



Experience & Lessons Learned Financing Energy Efficiency Projects in Eastern Europe

Ira Birnbaum
Energy Efficiency & Climate
Change Coordinator
USAID Europe & Eurasia Bureau

UN Commission on Sustainable Development CSD-15
New York, May 1, 2007



USAID INTEREST IN ENERGY EFFICIENCY IN EUROPE AND EURASIA

- Energy costs are increasing, leaving less money for buying other items.
 - Energy costs increased from about 4% of a Bulgarian family's budget in 1995 to over 12%.
 - 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 benefits including lowering emissions of greenhouse gases and other harmful pollutants.



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



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



PROJECT IDENTIFICATION AND PREPARATION

- USAID-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



SUCCESS STORY: BULGARIA DCA

- Partner Bank: UBB
- Partial Loan Guarantee
 - Initially 50%, now 30%
 - Leveraging started at 12:1, improved to 20:1, now 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 CO₂
 - 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
- Additional \$10 million (revolving) now in place



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



OTHER COUNTRIES WITH DCA FACILITIES

- Ukraine: UkrSib Bank, Nadra Bank -- \$3 million
- Kazakhstan: Kazkommertsbank (KKB) -- \$15 million
- Georgia -- \$3 million
- Macedonia – ~\$12 million (under development)



Critical Success Factors

- Lending environment
 - Niche banking markets
 - Tariff and bill-paying discipline; consumption-based billing
- Lender commitment, motivation
- Legal, creditworthy borrowers
- Good project preparation meeting lender's needs



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 includes as part of comprehensive turn-key package



Future Challenges

- Lending to ESCOs
- Residential energy efficiency lending
- Concerns: Creditworthiness, lack of borrowing history
- Requires innovative approaches
- Other innovative financing tools
 - PEPSEI
 - Pooled finance



Contact Information

Mr. Ira Birnbaum
Energy Efficiency/GCC Coordinator
USAID Europe & Eurasia Bureau
Washington, DC
ibirnbaum@usaid.gov
Phone: 202-712-1459. Fax: 202-216-3389