

SOUTH CAUCASUS ENERGY FORUM

**ENERGY DIVERSIFICATION TRENDS IN THE SOUTH
CAUCASUS AND THE NEIGHBORHOOD**

23-24 May 2014, Turkey

Istanbul, Elite World Istanbul Hotel





Konrad
Adenauer
Stiftung

SOUTH CAUCASUS ENERGY FORUM

ENERGY DIVERSIFICATION TRENDS IN THE SOUTH CAUCASUS AND THE NEIGHBORHOOD

Istanbul, Elite World Istanbul Hotel
23-24 May 2014, Turkey



Konrad-Adenauer-Stiftung (KAS) is a political foundation of the Federal Republic of Germany. Democracy, peace and justice are the basic principles underlying the activities of KAS at home and abroad. The Foundation's Regional Program South Caucasus conducts projects aimed at strengthening democratization processes, promoting political participation of the people, supporting social justice and sustainable economic development, promoting peaceful conflict resolution, and supporting the region's rapprochement with European structures.



The Regional Environmental Centre for the Caucasus (REC Caucasus) is an independent, not-for-profit organization, established in 1999 within the framework of the "Environment for Europe Process" by the governments of Azerbaijan, Armenia, Georgia and the European Union. RECC's main goals are to assist in solving environmental problems and to develop the civil society in the countries of the South Caucasus. To achieve its mission, REC Caucasus facilitates cooperation among environmental stakeholders by supporting exchange of information, offering advice and technical expertise, and promoting public participation in environmental decision-making.

All rights reserved. Printed in Georgia.
Konrad-Adenauer-Stiftung
Regional Program South Caucasus
Akhvlediani Aghmarti 9a
0103 Tbilisi, Georgia
www.kas.de/kaukasus

THE SOUTH CAUCASUS REGIONAL ENERGY FORUM

The publication on hand is the compilation of recommendations and findings adopted during the third South Caucasus Energy forum, which took place on May 23-24 in Istanbul, Turkey. This time, the forum was focused on Energy Diversification Trends in the South Caucasus and the neighborhood. The forum reflected the outcomes and implications of the latest developments around the energy sector in the European and EECCA (Eastern Europe, Caucasus and Central Asia) region and discussed the challenges that the South Caucasus countries face in maintaining energy security in the region, as well as further steps to overcome them.

In 2012, Konrad-Adenauer-Stiftung, in cooperation with the Regional Environmental centre for the South Caucasus, established the South Caucasus Energy Forum. Representatives of the government, think tanks, international organizations and NGOs from Armenia, Azerbaijan, and Georgia are engaged in the forum.

The South Caucasus Regional Energy Forum concentrates its efforts on promoting sustainable energy development and contributes to the convergence of countries of the South Caucasus region. These efforts support the implementation of the sustainable development goals, set out in the document "The Future We Want," which governments adopted during Rio+20, the United Nations Conference on Sustainable Development, held on June 20-22, 2012 in Rio de Janeiro.

The South Caucasus Regional Energy Forum intends to:

1. Serve as an instrument for the South Caucasus region to launch national and regional initiatives and projects, including the preparation of international meetings in the region to review energy priorities;
2. Strengthen information and observational capacity, in order to provide reliable and relevant information on the state of sustainable energy development as a basis for improved policymaking and public awareness,

and to use indicators to assess progress as appropriate;

3. Consider the need for and develop, as appropriate, recommendations, methodologies and guidelines for the promotion and development of sustainable energy;
4. Develop and support international activities which promote the development of sustainable energy in the region;
5. Promote implementation of policy and economic instruments and tools for strengthening the capabilities of countries through technical assistance, advisory missions and capacity-building;
6. Assist South Caucasus countries, as necessary, to integrate sustainable energy considerations into other policies and to use indicators to assess progress as appropriate;
7. Contribute to the South Caucasus region's implementation of the energy pillar of sustainable development;
8. Regularly review its program of work to ensure the compliance of its activities with the overall objectives of the Konrad Adenauer Foundation and REC Caucasus, herein Secretariat;
9. Facilitate coordination between energy-related programs initiated by governments and the European Union; cooperate with other international organizations and relevant bodies, including financing institutions, to avoid duplication of work and to enhance synergies.

