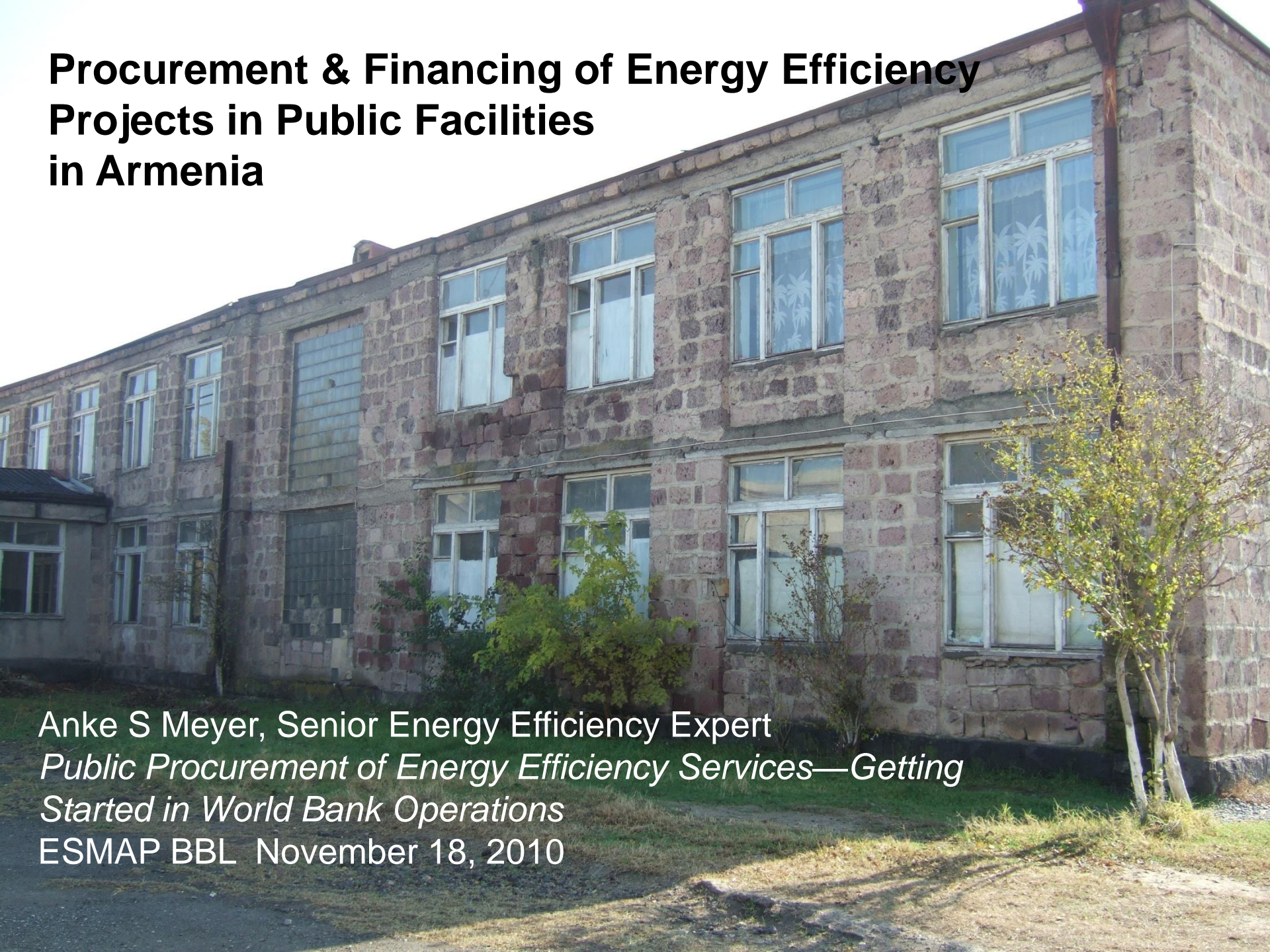


Procurement & Financing of Energy Efficiency Projects in Public Facilities in Armenia



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*Public Procurement of Energy Efficiency Services—Getting
Started in World Bank Operations*
ESMAP BBL November 18, 2010

Background

- Social sector faces severe budget constraints coupled with rising energy costs, which is not sustainable
- State of public buildings is poor and many need rehabilitation without prospects for cost recovery
- Also
 - ~97% of primary energy sources are imported
 - energy costs are generally second highest cost (5-20% of total costs) for public buildings
 - survey results show average comfort levels in social buildings ~40%
 - gas prices increased ~58% from 2008 to 2010; electricity also increased 20% (daytime), 33% (nighttime)

Project Summary

PDO: To reduce energy consumption in social and other public facilities

Financing: \$12.4m (\$10m IBRD, \$1.8m GEF, \$0.6m GOA)

Description: EE investments in public facilities (~75-100 facilities – schools, kindergartens, hospitals, public lighting)

Implementation Arrangements: The GOA-owned Renewable Resources and Energy Efficiency (R2E2) Fund, created in 2005 to promote RE/EE, will implement the project.

