

**PROJECT DOCUMENT TEMPLATE**  
**10TH TRANCHE OF THE DEVELOPMENT ACCOUNT**

**1 EXECUTIVE SUMMARY**

Project Code and Title:	1617X Sustainable Energy for All (SE4All) in Eastern Europe, the Caucasus and Central Asia
Start date:	June 2016
End date:	December 2019
Budget:	\$564,000
Target countries:	Azerbaijan, Belarus, Georgia, Kazakhstan, and Kyrgyzstan
Executing Entity:	UNECE
Co-operating Entities within the UN system	UNESCAP
Other partners	Statistics Division of DESA, Copenhagen Centre on Energy Efficiency (UNEP-DTU Partnership)

**Brief description:**

Sustainable Energy for All is a global initiative led by the UN Secretary General and the president of the World Bank. It pursues three key development objectives for the energy sector by 2030: ensuring universal access to electricity and modern cooking solutions, doubling the rate of improvement of energy efficiency, and doubling the share of renewable energy in the global energy mix. These objectives have been endorsed by the UN General Assembly, which declared 2012 the Year of Sustainable Energy for All and made 2014–24 the Decade of Sustainable Energy for All.

The overall goal of the project is to strengthen the national capacity of economies in transition to develop National Action Plans for Sustainable Energy for All (SE4All). While national governments are the only entities with the responsibility and authority to collect and publicly report the statistics to construct national energy policies, there is a lack of adequate knowledge and experience on expert level in collection of data and monitoring of process on the actual situation in promoting three objectives of SE4ALL. UNECE can have roles in building national capacity to better track energy data collection and develop sustainable energy policies.

The beneficiary countries of this project are: Azerbaijan, Belarus, Georgia, Kazakhstan, and Kyrgyzstan. The countries were selected to ensure representation from Eastern Europe, the Caucasus, and Central Asia. The countries were chosen on the basis of their energy profiles such that energy producing, consuming and transit countries would all be represented: Azerbaijan and Kazakhstan are energy-rich countries, Belarus is an energy importer, Georgia is as an important energy transit country, and Kyrgyzstan is looking to diversify its economy and has significant potential for renewable energy development other than hydropower. The key stakeholder from the countries will be policy makers responsible for development of national action plan on SE4ALL (energy related ministries) and private sector, which should play active role in investments to employ advanced EE and RE technologies with all related benefits.

The project further seeks to help member States with economies in transition to identify best practices, measures and procedures relevant to prepare a sustainable energy transition, with a particular focus on the cross-cutting nature of energy efficiency, renewable energy and energy access. Targeted Member States do not have the necessary policy and regulatory infrastructure to enable progress on these fronts. The project will assist member States in development of their national action plans for energy for sustainable development drawing on best practice guidance from the UNECE, and will help to convert the plans into effective national policy frameworks.

## **2 BACKGROUND**

### **2.1 Context**

The three objectives of the Sustainable Energy for All (SE4All) Initiative of the UN Secretary-General are ensuring universal access to modern energy services, doubling the global rate of improvement in energy efficiency (EE) and doubling the share of renewable energy (RE) in the global energy mix by 2030.

Ensuring equitable access to modern energy services for households and public services facilities, including access to adequate electricity supply and clean energy for cooking, health and hygiene is essential to fulfill basic human needs and enable sustainable development. All stakeholders should have fair access to the different segments of the energy markets. However, access to modern energy services varies widely, and requires adequate investments from primary energy supply to final end users. In a broad meaning of the word, access to sustainable energy includes the following three aspects: (i) physical access, which is connection either to a grid-based service or to an off-grid solution; (ii) economic access, which is the ability to pay the cost of service; and (iii) quality of service which implies that if systems are not properly maintained, then quality will deteriorate. Existing information does allow proper assessment of national situations vis-à-vis access to modern energy services in any of these aspects, and it will be necessary to insure that proper data are gathered and reported.

Improving energy efficiency is a low-hanging fruit that can contribute to energy security, better environment, quality of life, and economic well-being for all. Energy efficiency is the best way of getting more out of our existing resources, supporting economic growth, and reducing the energy costs for all citizens. Despite the multiple benefits, improving energy efficiency remains elusive. Low energy tariff policies, subsidies, lack of information, and lack of investment capital for end-users are among the barriers to deployment of energy efficiency. Increased and sustained public investments in improving energy efficiency from source to use will be critically important. Attempts to improve energy efficiency fall short because of ill-conceived national policies that artificially lower energy prices and encourage wasteful consumption; production and consumption subsidies that distort markets; poorly managed housing stocks; inefficient land use management; barriers to new entrants; inadequate norms and standards; and incomplete statistics and information to manage energy use and track progress. In addition, there is a general lack of public awareness and education about the long-term economic and societal benefits of action to improve energy efficiency and industrial productivity.

Investing in renewable energy is one way to reduce the carbon intensity of the energy sector. Renewable energy technologies are promoted for three principal interlinked reasons: (i) to reduce the environmental consequences of fossil fuel use; (ii) to improve energy security; and (iii) to encourage economic development, innovation, and high-tech manufacturing. These reasons are particularly relevant for developing regions, where much of the population lives in remote or isolated rural communities that lack energy services and suffer from poor socio-economic conditions. Renewable energy is not the only way to address climate change and air pollution. While renewable energy penetration would be an important indicator of progress, sustainable energy policies could also explore the range of alternatives (such as improving the performance of fossil fuel technologies) for reducing the carbon intensity of the energy sector and reducing the environmental and social impacts caused by energy production and consumption and energy poverty. Wider uptake of renewables requires addressing barriers to fair competition with conventional technology without resorting to long-term subsidies, as well as implementing stable long-term energy policy frameworks in a future energy system context, and deploying innovative and targeted financial mechanisms.