ENERGY DIVERSIFICATION TRENDS IN THE SOUTH CAUCASUS AND THE NEIGHBORHOOD

Recent geopolitical developments and international projects started in the EECCA region have changed the regional energy map of the Caucasus significantly and may affect the further transformation of the European one.

The growing global demand for energy has raised challenges for the global community to achieve a sustainable energy system from an environmental perspective and to ensure secure and affordable energy supplies. Energy and geopolitics are interlinked, which is clearly evident in the recent geopolitical crises of the region.

South Caucasus countries are working on the development of wider energy corridors to export natural and renewable energy resources. It is obvious that the respective governments of Armenia, Azerbaijan, and Georgia are in a difficult and decisive stage of considering important decisions which will have a significant impact on regional energy security.

In order to enhance communication and coordination between the South Caucasus and Turkey as a main partner in the Black Sea region, the third South Caucasus Energy Forum was held in Istanbul, Turkey. For the security and sustainability of the South Caucasus energy sector, it is vital for the countries of the region to actively harmonize with other countries of the Black Sea region. Turkey is the nearest major market for renewable and fossil fuel resources, and at the same time, the country is also important in terms of its transit role to Europe. Therefore, incorporating experience and clearly understanding the needs of the Turkish and other Black Sea countries' markets are essential for the development of the energy sector in South Caucasus.

The primary challenges to energy diversification in the South Caucasus region and Turkey are dependence on energy imports, capacity and condition of supply and distribution infrastructure. On the contrary, environmental damage that is caused by the inefficient use of energy resources is also

problematic for South Caucasus countries. Finally, regional conflicts create an additional threat to energy security.

The supply of natural gas is one of the most challenging issues for the energy security of Armenia and Georgia. Both countries depend on imported natural gas for almost all of their supplies. Georgia primarily depends on Azerbaijan and gets a small share of its imports from Russia, as payment for transit to Armenia. Azerbaijan became Georgia's primary gas supplier after the 2006 sabotage accident of Russia-Georgian pipeline. Azerbaijan is considered to be a more reliable partner for Georgia due to recent geopolitical cooperation and historically strong ties between the countries. There is an opportunity to renovate Kazi-Magomed-Astara-Abadan gas pipeline from Iran to Azerbaijan, thereby creating an additional import route for Georgia. An important challenge to Georgia's natural gas security is the lack of storage facilities, which render its supplies more vulnerable to risks. In general, the South Caucasus region has extensive natural gas infrastructure, constructed in Soviet times, which are already depreciated and in need of renovation, especially in Georgia and Armenia. As for the natural gas security of Armenia, it is supplied through the Russia-Georgia-Armenia and Armenia-Iran pipelines, both of which are owned by Russia's Gazprom. Currently, most of Armenia's gas supplies come from Russia; however, there is a diversification opportunity with Iran. In addition, Armenia has a gas storage facility that creates the prospect for Georgia to import gas from Armenia in case of an emergency. Finally, South Caucasus pipeline (SCP – Baku-Tbilisi-Erzurum pipeline) connects Azerbaijan, through Georgia, to Turkey, which has one of the fastest growing demands for energy. The planned development of SCP will build the Trans-Anatolian pipeline (TANAP) and the Trans-Adriatic pipeline (TAP) to supply Europe with gas from Azerbaijan. The project will connect Azerbaijan with Italy through Georgia, Turkey and Greece.

