Energy Efficiency Reforms in Azerbaijan

International Ecoenergy Academy

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International Ecoenergy Academy

Topics of Presentation

1. International Ecoenergy Academy's (IEA) background
2. Where are we now
3. Current and future challenges
4. Recommendations

1. IEA's Background

- **The IEA was founded in 1994.**

- **Co-founders of the IEA:**
  - The National Academy of Sciences of the Republic of Azerbaijan,
  - Clean Energy Research Institute of USA,
  - Russian Academy of Architecture and Construction,
  - Russian Association ABOK.

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Proposed Draft Laws

- Energy Efficiency Law of the Republic of Azerbaijan
- Law of the Republic of Azerbaijan on the use of Renewable Energy Sources
- Law of the Republic of Azerbaijan on Support to the use of Alternative and Renewable Energy Sources

The analyzed legal and regulation acts

- Laws
- Decrees
- Ordinances
- Regulations
- State Programs

Project: Building # 27

- Binagadi District, Baku City
- Built in 1986
- Old nine (9) floors and eight (8) entrances Soviet era type building
- Concrete exterior walls 30 cm thickness
- External and internal plasters are 0.02 m
- Dual exterior windows and glazed balcony doors
- Condition of the external walls are satisfactorily

Stage 1: Description of the initial situation

Stage 2: Identification and determination of the parameters of the territory where building is located

Stage 3: Market search for local insulation materials and window designs

Stage 4: Calculation of technical and economic parameters of the proposed activities

Final Results

- The total cost of the renovation is 582,174 AZN
- Annual savings are 69,676 AZN
- Payback 8.4 years
- Energy consumption before 209 kWh/year
- Energy consumption after 105 kWh / year
- Reduction of harmful emissions into the atmosphere 442 tons / year

Kindergarden in Khazar District

Final Results

- Calculated energy efficiency will be 1.119. 980 kWh/year
- Annual savings are 30, 624 AZH
- Annual reduction of CO_2 - 193 tons (0,17271 kg/kWh).

3. Current and future challenges

- excessive consumption of fossil fuels by all sectors;
- increase of GHG emissions and aggravation of environmental situation;
- high proportion of obsolete facilities in energy sector;
- losses of energy resources during production, transportation and utilization of energy resources;
- insufficient application of energy efficient and renewable energy technologies.

- **Legal:**
- **Financial:**
- **Technical and professional:**
- **Public awareness:**

4. Recommendations

- Establishment of a governmental entity to coordinate the activities related to energy efficiency in all spheres including industrial sectors, public and residential building;
- Development of long-term National Energy Efficiency program with participation of the related governmental bodies and scientific-research institutes;
- Development and implementation of projects on increased energy efficiency in both new and existing buildings;
- Development and use of new energy efficient building models according to advanced world practice.

- **Application of automated building energy management and control systems;**
- **Organizing of the manufacture of modern and high-quality building materials and structures;**
- **Development and adoption of new standards, norms and regulatory acts on building energy performance, and establishment of institutional and financial mechanisms of their management;**
- **Establishment of incentives and economic motives to stimulate energy efficiency of buildings;**

- **Development of legal and policy framework for energy efficiency of buildings in compliance with international standards to regulate**

Thank you for your attention!