



Příloha 18. Presentace z debriefingu

Utilization of renewable resources for district heating system in Nemila supported by CZDA

Evaluation Debriefing

24 October 2017

Zenica



Evaluation Focus and Aim

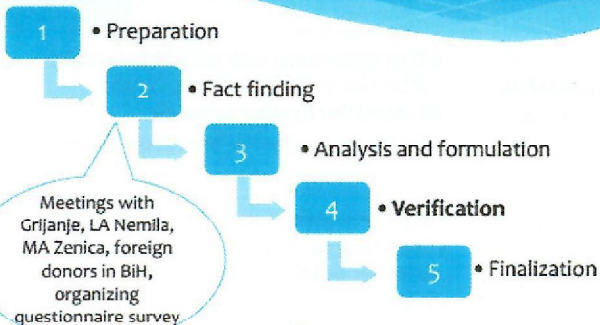
Focus

- District heating (DH) project in Nemila
- Repair of DH in Nemila after flooding
- Similar projects from energy production and distribution sector in BiH

Aim

- Obtain findings, conclusions and recommendations for decision making by the Czech Ministry of Foreign Affairs and Czech Development Agency (CZDA) about future focus and realization of CZDA projects in BiH

Evaluation steps



Main findings – efficiency

economy

- Investment costs for 1 MW of installed capacity in Nemila are lower by 35 % in comparison with Gračanica DH
- Investment cost for 1 MW of max. operated capacity are **higher by 29 %** in Nemila in comparison with Gračanica DH
- **Cooperation, communication and coordination – very good and efficient** thanks to clear division of responsibilities and fulfilment of commitments.

Main findings – effectiveness

usefulness

- **Overall aim** – decrease of air pollution – cannot be verified as no data about air quality in Nemila before 2013
- **Target** – 9 public/commercial objects and 40 family houses connected, but at the end there are 3 public buildings and 91 family houses and smaller objects
- **Installed capacity 3 MW operated usually at 20 – 30 %, max. 50 %**

Main findings – impacts

- **Decrease of air emissions** by savings of about 150 t of coal per year, but only 71 % of connected households use only DH during heating season
- **Air quality improvement** in relation to DH operation felt by 68 % of connected households
- Some connected households made construction improvements to decrease heat losses

Main findings – sustainability

- * Technology lifetime – 15 – 20 years, regulation range 10 – 110 %
- * Sustainability of operation – 5 years guarantee service and online connection of through automated process control with Czech experts
- * Operator ensures staff and finances for operation
- * Insurance for natural disasters (after flooding damage repairs)

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Survey between households connected to DH - RESULTS

- 1) Households using only DH - 71 %
- 2) Reasons for partly using old heating source:
 - * Extreme cold - 15 %
 - * DH is too expensive - 19 %
 - * Electricity out of order - 7 %
- 3) Construction repairs since connection to DH – 33 %
 - * Main repairs: heat insulation of walls or roof, windows replacement
- 4) Impacts
 - * 68 % consider air quality improvement
 - * 19 % feel decrease of odor

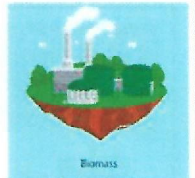


Activities of other donors in renewable energy sector

- * **UNDP** - DH projects focused on fuel change towards biomass (e.g. reconstruction of Bihac hospital heating system)
- * **SIDA** - energy efficiency measures, cooperates with UNDP, EBRD
- * **GIZ** - support schemes for biomass utilization (e.g. feed in tariff), national study mapping biomass potential in BiH, supports establishment of energy cooperatives
- * **USAID** - CHP projects in farming and wood processing sectors; prepared SW for FS calculation available free of charge (online)

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Recommendations



GRIJANJE d.o.o.

- Sign agreement with EVECO for service after the end of guarantee (2018)
- **Extend the heating network**
- Fulfill environmental permit condition

Local authority Nemila

- Support establishment of Energy union
- Searching for financial sources for **connection of other public buildings to DH**
- Support of households for connection to DH

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Recommendations for Zenica



- Ensure **financial sources** for connection of new households and in mid term extension of the network to improve economy of operation
- Support establishment of **Energy Union** in order to get biomass in favorable price in long term



- Support MA Zenica in searching for suitable funding for connecting new houses to DH and extension of heating network

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Recommendations for ZD canton and Czech Embassy

Ministry of economy Zenica-Dobož Canton

- * Select list of **potential projects** from the Cantonal catalogue which are relevant to CZDA priorities for BiH and send them to the Czech Embassy for consideration

Czech Embassy

- * Disseminate information about the newly adopted Strategy for development cooperation for 2018 – 2030 and relevant sectoral specification for BiH to the potential Bosnian partners

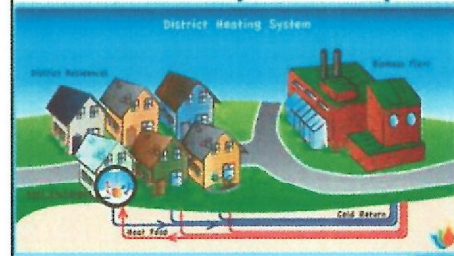
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Development Cooperation Strategy of CR for 2018 – 2030

- BiH is one of 6 priority countries for development support
- MFA preparing Development Cooperation Program for BiH with specific project tools and sectors for support
- http://www.mzv.cz/sarajevo/bs/Razvojna_saradnja/index.html

„CR will provide 3,2 mil. EUR/year for projects focused on economic growth, sustainable development, management of natural resources and good governance“
" Czech Ambassador, 9/2017

Děkujeme za pozornost



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on behalf of 46 eval