



Ministry of Power and  
Energy Sri Lanka

## WB Energy Efficiency Program Support in Sri Lanka



Sri Lanka Sustainable  
Energy Authority

# Implementation and Financing Mechanisms in Commercial, Public & Industrial Buildings Sectors

## National Consultation and Dissemination Workshop

November 10, 2022

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ARMENIA RENEWABLE RESOURCES  
AND ENERGY EFFICIENCY FUND

*Be Efficient, Use Renewables and Become Sustainable*

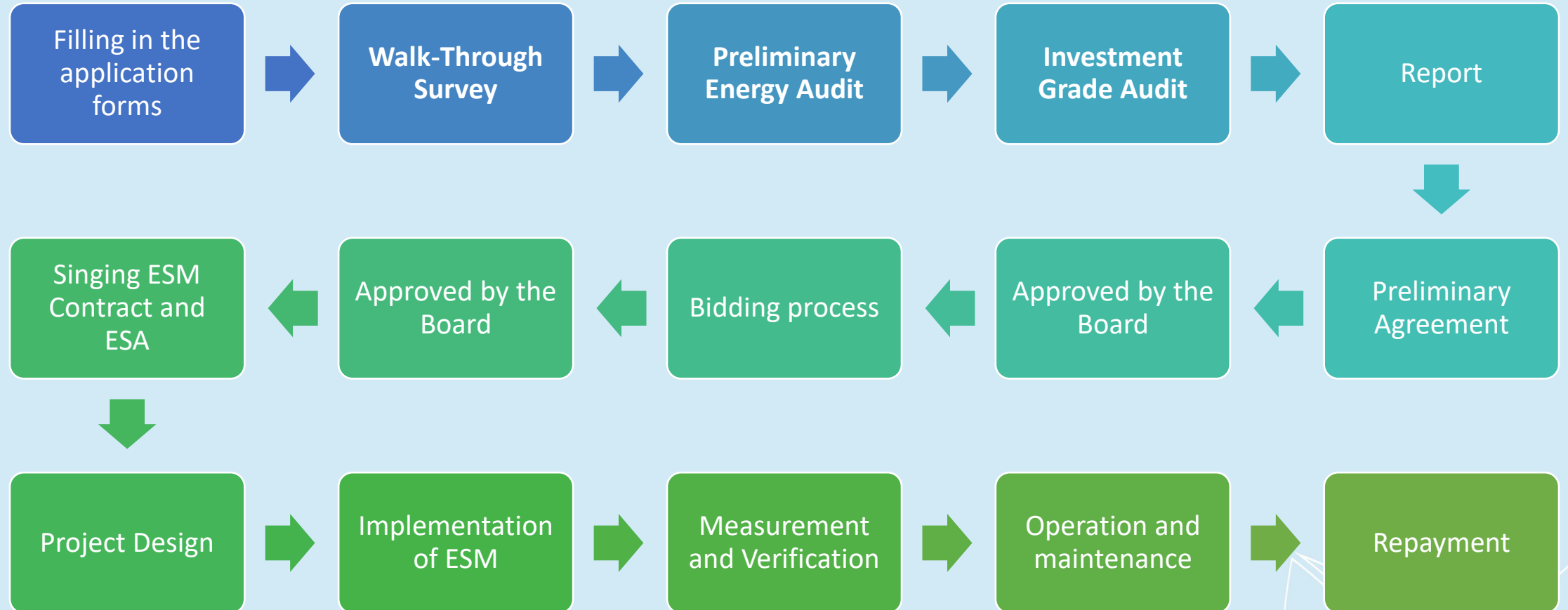
[www.r2e2.am](http://www.r2e2.am)



# Procurement of Energy Saving Measures in the Public Facilities

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R2E2 Fund

# Subproject Cycle



# Project preparation stage

- Estimation of Energy efficiency potential for sample Public Facilities
- Collection of energy/technical and financial data for 3300 public facilities
- Creation of data base for the Facilities
- Identification of energy efficiency potential of the Facilities and their repayment
- Development of initial selection indicators of the Facilities

- Development of Energy Efficiency Project concept,
- Discussion with Beneficiaries – the WB, Government, Local self-governmental institutions, managers of facilities, construction and design companies,
- Approval of the Project,
- Broad awareness campaign. Mass Media, meetings in regions, communities, ministries
- Project implementation process.

