



UN ECONOMIC COMMISSION for EUROPE

Activities to Support SE4ALL Initiative

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The Sustainable Energy for All (SE4ALL) Initiative of the UN Secretary-General

- UN Secretary-General Ban Ki-moon launched this global initiative to mobilise all stakeholders to take concrete action toward three critical objectives to be achieved by 2030:
 - (1) ensure universal access to modern energy services;
 - (2) double the global rate of improvement in energy efficiency; and
 - (3) double the share of renewable energy in the global energy mix.
- SEE4ALL is expected to catalyse major new investments to transform the world's energy systems, help eliminate energy poverty, and enhance prosperity.





Ensuring universal access to modern energy services.



“Access” should be defined in sufficiently broad terms that capture the challenges of the ECE region, in particular Central Asian (CA) countries. A broader view of access would include 3 aspects that collectively are very relevant to the CA region:

- a) physical access, which is connection either to a grid-based energy service or to an off-grid solution;
- b) economic access, which is the ability to pay the cost of service; and
- c) quality of service – if systems are not properly maintained, then quality will deteriorate. Having access to 1 hour of electricity a day does not meet any standard of access to modern energy services.





Ensuring universal access to modern energy services

Baseline:

Most of UNECE members have nearly universal access to “modern energy services”, defined as “universal access to modern cooking and heating solutions, as well as productive uses and community services”

Potential Target for UNECE member countries:

Achieve universal access to advanced energy services (AAES) defined as “customized, affordable, and reliable access to retail energy markets supplemented by widely available self-generation, renewable energy and energy efficiency solutions”

Advanced energy access in UNECE countries

- Highly uneven, both internally and across members
- Different interpretation of consumer rights and access to energy service
- Emphasis on centralized regulation or free market solutions





Ensuring universal access to modern energy services

- Connection to energy grids: opportunity for gaining affordable and non-discriminatory connection to electric, natural gas or district heating networks.
- Reliability of power supply: reduced frequency of blackouts and brownouts and frequency of disruptions in the central heating delivery as well as prompt restoration of access to power.
- Access to alternative energy solutions: availability of natural gas networks, electric grids, and district heating; choice of alternative providers; ability to install autonomous generation.
- Access to modern renewable energy instruments: availability of household renewable energy technologies; ability to sell excess power to the grid; access to information on RE opportunities.
- Access to energy saving instruments: access to energy saving programs and financial incentives; availability of smart metering and smart grids; access to information on how to save energy.
- Affordability: affordable cost of electricity and centralized heat (including connection charges) relative to average incomes; availability of subsidized rates for disadvantaged consumer categories.





Ensuring universal access to modern energy services

Barrier	Policy
1. Lack of awareness about types of advanced energy services among residential and business consumers	<ul style="list-style-type: none">● Exchange of AAES case studies and lessons learned between UNECE members on a regular basis.● Awareness raising measures focused on major consumer groups and business associations.
2. High costs of advanced energy service technologies	<ul style="list-style-type: none">● Public support for selected technologies via:<ul style="list-style-type: none">○ “Green technology” banks and funds.○ Tax breaks and rebates.○ Removal of import tariffs.○ Targeted subsidies for disadvantaged communities





Ensuring universal access to modern energy services

Barrier	Policy
3. Lack of interest from utilities to offer AAES to their customers	<ul style="list-style-type: none">• Maximum deregulation of end-use energy service sector, including suppliers of equipment and services.• Providing a mix of incentives and minimum standards to utilities to stimulate greater access to advanced energy services.
4. Technological difficulties in providing AAES	<ul style="list-style-type: none">• Public support for applied AES research and development.• Sharing best practices among UNECE members.
5. Lack of experienced AAES providers	<ul style="list-style-type: none">• Introduction of AAES specialization in technical colleagues and universities.• Specialized training courses.





Doubling the global rate of improvement in energy efficiency

Dramatic improvement in energy efficiency is seen as a prime direction of climate change mitigation and a way of ensuring equitable and affordable access to energy across the globe

UNECE consumers still have way to go to become more energy efficient

Main instruments of saving energy for businesses and households:

- Smart meters and smart grids allowing to effectively manage daily loads
- Wide choice of energy efficient equipment and appliances
- Economic incentives – differentiated tariff structures

What the governments could do:

- Ensure universal energy efficiency certification and labeling of equipment and appliances (e.g., EU approach)
- Support regional demand-side management programs in high-load areas
- Provide universal access to information and tools to manage and save energy





Doubling the global rate of improvement in energy efficiency

Financing energy efficiency projects:

All countries in the CA region have expressed their interest in adopting energy efficiency measures in sectors with high carbon dioxide emission levels but they still face serious challenges in attracting private investments in EE area.

Despite considerable differences in countries' power systems, all targeted countries are in need of significant foreign and domestic investments to employ advanced EE technologies with all related benefits.

Capacity building for the development of energy efficiency investment projects is an essential requirement for this work.