Criteria for Public Facilities

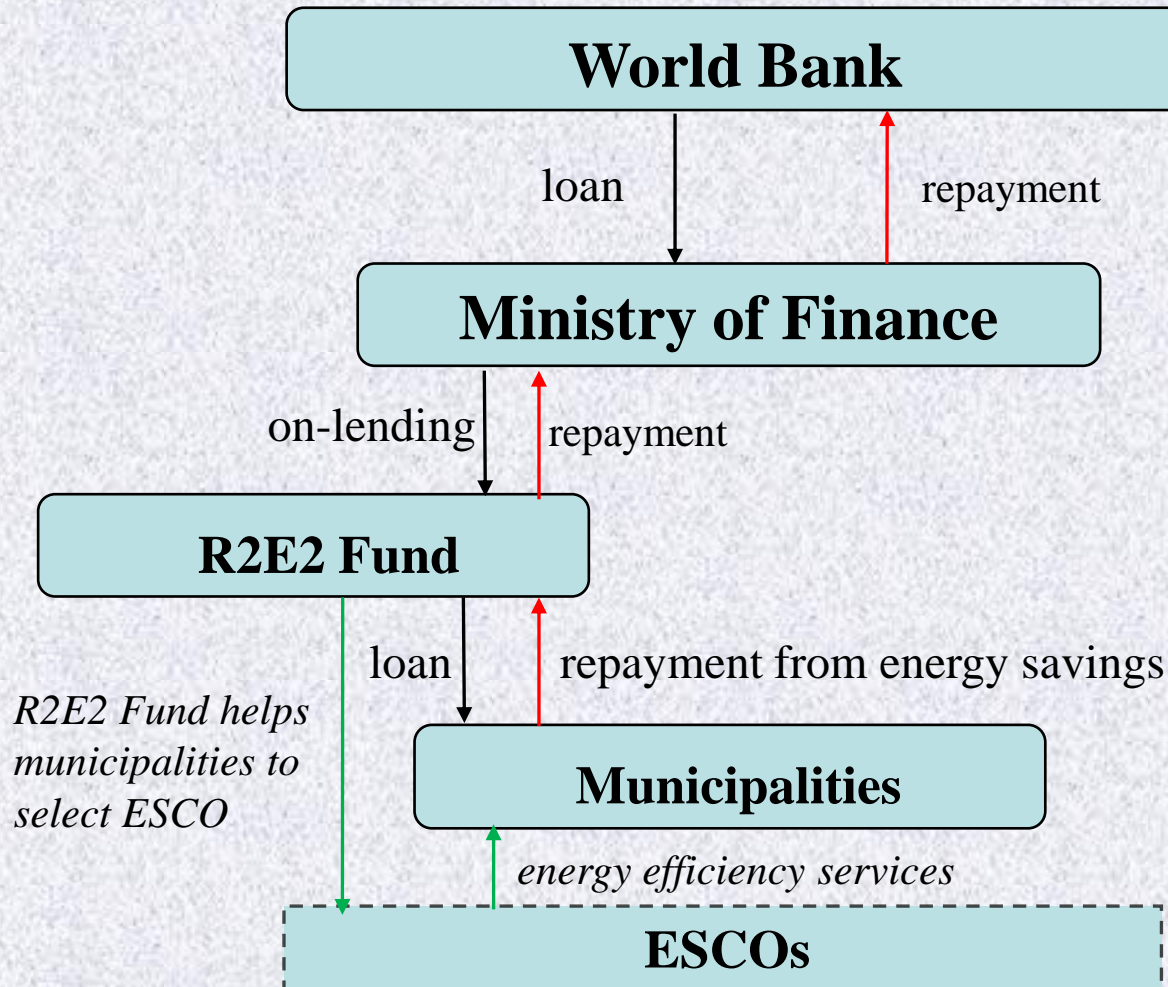
Facility type – public administration buildings, schools, kindergartens, hospitals, public lighting

Requirements - sound building structures, no plans for facility closing/privatization