# Innovative Procurement Method

- Introduced the use of modified National Competitive Bidding (NCB-WB) design/works contracts with three modifications:
- (i) it specified the minimum energy savings but allowed bidders to propose their best technical solutions in order to maximize energy savings and value to the client;
- (ii) selection was based on the highest NPV rather than the lowest cost;
- (iii) a commissioning test was performed and linked to the contractor payment, thus introducing a performance-based approach.
- NPV-based procurement had the benefit of encouraging bidders to be innovative in their technical solutions while maximizing the EE benefits per dollar invested as it factored both investment cost and energy savings



# Standard Form: Contractor's Bid

To: \_\_\_\_\_ *[name of Employer]*  
Address: \_\_\_\_\_ *[insert address]*

We offer to execute the (name of Lot)  
in accordance with the Conditions of Contract accompanying this Bid for the Contract Price

for Lot \_\_, \_\_\_\_\_ AMD, NPV \_\_\_\_\_ AMD, *energy saving* \_\_\_\_\_ %:

The advance payment required is: *[insert amount and currency]*

This Bid and your written acceptance of it shall constitute a binding Contract between us. We understand that you are not bound to accept the lowest or any Bid you receive.

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded the contract, are listed below:

Name and Address of agent	Amount and Currency	Purpose of Commission/gratuity
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\_\_\_\_\_  
(If none, state "none")

We hereby confirm that this Bid complies with the Bid validity and, if required, Bid Security or Bid-Securing Declaration as required by the bidding documents and specified in the Bidding Data.

We, including any subcontractors or suppliers for any part of the Contract, have nationalities from eligible countries in accordance with ITB Sub-Clause 2.2;

We have no conflict of interest in accordance with ITB Sub-Clause 3.1;

Our firm, its affiliates or subsidiaries—including any subcontractors or suppliers for any part of the contract—has not been declared ineligible by the Bank, or under the Employer's country laws or official regulations, in accordance with ITB Sub-Clause 3.3.

Authorized Signature: \_\_\_\_\_

Name and Title of Signatory: \_\_\_\_\_

Name of Bidder: \_\_\_\_\_

Address: \_\_\_\_\_



# Content of Bid

- **Contractor's Bid** (in a Standard Form given in Section III),
- **Bid security,**
- **Activity Schedule,**
- **Documents and data requested in the Qualification Information (Section 3)**
- **Additional mandatory documents:**
  - *a. Description of ESMs,*
  - *b. Detailed work plan,*
  - *c. Calculation of investment cost,*
  - *d. Annual energy saving indicator (percent),*
  - *e. Calculation of energy demand before and after ESMs,*
  - *f. Assessment of energy consumption decrease,*
  - *g. Calculation of NPV (sample form is attached to BD)*
  - *h. O&M plan*





# Contract award

- The Employer will award the Contract to the Bidder whose Bid for each Lot has been determined to be substantially responsive to the bidding documents as specified in Clause 26, particularly whose Bid for each Lot specifies a technically feasible option to meet the minimum annual energy saving level stated in Section 7, Specifications, and who has offered the Bid with highest net present value (NPV) for each Lot, provided that such Bidder has been determined to be (a) eligible in accordance with the provisions of Clause 3, and (b) qualified in accordance with the provisions of Clause 4.



# Scope of Contract

- a) Detailed engineering design of proposed ESMs;
- b) Implementation of ESMs;
- d) Commissioning;
- e) Measurement & Verification (M&V) within 15 days of heating season;
- f) Measurement & Verification (M&V) during the first 12 months after commissioning;
- g) Operations & Maintenance (O&M) Services during the first 12 months after commissioning.



# Payment Schedule

- 20% - Advance payment against submission of a suitable bank guarantee;
- 10% - After completion of design documents (based on invoice for an amount equivalent to 13% of the Contract Price)
- 20% - After actually completed and checked activities (based on invoice for an amount equivalent to 27% of the Contract Price)
- 30% - After completion of ESMs and commissioning, and signing of the Certificate of Completion (*Certificate of the Acceptance Committee on Commissioning of Completed Works*) (based on invoice for an amount equivalent to 40% of the Contract Price).
- 10% - Performance-based payment to be made subject to the written confirmation by authorized representative of the Employer accepted by the Project Manager that not less than xx% of savings are achieved (confirmed based on the results of at least 15-days M&V during the heating season and upon submission of an invoice for amount equivalent to 10% of Contract Price).
- 10% - will be paid after 365 days defect liability period upon submission of an invoice for amount equivalent to 10% of Contract Price and subject to the written confirmation by the Project Manager that (i) O&M services have been completed successfully, (ii) all the defects notified to the Contractor before the end of this period have been corrected (iii) that the achieved level of the savings has been unchanged.

