

# FINANCING ENERGY EFFICIENCY IN BUILDINGS IN COUNTRIES IN TRANSITION

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## ENERGY EFFICIENCY: A KEY ISSUE FOR THE EBRD REGION OF OPERATIONS

- INCREASE SECURITY OF SUPPLY
  - REDUCE DEPENDENCY ON IMPORTS OF INCREASINGLY EXPENSIVE FOSSIL FUELS
- IMPROVE COMPETITIVENESS
  - SAVING ENERGY REDUCES COSTS, IMPROVES CASH FLOWS
  - ENERGY INTENSITY OF LITHUANIA (PPP-ADJUSTED) IS CA 1.5 TIMES THE EU-15 AVERAGE
- SAVE SCARCE CAPITAL RESOURCES
  - SAVING ENERGY IS CHEAPER THAN BUILDING A NEW POWER PLANT
- IMPROVE THE ENVIRONMENT
  - GLOBAL: REDUCE GREENHOUSE GAS EMISSIONS; CARBON INTENSITY
  - LOCAL: AIR POLLUTION



## EBRD's SUSTAINABLE ENERGY INITIATIVE (SEI) OVERVIEW

- EBRD SPECIFIC RESPONSE TO G8 GLENEAGLES SUMMIT IN 2005
- NEW EBRD ENERGY OPERATIONS POLICY PLACING ENERGY EFFICIENCY AND RENEWABLE ENERGY AS CORNERSTONE
- TARGET OF 1.5 BILLION IN EBRD FINANCING OVER PERIOD 2006-2008, AN INCREASE OF CA 50% OVER PREVIOUS LEVELS
- PRIORITY FOCUS MATCHED TO EBRD'S COMPARATIVE ADVANTAGES
- NEW ORGANISATION TO IMPROVE MAINSTREAMING
- ADDITIONAL STAFF; TEAM OF 16 PROFESSIONAL BY END 2006



## EBRD SUSTAINABLE ENERGY INITIATIVE: SECTOR FOCUS

- LARGE INDUSTRIES IN ENERGY INTENSIVE SECTORS
- SMALL ENERGY USERS SUCH AS SME'S AND RESIDENTIAL USERS
- CLEANER POWER ENERGY SUPPLY INCLUDING FUEL SWITCH AND GENERATION, TRANSMISSION AND DISTRIBUTION EFFICIENCY IMPROVEMENT
- RENEWABLE ENERGY INCLUDING HYDRO, WIND AND BIOFUELS
- MUNICIPAL INFRASTRUCTURE INCLUDING DISTRICT HEATING, PUBLIC TRANSPORT, SOLID WASTE (METHANE), AND WATER
- CARBON FINANCE



**EBRD SUSTAINABLE ENERGY INITIATIVE:  
2006 RESULTS, 15% OF TOTAL EBRD COMMITMENTS... ca 90% EE!!!**

SEI SECTOR	NUMBER OF PROJECTS	EBRD SEI FINANCING (€ MILLION)
INDUSTRIAL EE	16	188.2
EE CREDIT LINES	8	81.1
CLEANER ENERGY PRODUCTION	5	310.3
RENEWABLE ENERGY	6	80.8
MUNICIPAL INFRA EE	16	88.0
TOTAL	51	748.4



## EE IN BUILDINGS

- LARGE POTENTIAL IN REGION
- BUT STILL “UNDERWEIGHT” IN EBRD OPERATIONS
  - APPROX 8.5% OF SEI FINANCING 2006, CA €65 MILL
- NO PROJECTS FINANCED YET IN “COMMON PARTS” OF APARTMENT BLOCKS SUCH AS E.G. BUILDING ENVELOPE (AS OPPOSED TO INDIVIDUAL FLATS)
- EBRD AIMS TO SCALE UP ITS ACTIVITIES AND FINANCING IN THIS AREA
- MAIN FINANCING PRODUCT: DEDICATED CREDIT LINE SUPPORTED BY GRANT PACKAGE