The international community recognizes the importance of a tracking system to gauge progress toward the three objectives and to hold national policymakers accountable. Since the energy sector did not feature among the Millennium Development Goals, such a comprehensive tracking system was not fully in place, countries need assistance in data collection from a range of sources and monitoring of progress on energy related sustainable development goals. The project will improve national capacity in data collection methodologies and provide a more nuanced and accurate picture of progress over time and will assist in development of

national action plans for energy for sustainable development drawing on best practice guidance from the UNECE, and will help to convert the plans into effective national policy frameworks.

The proposed project will assist UNECE countries with economies in transition, in the preparation of national action plans to achieve sustainable development goals related to energy. Reliable data provide the basis for better energy planning and management of resources, and eventually sustainable development. However, data in many UNECE member States with economies in transition are not readily available, accessible or reliable. Filling identified data gaps with the desired key characteristics (comprehensive, transparent, homogeneous and consistent) represents real value added for strategic energy planning in many of these countries. The project will address gaps in existing information, quality of existing energy statistics, and to develop new statistical foundations in support of these goals and objectives. The cooperation with the Statistics Division of DESA and with the Copenhagen Centre on Energy Efficiency (UNEP-DTU Partnership) that serves as SE4All Energy Efficiency Hub<sup>1</sup> is explicitly intended to avoid any duplication and ensure the project benefits from its expertise and experience.

## **2.2 Mandates, comparative advantage and link to the Programme Budget**

### Mandates

The UNECE has a mandate to facilitate greater economic integration and cooperation among its fifty-six Member States. The UNECE Committee on Sustainable Energy is an intergovernmental body that provides member States with a platform for international dialogue and cooperation and is mandated to carry out a programme of work in the field of sustainable energy with a view to providing access to affordable and clean energy to all, in line with the “Sustainable Energy for All” initiative of the United Nations Secretary-General, and to help reduce greenhouse gas emissions and the carbon footprint of the energy sector<sup>2</sup>.

### Comparative advantage

UNECE and UNESCAP have the comparative advantage to support and provide assistance to member countries on development of National Action Plans for Sustainable Energy for All (SE4All) in the context of the post 2015 Sustainable Development agenda. UNECE outcomes of the projects “Application of clean, renewable and/or alternative energy technologies for rural areas in Central Asian countries”, “Analysis of Advanced Technologies in Energy Efficiency and Renewable Energy in the Framework of the Global Energy Efficiency 21 Project and Preparation of Recommendations on its Application with Special Emphasis on Central Asian Region”, “Enhancing Synergies in CIS National Programmes on Energy Efficiency and Energy Saving for Greater Energy Security” along with UNESCAP analytical reports including the annual Regional Energy Trends Report in Asia-Pacific have showed how member countries with economies in transition are driving the sustainable energy agenda with enhanced energy security and sustainable use of energy.

The outcomes from high level intergovernmental meetings such as the ministerial Asian and Pacific Energy Forum emphasized enhancing and balancing the share of cleaner fossil fuels in the energy mix, more efficient use of energy and the development of new and renewable energy sources, with a view to serving to enhance energy security, contribute to economic development and reduce negative environmental impacts.

In May 2015, UNESCAP launched an Asia Pacific Energy Portal ([www.asiapacificenergy.org](http://www.asiapacificenergy.org)) that provides access to information on the energy data and policies of countries in Asia and the Pacific. The portal includes the key energy related indicators from all ESCAP member states including Azerbaijan, Georgia, Kazakhstan

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<sup>1</sup> UNEP DTU Partnership is a leading international research and advisory institution on energy, climate and sustainable development. It has been a long standing partner of UNEP’s Division of Technology, Industry and Economics (DTIE) and it is an active participant in both the planning and implementation of UNEP’s Climate Change Strategy and Energy Programme. UNEP DTU Partnership comprises two Centres: Centre on Energy, Climate and Sustainable Development, and the Copenhagen Centre on Energy Efficiency development. It has been a long standing partner of UNEP’s Division of Technology, Industry and Economics (DTIE) and it is an active participant in both the planning and implementation of UNEP’s Climate Change Strategy and Energy Programme. UNEP DTU Partnership comprises two Centres: Centre on Energy, Climate and Sustainable Development, and the Copenhagen Centre on Energy Efficiency.

<sup>2</sup> E/ECE/1434/Rev.1

and Kyrgyzstan. The portal will be used for the project in order to develop national information systems to track progress in the achievement of SE4All objectives. Having an overlapping region of 10 member states with Russia and countries of Central Asia and the Caucasus, UNESCAP and UNECE have implemented several successful joint activities including the UNDA 8 Tranche project “Promoting Energy Efficiency Investments for Climate Change Mitigation and Sustainable Development” as well as annual International Fora on Energy for Sustainable Development. Close cooperation and partnership between two RCs in this region ensures that activities are not duplicated and provides opportunity to cost efficient and coherent efforts to promote sustainable energy.