While UNECE and other implementing partners are actively working on furthering the state of energy security, energy efficiency, energy networks interconnections and other related issues in this area, the purely investment and regulatory component of EE is addressed by the project **Promoting Energy Efficiency Investments for Climate Change Mitigation and Sustainable Development (2012-2014)**





Doubling the global rate of improvement in energy efficiency

Promoting Energy Efficiency Investments for Climate Change Mitigation and Sustainable Development (2012-2014)

- Implemented by five UN Regional Commissions (UNECE – lead agency)

Objective

- Capacity building for development of EE investment projects. It assists UN RCs to strengthen capacities of their member states to attract investments in EE projects in the context of climate change mitigation and sustainable development.

Expected accomplishments

- a) Improved capacity of national project developers, energy experts and middle-level managers in developing countries and countries with economies in transition to develop energy efficiency investment projects in private and public sectors;
- b) Improved regulatory and institutional framework for promotion of new financing mechanisms for energy efficiency projects;
- c) Increased financing for investments in energy efficiency projects, including through innovative financing mechanisms.





Doubling the global rate of improvement in energy efficiency

Promoting Energy Efficiency Investments for Climate Change Mitigation and Sustainable Development (2012-2014)

Main activities

- **Five regional trainings** in project development, finance and business planning
- **Development of an investment project pipeline** (inventory of energy efficiency project proposals)
- **Five regional workshops** to analyze investment project pipeline
- **Fifteen case studies** on the experience of policy reforms
- **Five policy seminars** focusing on policy reforms to promote financing of energy efficiency investments
- **End-of-the-project global workshop** to bring together officials from the regions along with major domestic and foreign investors to encourage greater investment flows into the EE projects





Doubling the global rate of improvement in energy efficiency

National Studies (Armenia, Azerbaijan, Belarus, Croatia, China, Georgia, Montenegro, Tajikistan, Thailand) has been completed:

- Demonstrate experience in practical implementation of policy reforms
- Conduct analysis of good practices and bottlenecks in the field of EE project financing and implementation
- Show examples of direct social, environmental and financial benefits coming from a specific project or series of projects, which were a result of specific policy reforms
- Identify potential for promoting successful policies more widely on a national basis
- Develop recommendations for adoption of a similar approach in neighboring countries





Doubling the global rate of improvement in energy efficiency

Each Case Study contains the following elements:

- A policy reform that has transformed one or more economically attractive investment projects into a bankable project which has been financed;
- An assessment of the ‘scaled-up’ potential environmental, economic and financial impact of the case study for selected projects or ‘classes’ of projects including reductions of greenhouse gas emissions;
- Recommendations on new reforms to introduce market based energy systems based on case study.





Doubling the global rate of improvement in energy efficiency

Training Courses on Business Planning for Energy Efficiency Projects was held in Almaty, Kazakhstan in April 2013 and in Istanbul, Turkey in June 2013 together with ESCAP;

The training helped over 60 representatives of private and public companies from South-Eastern and Eastern Europe, the Caucasus, Central, Northern, South-Eastern and Southern Asia, as well as the Russian Federation and Turkey better prepare and implement energy efficiency projects;

Project developers and owners, Government officials, representatives of banking community, academia, private sector and NGOs learned financial engineering and business planning skills to identify, select and develop energy efficiency investment projects and prepare bankable project proposals;

The main component of the course was a detailed extended interactive presentation on business planning and preparing project documentation for EE projects by the training facilitator from Renaissance Finance International, with numerous questions from the audience and individual consultations for project developers and owners;

Individual consultations with the facilitator, an international expert in the area of financing energy efficiency projects, are available during the seminar and after its completion.





Doubling the global rate of improvement in energy efficiency

One of the sessions was devoted to analysing real cases of energy efficiency projects financing by financial institutions and companies. Representatives of development and commercial banks, credit institutions and business companies will take part in this session.

All training participants received CD-ROMs with Business Planning Course prepared according to the curriculum developed for the Project.

Pipeline of more than 40 project proposals from 17 ECE region countries have been prepared for further consideration.





Doubling the share of renewable energy in the global energy mix

New project: Promoting Renewable Energy Investments for Climate Change Mitigation.

RE technologies is critical for three principal reasons which are interlinked: (i) to protect the environment from impacts of fossil fuels use; (ii) to improve energy security; (iii) to encourage economic development, particularly associated with rural and agricultural sectors, or with innovation and high-tech manufacturing.





Doubling the share of renewable energy in the global energy mix

Expected Accomplishments:

Improved capacity of government officials, national financial institutions and national energy experts and project developers, to develop renewable energy investment projects in the private and public sectors

Improved capacity for governments to adopt policies and measures to improve opportunities for banks and commercial companies to invest in renewable energy projects through the development of new financing mechanisms

Although the project includes activities on policy reforms, the main target is capacity building for the development of RE investment projects.





Doubling the share of renewable energy in the global energy mix

- Reducing the carbon intensity of the energy sector
- Reducing the environmental and social impacts caused by energy and energy poverty
- Supporting economic development





Thank you

Global Energy Efficiency 21 Project

<http://www.unece.org/energy/gee21.html>