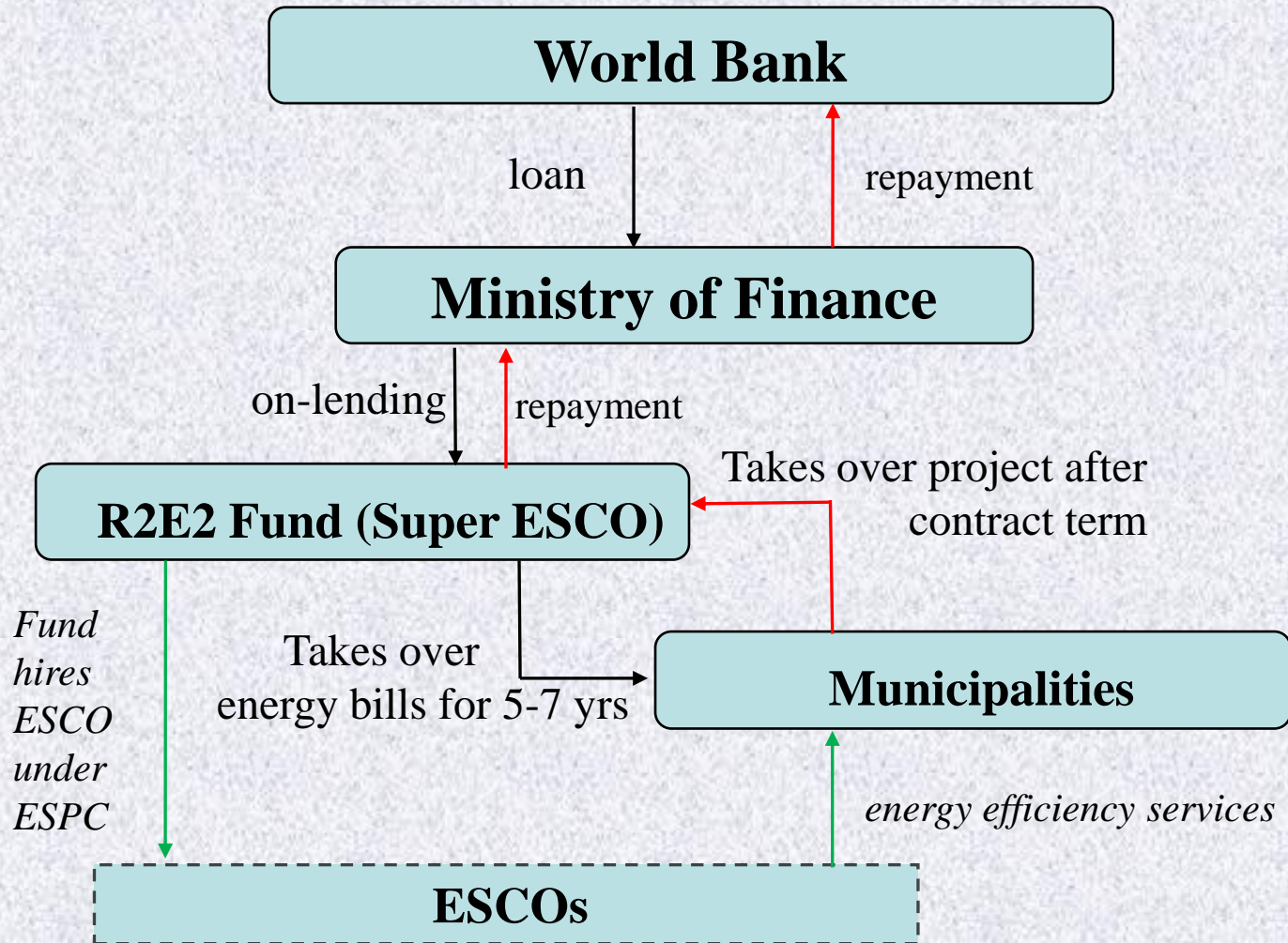
Additional selection criteria

- Comfort level over 50%
- Technical energy savings potential over 30%
- Payback period less than 10 years

Financing Scheme #1 – Municipal lending



Financing Scheme #2 – Super ESCO



Procurement Scheme

- (Public procurement note Option 5 – Combined design & output-based CW contract with performance-based payments)
- Use of NCB template for small Works (updated Nov 2010)
- Project is defined by minimum level of energy savings based on preliminary energy audit
- Bidder must bid on design and construction
- Bids are submitted in single envelop (technical & financial)
- Evaluation is based on (i) technical feasibility to meet promised energy savings, and (ii) highest net present value
- Bidding documents to include process for commissioning and 1-year M&V

Payment Scheme

- Desire to begin to transfer some risks from the Fund, requiring some payments based on project performance is desirable
- But, need to disburse within project period and local ESCOs have limited working capital
- Thus, proposed payment scheme is as follows:
 - Advance payment of up to 20% at contract signing based on suitable bank guarantee
 - 5% payment after approval of final project design
 - 60% payment upon successful commissioning of project performance (within 10% of promised NPV)
 - 10% payment after 12 months if project performance persists
 - 5% payment after 12 months of acceptable O&M services

Status

- Procurement approach discussed and agreed with ECA RPA
- R2E2 Fund now revising bidding documents and developing commissioning and M&V plans
- First performance contract to be signed in late 2011
- Project QER scheduled for early December; pre-appraisal in March 2011