### Link to the Programme Budget

The project is directly linked to Expected Accomplishments (a) “improved policy dialogue and cooperation among all stakeholders on sustainable energy issues, in particular energy efficiency, cleaner electricity production from fossil fuels, renewable energy, coal mine methane, mineral resource classification, natural gas and energy security”, and (c) Strengthened implementation of ECE recommendations/guidelines, best practices and other normative instruments for sustainable energy development” for Subprogramme 5 “Sustainable energy” of the UNECE Strategic Framework for 2016-2017.

The project is linked to Expected Accomplishment (b) Improved capacity of local and national governments and major stakeholders to operationalize environment and development policymaking and energy security, water resources management and urban development policies, including their gender dimensions, in the context of the development agenda beyond 2015 (as and when approved by the General Assembly) and the sustainable development goals for Subprogramme 4 Environment and Development of the UNESCAP Strategic Framework for 2016-2017.

UNESCAP's work in the area of sustainable energy is driven by an array of mandates, such as ministerial declaration and regional plan of action of the first Asian and Pacific Energy Forum held in May 2013 that established UNESCAP's overarching 2014-2018 energy development agenda.

This project will contribute to the implementation of DESA's Strategic Framework for the period 2016-2017, in particular Subprogrammes 3 “Sustainable Development” and Subprogramme 4 “Statistics” because it will contribute to strengthen national capacities in the use of statistics for the development of high-quality data on access, energy efficiency measures and renewable energy potential, which are based on the principles of national accounts. The results will provide with policy analysis in the economic and environment sectors to properly track national achievements towards the SE4ALL targets.

### **2.3 Country demand and target countries**

The beneficiary countries of this project are: Azerbaijan, Belarus, Georgia, Kazakhstan, and Kyrgyzstan. The countries were selected to ensure representation from Eastern Europe, the Caucasus, and Central Asia and in accordance with the needs expressed by the countries. All countries requested assistance and expressed their interest to participate in the project through the official letters. The letters are available at the UNECE Secretariat and could be forwarded upon request.

The countries were chosen on the basis of their demand for the project and their energy profiles such that energy producing, consuming and transit countries are represented. Azerbaijan and Kazakhstan are energy-rich countries, Belarus is an energy importer, Georgia is an important energy transit country, and Kyrgyzstan is looking to diversify its economy and has significant potential for renewable energy development other than hydropower. Also selected countries have a various energy mix. While Azerbaijan, Belarus and Kazakhstan generate power mainly on thermal power plants, Azerbaijan and Kazakhstan use their own fossil fuel resources, and Belarus imports gas, and Georgia and Kyrgyzstan produce electricity mainly from big hydro power plants.

All selected countries do not have the necessary institutional, policy and regulatory infrastructure to enable progress to meet SE4All objects and to attract significant foreign and domestic investments for employing advanced EE and RE technologies with all related benefits.

The project further seeks to help member States with economies in transition to identify best practices, specific measures and procedures for preparing a sustainable energy transition, with a particular focus on the cross-cutting nature of energy efficiency, renewable energy and energy access.

Beneficiary countries do not have the necessary policy and regulatory infrastructure, to enable progress on these fronts. The project will assist member States in the development of their national action plans for energy for sustainable development drawing on the best practice guidance from the UNECE. Furthermore, it will help to convert the plans into effective national policy frameworks.

## **2.4 Link to the SDGs**

The project will support Sustainable Development Goal 7. “Ensure access to affordable, sustainable, and reliable modern energy services for all”, in particular the following targets:

- 7.1 by 2030 ensure universal access to sustainable modern energy services for all
- 7.2 increase substantially the share of renewable energy in the global energy mix by 2030
- 7.3 double the global rate of improvement in energy efficiency by 2030
- 7.a by 2030 enhance international cooperation to facilitate access to clean energy research and technologies, including renewable energy, energy efficiency, and advanced and cleaner fossil fuel technologies, and promote investment in energy infrastructure and clean energy technologies
- 7.b by 2030 expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, particularly LDCs and SIDS.

## **3 ANALYSIS**

### **3.1 Problem analysis**

The lessons learned from the past activities in UNECE countries with economies in transition, relate (d) to energy efficiency, advanced fossil fuel technologies, and the application of clean, renewable and/or alternative energy technologies in rural areas have all demonstrated the lack of relevant information and data, limited policy/regulatory infrastructure, and slow implementation on energy topics, including energy efficiency and renewable energy. Where data exist they are largely unreliable and incomplete, making it difficult to establish the baseline for both policy and measurement of progress.

Beneficiary countries face serious challenges in tracking of SE4ALL progress and implementing the necessary policy and regulatory infrastructure, to enable this progress. Data collection and measurement of accomplishments are crude and a detailed picture is not available for the countries. For instance, on achieving access to modern energy services, it has been noted that tracking access to electricity alone does not reflect fluctuations in the quality of service (black-outs, voltage variations, etc.).

To address the matter, the several methods were discussed but would require much more data. Likewise, no specific attention has been paid – to date - to developments at national level. As an example, in Georgia 80% of the average annual electricity production is generated by hydro plants, renewable energy (including large hydro power) provides already more than 85% of the national energy mix in Kyrgyzstan, doubling this share is, thus, impossible and more focus could/should be placed on energy efficiency. Other countries including, Azerbaijan, Belarus and Kazakhstan —have a high share of fossil fuel–based generation. In these countries, renewable energy could be important in reducing the risk of fuel dependence. In fact, most of these countries appear to have abundant renewable energy resources, and they could consider promoting renewable energy as an energy diversifying strategy.

