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# Experience & Lessons Learned Financing Energy Efficiency Projects in Eastern Europe

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## USAID INTEREST IN ENERGY EFFICIENCY IN EUROPE AND EURASIA

- Energy costs are increasing, leaving less money for buying other items.
  - Energy costs represent significant share (>10%) of a family's budget.
  - Energy cost impact is greatest among the lowest income groups, which pay a percentage two-to three times greater than average households.
  - Energy represents a substantial percentage of municipal expenses, limiting the ability to provide high quality public services.
- Energy costs can be reduced 20-40% through cost-effective projects.
- Important indirect benefits:
  - Improving comfort
  - Improving the quality of services
    - schools and hospitals can buy more text books and medicine;
    - school attendance increases;
    - hospitals have lower re-infection rates;
    - streets are safer.
- Environmental/climate benefits including lowering emissions of greenhouse gases and other harmful pollutants.



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## RESULTS: USAID-FUNDED ENERGY EFFICIENCY PROJECTS

Type (#)	Countries	Cost Range (000's)	Average Payback
Hospitals (16)	Bulgaria, Serbia, Lith.,Czech	\$40 - 380	2.9 yrs
Schools (18)	Serbia, Macedonia, Bulgaria Hungary, Poland, Czech, Ukraine	\$1.8 - \$127	3.1
Housing (5) (apartment buildings)	Albania, Poland, Slovakia, Ukraine	\$3.6 - \$163	3.5
Street lighting (20)	Serbia, Poland, Bulgaria	\$5 - \$450	3.9
Municipal buildings (6)	Bulgaria, Serbia	\$83 - \$362	3.1
District heat distribution (2)	Serbia, Bulgaria	\$44- \$393	2.8
Senior center (2)	Serbia, Macedonia	\$5 - 173	2.0



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## WHAT IS DCA?

- DCA = Development Credit Authority
- USAID partial loan guarantee ( $\leq 50\%$ ) for commercial lenders
- Loans issued by participating lenders according to their approval process
- Provides support for non-sovereign lending (private sector and municipal)
- USAID technical assistance may help identify projects and perform necessary analyses



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## WHY WE USE DCA

- Addresses insufficient donor funds by leveraging limited development assistance with private capital
- Overcomes lender reluctance by reducing risk, increasing their willingness to extend loans
- Addresses barriers to borrowers: reduced collateral requirements, increases size of loans
- Well-suited for energy efficiency and renewable energy: short paybacks enable borrowers to repay
- Helps establish creditworthiness among newly eligible borrowers, e.g., Macedonia municipalities.



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## **PROJECT IDENTIFICATION AND PREPARATION**

- USAID or other donor-funded technical assistance identifies projects and prepares technical and financial analyses
- Important to get understanding, trust from borrower and lender
- Requires additional development assistance funding



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## SUCCESS STORY: BULGARIA DCA

- Partner Bank: UBB
- Partial Loan Guarantee
  - Initially 50%, subsequently lowered to 30%
  - Leveraging started at 12:1, improved to 20:1, later 40:1
  - Reduced risk to lenders; reduced collateral requirements; increased size of loans; extended terms of loans



## BULGARIA DCA RESULTS

- Initial \$10 lending facility
  - 33 projects financed
    - 22 municipal, 11 industrial
  - Annual savings: 400 GWh electricity; 1.419 TJ fuel and thermal; and 530,000 tons CO<sub>2</sub>
  - 100% repayment rate (vs. pre-DCA default rate of 4.5% among total loan portfolio)
  - Maximum terms: 5 years municipal, 10 years industrial (vs. 1-3 years non-DCA)
  - TA <10% of loan amounts



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## **BULGARIA DCA ACCOMPLISHMENTS**

- For years, DCA was the only lending source for energy efficiency of any sort.
- DCA was only source of municipal loans.
  - Demonstrated right and ability to borrow
  - Established right to borrow beyond electoral term
- DCA opened the market for small loans
  - Average loan: \$250,000
  - 39% of loans <\$100,000
  - Only 12% of loans >\$500,000; 6% >\$1 million
- Paved the way for BEEF, EBRD, other IFIs



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## OTHER COUNTRIES WITH DCA FACILITIES

- Macedonia -- \$10 million lending facility
  - UniBank, NLB Leasing
  - 50% guarantee
  - Municipal and residential projects; EE and RE
  - ESCOs eligible as borrowers
- Bosnia & Herzegovina -- \$10 million lending facility
  - Raiffeisen
  - Guarantee may be <50% at Raiffeisen discretion
  - Municipal and residential projects; EE and RE
  - ESCOs eligible as borrowers



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## Critical Success Factors

- Lending environment
  - Niche banking markets
  - Tariff and bill-paying discipline; consumption-based billing; cost-reflective energy tariffs
- Lender commitment, motivation
- Legal, creditworthy borrowers
  - Concerns with municipalities, Home Owner Associations
- Good project preparation meeting lender's needs
- Capacity training among lenders
- Awareness raising among eligible borrowers



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## Sustainable Project Preparation

- Phase I: Donor-funded TA (<10% of loan amount)
- Phase II: Include costs in loan repayment
  - Initial TA paid as part of borrower's share
- Phase III: ESCO included as part of comprehensive turn-key package



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## Future Challenges

- Lending to ESCOs
- Residential energy efficiency lending
  - Microfinancing
  - Revolving funds
- Concerns: Creditworthiness, lack of borrowing history, Homeowner Associations
- Requires innovative approaches



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