# Pre-Bid Conferences/Trainings

- For each tender the Pre-bid Conference was organized
- Minutes of Pre-bid conferences were recorded and uploaded into the official web site of the R2E2 Fund
- Special Trainings were organized
- Questions received by the potential bidders were responded and replies were sent to all companies that obtained BDs



# PHOTOS of PRE-BID MEETINGS



# ESMs in the Facilities

- Number of ESM Contracts signed- 64
- Number of buildings (hospitals, universities, schools, penitentiaries etc.) involved in the Project- 180
- ESMs were implemented in Yerevan and all marzes of the Republic of Armenia



# EE Survey

## Survey

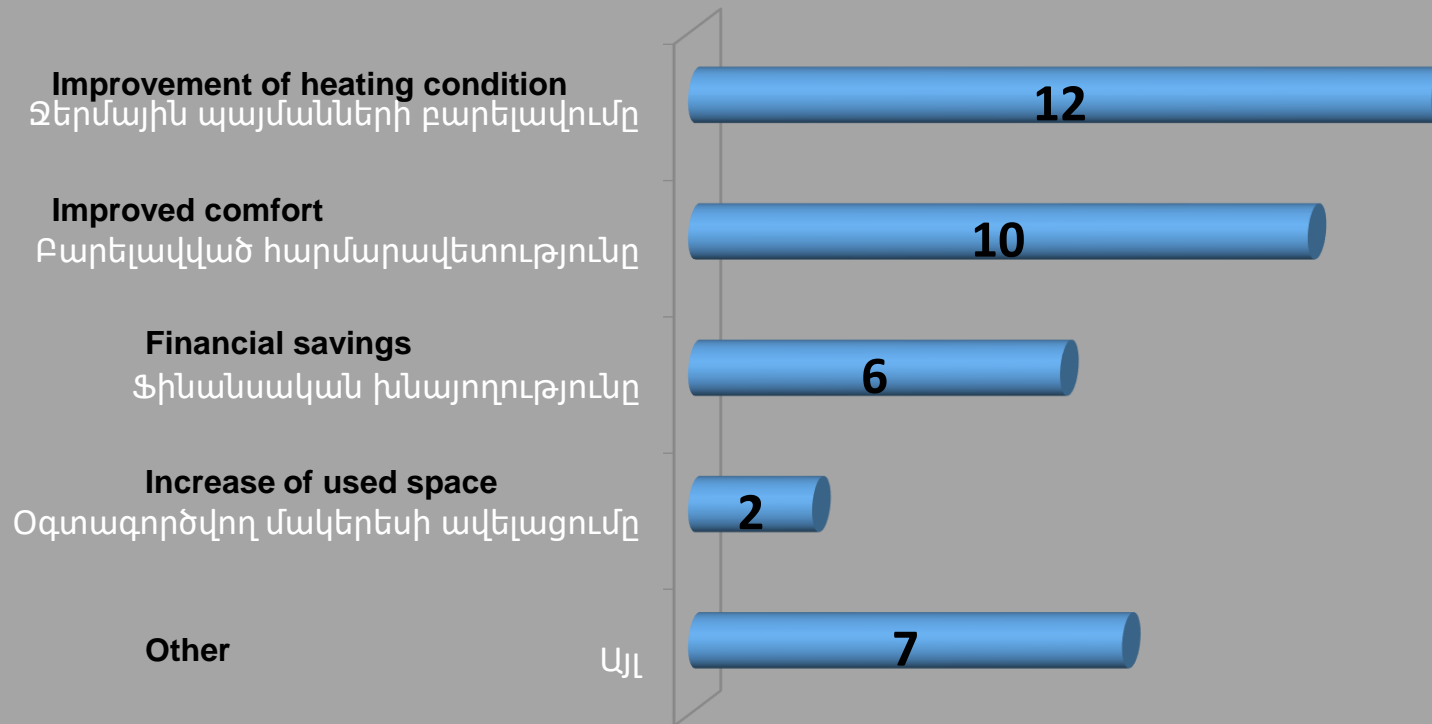
- **Beneficiaries**  
(43 facilities)
- **Contractors**  
(12 organizations)