In development of their energy strategies to meet SE4ALL objectives, countries still need to develop high-quality data on access, energy efficiency measures and renewable energy potential to anticipatory planning in expansion of both generation and transmission. Member States with a commitment to achieve SE4ALL objectives generally need to introduce a cost-effective and customized basket of regulatory, fiscal, and financial incentives to be included in national action plans for energy for sustainable.

A massive data collection is therefore essential in the energy sector, in order to be able to properly track national achievements towards the SE4ALL targets. It requires improving of national capacities and cannot solely be addressed by the governments. Also, there is a need to develop skills in public sector that would allow development of national action plans for sustainable energy. This requires providing knowledge to national authorities of best international practices for the development of national sustainable energy policies.

The current situation in the targeted countries requires assistance in the preparation of national action plans to achieve sustainable development goals related to energy. Reliable data provide the basis for better energy planning and management of resources, and eventually sustainable development. Data in these countries are not readily available, accessible or reliable, creating a barrier to energy system development. Filling identified data gaps with the desired key characteristics (comprehensive, transparent, homogeneous and consistent) represents real value added for strategic energy planning in these countries. The project will address gaps in existing information, quality of existing energy statistics, and will lay down new statistical foundation in support of these goals and objectives.

While this project is aimed at bringing society-wide benefits, a particular attention would be paid to the gender balance in its preparation and execution. Since the project deals with the energy sector in which women are traditionally less represented, during its preparation and execution a due care will be exercised in contributing to the restoration of the gender balance. In this respect, in the choice of the local participants, the UNECE and ESCAP will ensure that all participating governments are requested to promote the right gender balance in all project activities and that related regulatory and policy knowledge is equally available to both qualified men and women in each country. This way the project will address the present gender inequalities and try to promote the wider participation of women in all power generation investment and policy processes.

### 3.2 Country level problem analysis

Table 1 – Country analysis

Country	Status of affairs	Realistic outcomes
Azerbaijan	The Government of Azerbaijan undertook the necessary structural reform of the sector in accordance with the State Programme for the development of the Fuel and Energy Complex in Azerbaijan for 2005-2015 and the State Programme for the Utilization of Alternative and Renewable Energy Sources. The State Programs envisages the construction of new heat and hydro-energy stations in the country’s energy system, modernization of the existing energy blocks, improvement of energy efficiency and increasing and approximation of the present generation capacity to 6500-7000 MW till 2015 through utilization of renewable energy sources (small hydro, wind, solar, thermal waters and etc.). Analysis of provisions of the energy legislation and policies of Azerbaijan with respect to energy efficiency and use of renewable energy sources shows that they have a general character and are not duly applied in practice. It caused by limited data on actual situation of	Through improved national capacity for data collection the much needed data on actual situation of access to modern energy services through a standardized framework, on standardized approach to energy efficiency indicators as well as on prospective to double share of renewables will be collected. National action plan for sustainable energy development will be drafted.

	<p>access to modern energy services through a standardized framework, on standardized approach to energy efficiency indicators as well as on prospective to double share of renewables.</p> <p>The much needed data would increase the potential to analyze existing status and to develop national action plan to set the country on the path for a sustainable and more-environmentally friendly energy sector development. It will provide a first-order snapshot of what exists in a country and identify best practices that could foster an enabling environment for sustainable energy.</p>	
Belarus	<p>In Belarus, lack of own natural energy resources predetermines an acute need of efficient and durable energy mix, but also a strong energy conservation policy. Without reforms in the energy sector, the power industry will not be able to provide further accelerated development of national economy.</p> <p>Belarus is on the right track in its energy legislation and policies, which would allow meeting SE4ALL objectives. Various legal acts, organizational and economic measures have been adopted to ensure state support and favorable conditions for the investors in small and unconventional energy, and a number of preferences in the energy efficient zones.</p> <p>The Law Renewable Energy Sources establishes some important instruments, which raise incentives for RES investors and producers through introduction of feed-in tariffs, green certificates, the RES cadaster and other arrangements. It is further suggested to extend some of provisions of the Law to make RES projects viable and commercially attractive.</p> <p>The Law on Energy Saving establishes overall legal and institutional framework for energy conservation and national energy saving monitoring and reporting systems. It introduces:</p> <ul style="list-style-type: none"> <li>• approaches to indices to be established in the field of energy conservation;</li> <li>• provisions for development and implementation of energy conservation programmes;</li> <li>• provisions for energy audit;</li> <li>• provisions for consumption rate setting for energy resources;</li> <li>• provisions for state expertise of energy efficiency;</li> <li>• requirements for supervision over rational and effective use of fuel and energy resources;</li> <li>• directions for economic stimulation of activities on energy conservation.</li> </ul> <p>However, country is in need to attract investors into the sphere of energy efficiency and renewable energy sources. The current investment climate does not attract investors directly into EE and RE technologies.</p> <p>To create enabling environment for investors to EE and</p>	<p>Appropriate data collection and their incorporation into national sustainable energy policies for better depicting the national enabling environment will help attract investment to EE and RE technologies.</p>



