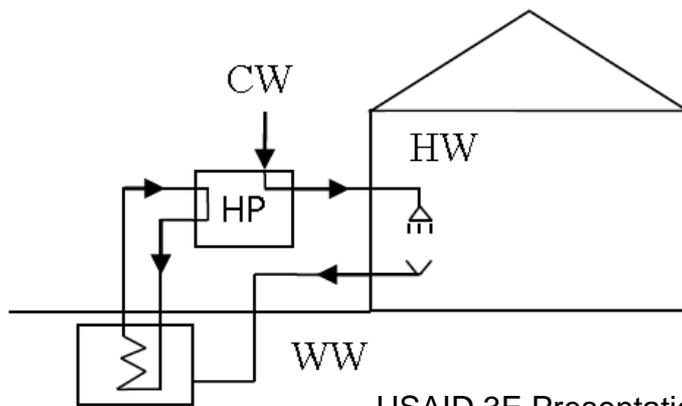
Existing street lighting



Pilot Project – Student Centre “Nikola Tesla” in Banja Luka

- **Partners on project:**
 - **City of Banja Luka**
- **Measures to be implemented:**
 - **Installation of heat pump and ancillary equipment**
 - **Installation of Monitoring and Verification System**

System schematics



HP – HEAT PUMP
CW – COLD WATER
HW – HOT WATER
WW – WASTEWATER



Pilot project – Primary and Secondary schools in Olovo

- **Partners on project**
 - **Suisse Caritas, Cantonal Ministry for culture and education**
- **Measures to be implemented:**
 - **Construction of joint biomass boiler room**
 - **Installation of thermostatic vents**
 - **Installation of Monitoring and Verification System**





Pilot project – The Administration building of Travnik Municipality

Partners on project:

- **UNDP**
- **Municipality of Travnik**

Measures to be implemented:

- **replacement of windows**
- **insulation of the façade and two flat roofs**





CAPACITY BUILDING – COURSES ON ENERGY MANAGEMENT IN BUILDINGS AND GREEN OFFICE PRACTICES

The lectures on energy management in buildings described the process of continuous management of expenses related to energy consumption with the goal of reducing those costs while retaining the same level of comfort. The green office practices lectures introduced the attendees to the activities that employees can employ to reduce the negative impact on the environment and increase the efficiency of resource consumption. The courses were held in **five** cities throughout BiH: Sarajevo, Tuzla, Mostar, Banja Luka and Bihać. Participants received a Certificate of Attendance.



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Capacity Building – EE Library

The EE Library consists of seven education books, jointly published by USAID 3E, UNDP and GIZ. These books contain information on energy efficiency that is related to systematic energy management in the cities, conducting energy audits of the buildings, monitoring and measurement of energy consumption, actual ways of financing project of energy efficiency measures implementation and organizing our offices in accordance to “green office” recommendations. The EE Library has been promoted in **seven** cities throughout BiH so far: Sarajevo, Tuzla, Mostar, Zenica, Doboje, Banja Luka and Trebinje.

Books will be donated to American Corners in libraries across Bosnia and Herzegovina, so that interested citizens and EE professionals may find and read them.





Public Awareness – 3E Website

- The 3E website was activated in October 2010
 - More than 45,000 hits to date

USAID Enterprise Energy Efficiency - 3E

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of Bosna and Herzegovina's (B&H) gross domestic product (GDP) in 2008 was spent on energy

20%

6,1% GDP in the USA

4,7% GDP in the EU countries

www.eee.ba



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Public Awareness and Capacity Building - Energy Efficiency Knowledge Days

USAID 3E organized, supported or participated in many Energy Efficiency seminars, fairs and events in **Sarajevo, Livno, Prijedor, Tuzla and Zenica**. Pilot Project activities were presented at these events and the participants were educated not only about the importance of energy efficiency, but also about the measures that can be implemented in their homes or offices – the main aim being not only reduction of money spent on energy bills, but also reduction of CO2 emissions.



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Public Awareness – EE Festival, June 2012

The aim of the six-day Energy Efficiency Festival, which included **14 events**, was to raise awareness of energy efficiency and popularize the Festival theme in an indirect way through interesting and inclusive events that citizens could connect with.

The citizens of Sarajevo and BiH had a chance to attend **cultural and entertaining events, concerts, street fairs, sport events, art exhibitions and movies** that carried the theme of Energy Efficiency, Renewable Energy and Environmental Protection. The EE Festival was a new concept for promoting energy efficiency which included citizens of all ages.



Approximately **20,000 people** visited various events and the Festival was followed by many Media houses, which reported on it in their regular and special programs. Also, numerous press editions in many daily papers followed the Festival, as did internet websites.



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Public Awareness- EE Festival Visual Identity

UKLJUČI SE!

FESTIVAL ENERGETSKE EFIKASNOSTI
5. – 10. JUNI, 2012. GODINE.
www.eee.ba



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ORGANIZER/ORGANIZATOR:  **USAID**
OD AMERIČKOG NARODA

SPONSORS/SPONZORI:  **SIEMENS**    **FBIH MINISTARSTVO KULTURE I SPORTA**

PARTNERS/PARTNERI:       

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Thank you!

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