## Analyses of documents

- Review of ESM documents, description of works, result of implemented works etc

# Beneficiaries

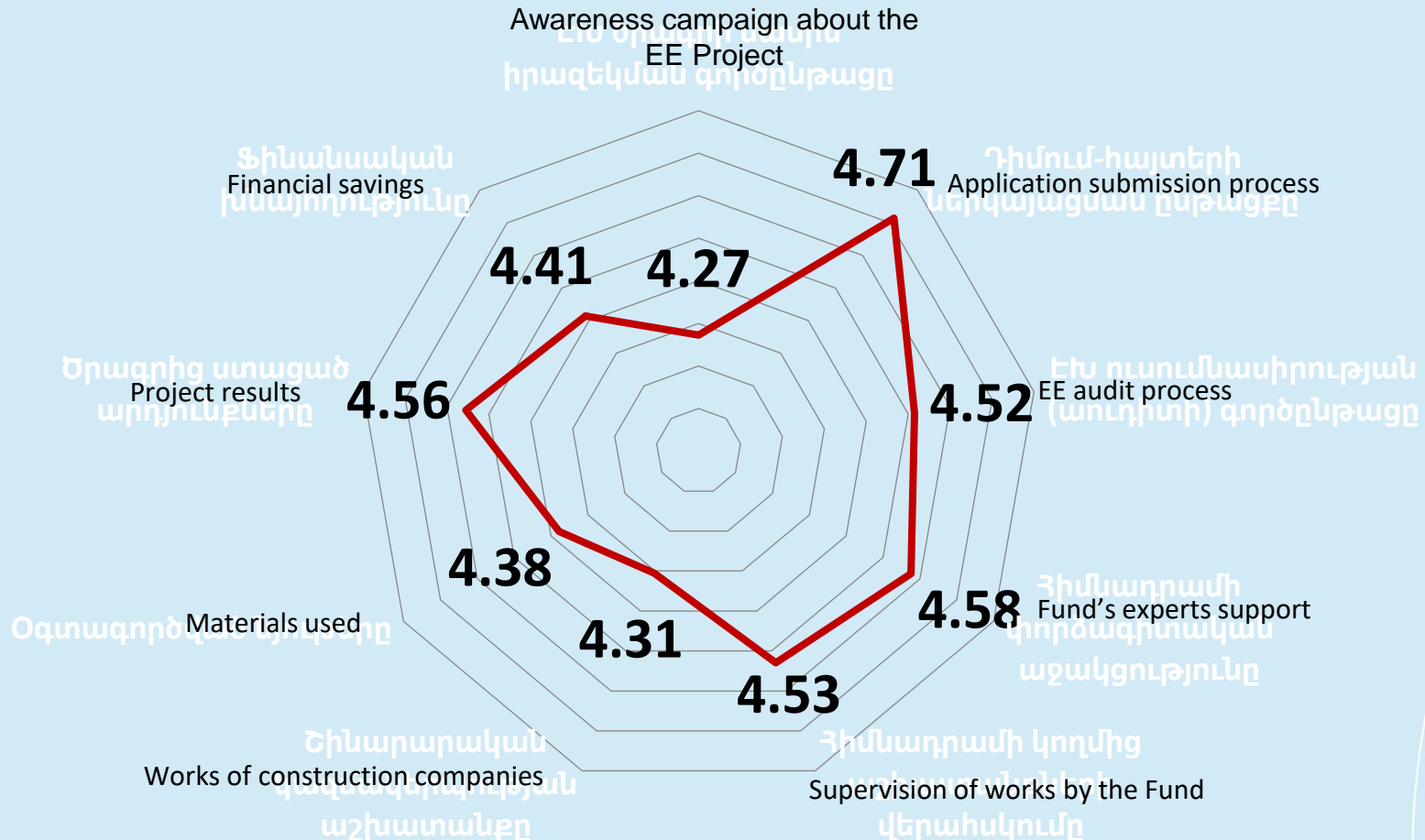
What was your achievement from the EE Project?





# Estimations of beneficiaries

(average mark, 1 -poor, 5-excellent)



# *Thank You*

*Zaruhi Gharagyozyan*

*Procurement team leader R2E2 Fund*