	<p>RE projects, a standardized approach to energy efficiency indicators as well as on renewable energy is needed. It requires appropriate data collection and their incorporation into national sustainable energy policies for better depicting the national enabling environment to attract investment.</p> <p>While Belarus has made good progress, there is still room for improvement in the areas of data collection, planning and of policies and regulations to attract significant foreign and domestic investments to employ advanced EE and RE technologies in order to meet SE4ALL targets.</p>	
Georgia	<p>In Georgia, different types of energy resources are available, however, except of rich hydro resources, their number is relatively limited. The total installed capacity of power plants (both hydro and thermal) is 3380 MW, including 2680 MW of hydro power plants. The share of electricity generated by hydropower has been steadily rising in recent years up to 83% in 2013. While doubling share of renewables is, thus, impossible the Government is committed to the development of Georgia's renewable energy resources in the interests of energy security, short and medium term economic development, and long term sustainability. Considerable effort has been expended in putting in place a framework of law, regulation, information and other incentives to facilitate the investment necessary for the development of the hydropower resource. The economically exploitable hydropower resource is estimated to be five times higher than current production and the figure for wind is somewhat less than current hydro production. However, an additional way to meet national electricity demand is the implementation of energy efficiency measures.</p> <p>Unfortunately, for many years significant basic alterations in terms of legislation on renewable energy and energy efficiency and/or practical implementation of energy efficiency measures have not occurred. There is no unified energy law in place for all types of energy. Georgia is the only country in the region, which has not adopted energy efficiency and renewable energy laws, and this is more a sign of underdevelopment, rather than of economic policy.</p> <p>Currently, there is no national energy strategy in Georgia. However, there are ongoing public discussions of the Project of Energy Policy of Georgia and the Ministry of Energy of Georgia is working on the development of the national strategy for the energy sector.</p> <p>At this stage, it's very important to incorporate SE4ALL objectives during the revision of existing and development of new strategic documents at all levels. In order to do it the Government needs to improve quality and quantity of data on the actual situation of access to modern energy services through a standardized framework, on the energy efficiency indicators and to estimate potential to increase share of renewables. Availability of these data will ensure the</p>	<p>The Government will improve quality and quantity of data on the actual situation of access to modern energy services through a standardized framework, on the energy efficiency indicators and to estimate potential to increase share of renewables and SE4ALL objectives will be incorporated during the development of the national strategy for the energy sector.</p>

	development and adoption of the National action plan to achieve sustainable energy development.	
Kazakhstan	<p>In recent years, Kazakhstan has significantly increased emphasis on energy efficiency and energy saving, and the use of renewables. In July 2009, Kazakhstan adopted the Renewable Energy Law and developed secondary legislation under the Law supporting some legislative acts regarding RE sources support. In 2009, Kazakhstan developed an energy-saving action plan to 2015 to implement the Government policy on rational and efficient use of energy. In 2010, Kazakhstan developed a sectoral programme on electric power industry development for 2010-2014. In 2011, the Government approved the comprehensive plan on energy saving. Implementation of this comprehensive plan will provide a reduction of GDP energy intensity by 10%. In December 2011, the Parliament of the Republic of Kazakhstan passed a new “Energy saving law and increase of energy efficiency”.</p> <p>While country considers that 99% of population has access to electricity, there are some problems of access to the centralized power and heat in some rural areas. Currently villages in remote areas are not connected to the grid. Power lines and the equipment have been deteriorated over 85% in more than 1500 villages. The problem of stable power supply can be resolved by alternative sources in sparsely populated villages but this has not happened yet.</p> <p>It is clear that if not to take urgently drastic measures to restore power grid facilities or provide alternative energy resources for the rural in the coming years it would be impossible to supply electricity to large areas because of the inevitable mass damage in distribution networks. All this had a negative impact on the rural population and rural economy as a whole.</p> <p>Although Kazakhstan has made good progress, many essential elements to meet SE4ALL objectives are missing. Energy intensity in the country in general is more than three times than the same in the European Union; the introduction of renewable and energy-efficient technologies is slow and has number of barriers and first of all financial; actual situation of access to modern energy services is not clarified. Thus, policy-makers and regulators should prioritize EE, RE as well access to energy issues within the sustainable energy space in a way to secure the investment grade attributes for attracting private sector participation. The Government needs high quality data on the actual situation of access to modern energy services through a standardized framework and on energy efficiency and renewable energies projects and initiatives, based on a standardized method. It will allow to conduct economic analysis of the long-term impact of introduction of SE4ALL objectives and then to prepare National action plan to achieve sustainable energy development.</p>	The Government will have high quality data on the SE4ALL objectives and will conduct economic analysis of the long-term impact of introduction of these objectives to prepare National action plan to achieve sustainable energy development.

Kyrgyzstan	<p>Kyrgyzstan is currently engaged in solving the issues related to financial and economic rehabilitation of the energy sector as well as putting into operation new generation and transmission lines, increasing the share of renewable energy in the structure of power generation, improving energy efficiency, improving reliability of power supply to the consumers and carrying out socially acceptable electricity tariffs policy.</p> <p>There is a legal basis for EE improvement, development of RES and sustainable power supply to rural and remote areas of Kyrgyzstan, including Laws: “On energy sector”, “On power sector”, “On power saving”, “On renewable energy sources”. However, they have mainly a general character and are not duly applied in practice.</p> <p>While country has enormous potential for increasing energy efficiency, there are no incentives for energy producers or consumers to reduce expenditures on energy. Overall energy consumption in the country’s economic sectors could be reduced by 13% in the near future due to technical and organizational measures that would not require substantial investments. Overhauling and modernizing the power equipment currently used in the energy sector and introducing energy-saving technologies could produce savings of up to 25% for electricity and about 15% for thermal energy.</p> <p>Since renewables, actually large hydro power provides already more than 85% of the national energy mix the most promising areas of application of renewable energy in Kyrgyzstan are the following: decentralized facilities located in remote mountain regions and residential buildings and public facilities in the regions with centralized power services. The use of renewables should be considered not only from an environmental perspective, but also from the point of view of reliable access to energy services, especially to rural areas, which are not connected to power grid. Currently, the most technically mature for widespread use are the solar heating systems and mini hydro projects.</p> <p>Thus, Kyrgyzstan has much to improve to achieve SE4ALL objectives.</p> <p>Kyrgyzstan still needs to improve its legal basis to secure the investment into EE and RE projects. Country should take some steps important to incentivizing energy efficiency and renewables. Actions such as establishing entities with responsibility for energy efficiency, setting appropriate electricity rate structures are needed.</p> <p>Reliable data collection on energy services access through a standardized framework and on energy efficiency and renewable energy projects and initiatives, based on a standardized method will help country to develop national sustainable energy policies for better depicting the national enabling environment to attract investment.</p>	<p>The Government will be able to collect reliable data on energy services access, on energy efficiency and renewable energy based on a standardized method and will be able to develop national sustainable energy policies for better depicting the national enabling environment to attract investment.</p>
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### 3.3 Stakeholder analysis and capacity assessment