## BULGARIAN RESIDENTIAL ENERGY EFFICIENCY CREDIT LINE

- INITIATIVE LAUNCHED IN 2005, TO STIMULATE AND ACCELERATE EE INVESTMENTS IN RESIDENTIAL SECTOR
- DESIGNED BY THE EBRD AND THE BULGARIAN GOVERNMENT WITH SUPPORT FROM KOZLODUY INTERNATIONAL DECOMMISSIONING FUND (KIDSF)
- REECL IS A '*ONE-STOP-SHOP*' INTEGRATED PACKAGE OF LOANS, GRANTS AND TECHNICAL ASSISTANCE, AIMING TO ADDRESS MARKET BARRIERS TO INVESTMENTS
- SEE [WWW.REECL.ORG](http://WWW.REECL.ORG)



## OVERVIEW

- EBRD CREDIT LINE: EUR 50 MILLION
  - LOANS TO 6 LOCAL BULGARIAN BANKS
- KIDSF GRANT SUPPORT: EUR 14.5 MILLION
  - TECHNICAL ASSISTANCE
  - INCENTIVES TO SUB-BORROWERS AND BANKS  
(UPON COMPLETION AND PERFORMANCE-BASED)
- SUB-BORROWERS = INDIVIDUAL HOUSEHOLDS
  - GRANT SUPPORT @ 20% OF RELATED LOAN AMOUNT  
(CAPPED)



## RESULTS TO DATE

- NUMBER OF SUB-LOANS: 10,400
- AVERAGE SIZE OF SUB-LOANS: EUR 1,500
- TOTAL DISBURSEMENTS: EUR 15 m
- ELECTRICITY EQUIV. SAVED: 68,500 MWH/Y  
EQUIV. TO 10.6 MW OF POWER GENERATION CAPACITY
- CO<sub>2</sub> EMISSION REDUCTION: 101,000 TON/Y



## TYPES OF INVESTMENTS

ENERGY EFFICIENT WINDOWS	51%
HEAT PUMP SYSTEMS	18%
WALL, ROOF, FLOOR INSULATIONS	13%
EFFICIENT GAS BOILERS	9%
SOLAR WATER HEATERS	4%
EFFICIENT BIOMASS STOVES/ BOILERS	3%



## TECHNICAL ASSISTANCE

- LIST OF ELIGIBLE EQUIPMENT
  - TECHNICAL SPECIFICATIONS AND
  - MINIMUM ENERGY EFFICIENCY CHARACTERISTICS
- LIST OF ELIGIBLE SUPPLIERS (SCREENED)
- MARKETING, TRAINING TO BANKS, SCREENING OF APPLICATIONS, COMPLETION VERIFICATION (DESK-BASED AND SPOT CHECKS), WEBSITE



## OUTSTANDING ISSUES

- SUB-OPTIMAL APPROACH AS LOANS EXTENDED ONLY TO INDIVIDUALS
- HOUSEHOLDS NOT ORGANIZED IN ASSOCIATIONS (LEGAL ENTITIES) UNDER THE BULGARIAN CONDOMINIUM LAW
- LEVEL OF INCENTIVE @20% SIMILAR WITH VAT (UNDERGROUND ECONOMY)



## ACCELERATING UPTAKE

- INCENTIVISING EE IN COMMUNAL SPACES (BUILDING ENVELOPE THERMAL INSULATION) WITH INCREASED GRANT SUPPORT
  - I.E. 30% OF THE LOAN AMOUNT IF AT LEAST 50% OF THE HOUSEHOLDS IN A BLOCK OF FLATS APPLY COLLECTIVELY



## EE IN APARTMENT BLOCKS: KEY REGIONAL ISSUES

- HIGH SHARE OF HOUSING STOCK
  - ca 65% IN LITHUANIA
- HIGH SHARE OF DISTRICT HEATING
  - ca 65% IN LITHUANIA
- MASS PRIVATISATION OF THE 90'S: > 95%
  - WIDE DISPERSION OF INCOMES
- NON-EXISTENT OR WEAK HOME-OWNERS ASSOCIATIONS
- LOW QUALITY > HIGH EE POTENTIAL
- LOWER ENERGY PRICES
- EE-RETROFIT GENERALLY NOT COST-EFFECTIVE IN ITSELF