Table 2 – Stakeholder Analysis

Non UN Stakeholders	Type and level of involvement in the project	Capacity assets	Capacity Gaps	Desired future outcomes	Incentives
Senior Policy makers responsible for development of national action plan on SE4ALL; in particular energy related ministries and agencies: Ministry of Energy and State Agency on Alternative and Renewable Energy of Azerbaijan; Ministry of Energy and Department for Energy Efficiency of State Committee on Standardization of Belarus, Ministry of Energy of Georgia, Ministry of Energy of Kazakhstan; Ministry of Economy of Kyrgyzstan.	Regular consultations, partnership.	Countries have the will to achieve the goals of the SE4ALL initiative, but the lack of expertise prevents them to achieve sustainable results.	All targeted countries do not have the necessary capacity for monitoring of progress on energy related sustainable development goals as well as policy and regulatory infrastructure to enable progress to meet SE4ALL objects. National action plan to achieve sustainable development goals related to energy, including questions on financing a sustainable national energy system is needed	The project will improve national capacity for monitoring of progress on energy related sustainable development goals and understanding of best practices for the development of national sustainable energy policies. It will strengthen national capacities for the development of national action plans for sustainable energy	Policy makers need improve their capacity for monitoring of progress on energy related sustainable development goals to meet SE4ALL objects.
National experts involved development of national action plan on SE4ALL; in particular	Regular consultations, partnership, trainings.	Country has the will to achieve the goals of the SE4ALL initiative, but the lack of expertise	Countries do not have the necessary capacity for data collection in accordance with United Nations Fundamental Principles of Official	The project will improve national capacity for data collection	Experts need improve their capacity for data collection in accordance with United Nations Fundamental

<p>energy related ministries and agencies:          Ministry of Energy and State Agency on Alternative and Renewable Energy of Azerbaijan;          Ministry of Energy and Department for Energy Efficiency of State Committee on Standardization of Belarus,          Ministry of Energy of Georgia,          Ministry of Energy of Kazakhstan;          Ministry of Economy of Kyrgyzstan.</p>		<p>prevents them to achieve sustainable results.</p>	<p>Statistics</p>		<p>Principles of Official Statistics to provide data to policy makers</p>
<p>Private sector: (power generation companies, energy service companies, energy efficiency manufactures, multilateral development banks)</p>	<p>Regular consultations, partnership.</p>	<p>Private sector has many motives, but foremost among them the investor wants a profit and good return on investment. Private sector/investor requires higher, more assured returns to compensate them for the higher risks, which are perceived to exist in a specific country.</p>	<p>The new technologies are expensive and require engineering skills, materials, and equipment which are not fully available in targeted countries. All of the countries have laws and regulations which permit investment in principal. But not all of the countries actively promote private sector to come into the electric power generating sector</p>	<p>Favorable environment to attract significant foreign and domestic investments to employ advanced EE and RE technologies with all related benefits.</p>	<p>Private sector needs incentives to invest into power generation sector and energy efficiency.</p>

<b>Indirect stakeholders:</b> NGOs and academic community involved in all aspects SE4ALL Imitative	Participate in relevant workshop and seminars	Interest in participation of sustainable energy policies development	Lack of specific expertise about best practices for the development of national sustainable energy policies	Disseminate information about, conduct capacity building and raise awareness about topics related to sustainable energy policies	These stakeholders need to get knowledge on topics related to sustainable energy and become more involved in development of national sustainable energy policies
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#### **4 PROJECT STRATEGY: OBJECTIVE, EXPECTED ACCOMPLISHMENTS, INDICATORS, MAIN ACTIVITIES**

##### **4.1 Project Strategy**

The overall goal of the project is to strengthen the national capacity of economies in transition to develop National Action Plans for Sustainable Energy for All (SE4All) in the context of the post-2015 Sustainable Development agenda.

The project intends to contribute to filling some of the identified gaps, discussed in previous sections, which are responsible for lack of energy strategies to meet SE4ALL objectives. These gaps include lack of relevant information and data, limited policy/regulatory infrastructure, and slow implementation on energy topics, including energy efficiency and renewable energy in the UNECE and UNESCAP regions. Where data exist they are largely unreliable and incomplete, making it difficult to develop baseline conditions for both policy and measurement of progress. This situation is also aggravated by the quasi unfamiliarity of local experts with cost-effective and customized basket of regulatory, fiscal, and financial incentives to be included to national action plans for energy for sustainable development.

The objective of the project will be pursued by achieving the following results:

- (EA1) Improved national capacity for data collection and monitoring of progress on energy related sustainable development goals;
- (EA2) Strengthened national capacities to develop national action plans for sustainable energy based on the best international practices.

Both the objective and the expected accomplishment will be achieved by the implementation of the following activities:

- (A1.1) A baseline review of sustainable energy data in each beneficiary country in order to assess the existing gaps in data collection
- (A1.2) Two sub-regional trainings to the national officials and experts responsible for sustainable energy data collection.
- (A2.1) Identification of best practices on sustainable energy for each beneficiary country.
- (A2.2) Multi-stakeholder consultations with the participation of national officials/experts, UNECE, UNESCAP, UNDESA, SE4ALL secretariat and others
- (A2.3) Development of a National Action Plan for each beneficiary country.
- (A2.4) A final validation workshop for the National Action Plans for sustainable energy for each beneficiary country.

The existing gaps in data collection in beneficiary countries identified through A1.1 will help to develop

training materials and conduct two sub-regional trainings to the national officials and experts responsible for sustainable energy data collection (A1.2). The trainings will be conducted by international consultant and will focus on methods for collection, verification, aggregation and reporting of data, as well as statistical indicators relevant for monitoring of sustainable energy development. The trainings will increase knowledge of national experts on relevant for each beneficiary country best practices on collection and monitoring of national data on sustainable energy in compliance with international standards.

Studies on relevant best practices on sustainable energy for each beneficiary country will be prepared through A2.1. These studies will increase knowledge and understanding of what the best practices are throughout the UNECE region and will help countries to assess their applicability to the national circumstances. This applicability and national models for development of sustainable energy policies will be considered through multi-stakeholder consultations with the participation of national officials/experts, UNECE, ESCAP, UNDESA, Copenhagen Centre on Energy Efficiency, and SE4ALL secretariat and others in each beneficiary country (A2.2). These consultations will help countries to assess best practices' applicability to the national circumstances and develop national models for improvement of sustainable energy policies.

Development of a draft National Action Plan for each beneficiary country will be conducted through A2.3 by national entities in close cooperation with the national and international consultants as well as UNECE, ESCAP, UN DESA and Copenhagen Centre on Energy Efficiency to support country ownership and future endorsement and implementation. When drafts are prepared, a final validation workshop will undertake a final review and validate the National Action Plans (A2.3). Draft National Action Plans would identify best practices, measures and procedures relevant to prepare a sustainable energy transition, with a particular focus on the cross-cutting nature of energy efficiency, renewable energy and energy access. Draft National Action Plans with a commitment to achieve SE4ALL objectives would include a cost-effective and customized basket of regulatory, fiscal, and financial incentives for sustainable energy development.

## 4.2 Logical Framework

Table 3 – Logical Framework

<u>Intervention logic</u>	<u>Indicators</u>	<u>Means of verification</u>
<p><b>Objective:</b> To strengthen the national capacity of select economies in transition in Eastern Europe, the Caucasus and Central Asia to develop National Action Plans for Sustainable Energy for All (SE4All).</p>		
<p><b>EA1</b> Improved national capacity for data collection and monitoring of progress on energy related sustainable development goals</p>	<p><b>IA 1.1</b> Five countries established national data collection systems on sustainable energy in compliance with the United Nations Fundamental Principles of Official Statistics</p>	<p>Project reports  National reports on SE4ALL related data</p>
	<p><b>IA 1.2</b> 80% of national experts responsible for data collection and monitoring from relevant line ministries confirm increased knowledge of relevant best practices on collection and monitoring of national sustainable energy data</p>	<p>Project reports</p>
<p><b>A1.1</b> Conduct a baseline review of sustainable energy data in each beneficiary country in order to assess the existing gaps in data collection. Reviews will be prepared by national and international consultants and serve as a basis for the development by a consultant of training materials for sub-regional trainings.</p>		
<p><b>A1.2</b> Provide two sub-regional trainings to the national officials and experts responsible for sustainable energy data collection. The trainings will be conducted by international consultant and will focus on methods for collection, verification, aggregation and reporting of data, as well as statistical indicators relevant for monitoring of sustainable energy development. The trainings will increase knowledge of national experts on relevant for each beneficiary country best practices on collection and monitoring of national data on sustainable energy in compliance with international standards. Based on knowledge acquired during trainings, national experts will be able to organize data collection in their countries in accordance with United Nations Fundamental Principles of Official Statistics. The project will consider organizing additional advisory missions subject to availability of additional funds.</p>		
<p><b>EA 2</b> Strengthened national capacities to develop national action plans for sustainable energy based on the best international practices</p>	<p><b>IA 2.1</b> Five National Action Plans for sustainable energy developed and submitted to the Government</p>	<p>Number of best practices documented and submitted to national authorities; number of draft national action plans</p>
<p><b>A 2.1</b> Identify relevant best practices on sustainable energy for each beneficiary country. The studies prepared by national and international consultants will develop increased knowledge and understanding of what the best practices are throughout the UNECE region and an assessment of their applicability to the national circumstances of the beneficiary countries.</p>		