## EE IN APARTMENT BLOCKS: THREE KEY SUCCESS FACTORS

AN INVESTMENT SCHEME FOR RESIDENTIAL ENERGY EFFICIENCY REQUIRES THREE CONDITIONS TO BE MET:

- THE (EXISTENCE AND) EMPOWERMENT OF OWNERS' ASSOCIATIONS
- EASY ACCESS TO INVESTMENT CAPITAL
- GENEROUS INCENTIVES (REWARDS) FOR PROJECT IMPLEMENTATION



## EE IN APARTMENT BLOCKS: A TALE OF THREE COUNTRIES

	BULGARIA	ROMANIA	LITHUANIA
OWNERS' ASSOCIATIONS			
ACCESS TO CAPITAL			
GENEROUS INCENTIVES			



## LITHUANIA: PERFECTING EXISTING “MODERNISATION OF MULTI-APARTMENT BUILDINGS” SCHEME

- ROBUST COLLECTIVE DECISION-MAKING MECHANISMS
  - E.G. ABILITY TO CONTRACT / BORROW
- ADJUST SUBSIDIES ACCORDING TO INCOME TO OVERCOME RETICENCE OF LOW-INCOME GROUPS
  - MOST EXISTING SCHEMES RELY ON FLAT-RATE SUBSIDIES
- IMPROVE COMMUNICATION ON BENEFITS OF SCHEME
- ADEQUATE PROJECT PREPARATION & IMPLEMENTATION SUPPORT TO LOWER COSTS TO OWNERS AND FACILITATE STANDARDISATION
  - ENERGY AUDITS, DETAILED DESIGN AND TENDERING
- LONG-TERM AND SUFFICIENT BUDGETARY COMMITMENT TO ENSURE CREDIBILITY OF SCHEME
- PROMOTE AN APPROACH BY DISTRICT (ECONOMIES OF SCALE) AND INVOLVEMENT OF MUNICIPALITIES
- IMPROVE BANK’S APPETITE FOR SECTOR THROUGH FINANCIAL INCENTIVES AND PERHAPS ASSUMPTION BY STATE OF COST OF LOAN INSURANCE (0.3-0.5% P.A.)
  - IN RETURN BANKS TO REDUCE MARGINS CLOSE TO INDIVIDUAL MORTGAGE LEVELS
- CONSIDER SUSTAINABLE ENERGY SOURCES SUCH AS SOLAR AND HEAT PUMPS
- ENSURE CONSTRUCTION INDUSTRY RESPONDS TO CHALLENGE



## LITHUANIA: EBRD'S PROPOSED APPROACH

- BUILD ON EXISTING MARKET-BASED MECHANISM WHICH IS BUILT ON SOUND FOUNDATIONS AND NEEDS TO BE PERFECTED
- LAUNCH NEW EBRD CREDIT LINE TO LOCAL BANKS
  - FOR ON-LENDING TO HOMEOWNER ASSOCIATIONS OR SIMILAR ARRANGEMENT
  - GRANT FUNDING FOR:
    - TA PACKAGE
    - FINANCIAL INCENTIVES TO BANKS AND BORROWERS
  - MIN €50 MILLION, BUT POTENTIAL MUCH LARGER
  - AIM FOR > 2000 BUILDINGS PER YEAR
  - POSSIBLE STARTING DATE: 2008
- EBRD HAS INITIATED DISCUSSIONS WITH GOL ON ACCESS TO FUNDING FROM IGNALINA DECOMMISSIONING FUND
- POLICY DIALOGUE TO PERFECT EXISTING GOV'T SCHEME



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## EE IN APARTMENT BLOCKS: FINDINGS FOR BALTIC COUNTRIES & POLAND (EUROACE 2006)

- 6.1 million dwellings
- 125,000 buildings
- 41% of dwellings
- Energy saving potential: 34%, equiv to 4.4% of regions' final energy demand or 9.3 MtCO<sub>2</sub> emissions
- Cost of investments: €c 1.4 /KWh (NB: EE is assumed to be part of a general refurbishment)
- Simple payback time: 10.5y
- Energy saved: 140 KWh/m<sup>2</sup>
- Net cost of conserved energy: €c -0.9 /KWh
- Low cost-effectiveness due to low energy (heating) prices