<p><b>A 2.2</b> Multi-stakeholder consultations with the participation of national officials/experts, UNECE, ESCAP, UNDESA, Copenhagen Centre on Energy Efficiency (UNEP-DTU Partnership), SE4ALL secretariat and others to share best practices for the development of national sustainable energy policies in each beneficiary country. These consultations will help countries to assess best practices’ applicability to the national circumstances and develop national models for improvement of sustainable energy policies.</p>
<p><b>A 2.3</b> Development of a draft National Action Plan for each beneficiary country. The draft Plans will be prepared by national entities nominated by the relevant ministries, in close cooperation with the national and international consultants as well as UNECE, ESCAP and UN DESA to support country ownership and future endorsement and implementation. The Draft Action Plans will be further submitted for the governmental approval and inclusion into relevant governmental strategies for further implementation. Draft National Action Plans will identify best practices, measures and procedures relevant to prepare a sustainable energy transition, with a particular focus on the cross-cutting nature of energy efficiency, renewable energy and energy access. Draft National Action Plans with a commitment to achieve SE4ALL objectives will include a cost-effective and customized basket of regulatory, fiscal, and financial incentives for sustainable energy development. The beneficiary countries will be further supported in the implementation of the National Action Plans by advisory missions, in-kind contribution from the intergovernmental bodies responsible for energy in UNECE and ESCAP, and potential new projects/ capacity building activities in this area.</p>
<p><b>A 2.4</b> Conduct a final validation workshop for the National Action Plans for sustainable energy for each beneficiary country. The national experts from each beneficiary country involved in developing the National Action Plans will undertake a final review and validate the draft National Action Plans. The main objective of the final review will be availability of all necessary incentives for sustainable energy development in the draft plans and their applicability to the national circumstances of the beneficiary countries. Experts will also identify a pathway to convert the draft plans into effective national policy frameworks. National and international consultants will prepare recommendations based on the undertaken review and submit them to the national governments for endorsement and subsequent implementation of National Action Plans.</p>

### 4.3 Risks and mitigation actions

Table 4 – Risks and mitigation actions

<b>Risks</b>	<b>Mitigating Actions</b>
The implementation of the project does not include considerable risks. The technologies, regulation and policies discussed are in the public domain and as such do not contain anything which could provoke a controversy both for the project execution and its effects. While possible political instability in selected countries could not prevent the participation of the government and energy sector experts in most of the project activities, it could delay the effective implementation of the project recommendations and the attraction of the desirable investment, which is out of the immediate scope of the project.	<b>Provide mitigation measures for every risk</b> The project will be executed at the level of high level governmental officials. It will ensure succession during the project implementation.
Lack of political support/regulations Lack of transparency	Holding of regular consultations and bilateral and multilateral meetings with stakeholders
Lack of established mechanism for effective sharing of experience and lessons learnt among	Holding of regular consultations and bilateral and multilateral meetings with stakeholders

Concerned countries. Lack of the benchmark for establishing relevant experience and lessons learnt	
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#### 4.4 Sustainability

In line with the project objectives and activities described before, the project tries to ensure its sustainability by:

- a) assisting governments in providing incentives for and supporting national institutes for data collection and monitoring of progress on energy related sustainable development goals;
- b) building the local capacity for understanding of best practices for the development of national sustainable energy policies for supporting the progress on energy related sustainable development goals; and
- c) enhancing the capacity of governments to define the best strategies to promote sustainable energy in each beneficiary country and prepare National Action Plans.

Draft National Action Plan for each beneficiary country is a final product of the project. It should be endorsed by the respective national government. After such endorsement, the national governments will be supported in the implementation of the plan by advisory missions, in-kind contribution from the intergovernmental bodies responsible for energy in UNECE and ESCAP, and potentially new projects.

The project activities are expected to have multiplier effects at the regional level through their linkages with the political framework of the annual International Forums on Energy for Sustainable Development organized by UN Regional Commissions in cooperation with other partners. The project's impact and dissemination of results, including support for the countries to implement national action plans, will also benefit from the earlier work undertaken by UNECE and ESCAP to promote implementation of the provisions of the Hammamet Declaration<sup>3</sup> (Joint Statement of the Executive Secretaries of the United Nations Regional Commissions at the Fifth International Forum on Energy for Sustainable Development in Hammamet in November 2014) and the Statement of Common Action adopted at the Sixth International Forum on Energy for Sustainable Development in September 2015 in Yerevan. These documents express readiness to assist member States in the development of sustainable energy action plans that are tailored to their individual needs in the post-2015 development context and specify priority action areas by the United Nations Regional Commissions and other international organizations.

#### 5 Monitoring and evaluation

- The UNECE secretariat will monitor and report on the implementation of the project to the UNDA Project Manager on the annual basis. In addition, it will report on the project's progress to the UNECE Committee on Sustainable Energy at its annual sessions.
- At the end of the cycle the project will be evaluated. To this end 2% of the total budget is planned for external evaluation.

#### 6 MANAGEMENT AND COORDINATION AGREEMENTS

- The project will be executed by UNECE and UNESCAP in cooperation with Statistics Division of DESA;
- UNECE will solicit cooperation from other interested international agencies and first of all from the Copenhagen Centre on Energy Efficiency on selected parts of the project;
- UNECE will be responsible to implement project activities in 3 targeted countries: Belarus, Georgia, Kyrgyzstan;
- UNESCAP will be responsible to implement project activities in 2 targeted countries: Azerbaijan, Kazakhstan;
- Implementation of all activities will be coordinated by UNECE.

<sup>3</sup> <http://www.unece.org/energy/welcome/areas-of-work/energy-efficiency/meetings-and-events/energy-efficiency/energy-efficiency-21/2014/fifth-international-forum-on-energy-for-sustainable-development/docs.html#/>