Gasoline and LPG supplies are fairly diversified in Georgia, which has multiple suppliers around the region (from both Europe and Central Asia). Azerbaijan again plays an important role through SOCAR, which holds biggest share of the Georgian gasoline and LPG market. The primary

challenge for Georgia in this case is its lack of a working oil refinery plant, which renders the country vulnerable to price variations depending on the capacity of Azeri oil refineries. Renovating the old refinery facility in Batumi can create additional capacity for Azeri oil and play a part in protecting Georgia from price variations. Armenia's gasoline and LPG supplies primarily come from Russia and Iran, as does the country's natural gas; however, imports are more diversified in the cases of gasoline and LPG. Fuel is exported from Russia to Armenia through Georgia via railway, and through the Armenia-Iran oil pipeline. The most important regional projects in the oil sector are the Baku-Tbilisi-Ceyhan and Baku-Tbilisi-Supsa oil pipelines, which supply oil to Turkey and Europe through ports on the Black and Mediterranean Seas. Both pipelines are of vital importance to the energy security of Europe and the South Caucasus region.

The consumption and generation of electricity is a final component of the energy security of the South Caucasus. All three countries of the region have the potential not only to meet their needs through their own generation capacities, but also to export electricity to Turkey, which has the fastest growing electricity demand in the world. Armenia's electricity generation heavily depends on nuclear energy, as well as thermal power plants consuming imported fuels. The two most important issues for Armenia's energy security are the condition of Metsamor nuclear power plant, which was constructed in Soviet times, and the thermal power plants, which run on imported natural gas. Georgia's electricity security challenge is the same in terms of thermal power; however, most electricity generation comes from hydroelectric power plants. The country has the potential to sustain its electricity needs with hydroelectric resources and to export electricity to Turkey. In the case of Azerbaijan, the primary challenge is environmental: due to production of a major share of electricity from fossil fuels, the country is now working on the development of wind and solar electricity. At last, Georgia can be considered a regional transmission hub for the South Caucasus, and electricity exports to Turkey, with its 400 kv line having already been connected to the Turkish grid and having a transmission infrastructure of 500 kv with Russia and Azerbaijan. Furthermore, the Georgian grid is also connected to Armenia, making the

electricity generation sector more resilient across the region.

In his key note speech during the South Caucasus Energy forum, Professor Mitat Celikpala gave an overview of Turkey's role in enhancing regional cooperation, energy, and security. He underlined the importance of energy diversification and establishment of new energy corridors, and he also commented on the possibility for Turkey to become a regional energy hub, and its benefits. Furthermore, Dr. Celikpala brought attention to Turkey's energy policy, which cannot be considered efficient in terms of existing regional cooperation schemes. Mr. Celikpala encouraged countries to establish new cooperation schemes which can mitigate external pressure on energy security in the region.

Representatives from the governments, think tanks, international organizations, experts, and civil society of Armenia, Azerbaijan, Georgia, and Turkey engaged in active discussions following the thematic sessions. The topics of the conference encompassed various issues of geopolitical challenges, governments' strategies and development perspectives of South Caucasus countries.

The conference was comprised of three thematic panels embracing the following topics: 1) Security of Energy Supply: Strategies in the South Caucasus and beyond, 2) Prospects in Development and Deployment of Clean Energy Technologies and 3) Chances and Constraints for Cross-Border Cooperation.

The representatives of the Ministries of Energy, Environment, and Economy of Armenia, Azerbaijan, and Georgia, representatives of the civil society of South Caucasus countries, Centers of Strategic Studies under the President's Administrations of the republics of Azerbaijan and Armenia, subject-matter experts of South Caucasus countries and Turkey, representatives of leading think tanks of Armenia, Azerbaijan, Georgia, and Turkey, and other distinguished participants contributed their ideas to the conference panels and working groups, and these informed perspectives have been incorporated into the recommendations presented below.

ACHIEVING REGIONAL ENERGY SUPPLY SECURITY

Ensuring sustainable fossil fuel imports is the primary challenge for Armenia and Georgia. On the contrary, Azerbaijan needs stable routes to export its oil and natural gas to Turkey and Europe. In this regard, the main threats to supply security are regional conflicts and poor pipelines, railway and storage infrastructure - a large part of which has not been renovated for more than a decade. The role of Russia in energy security of the region is significant, both for fossil fuel supplies to Armenia and in terms of electricity exports to South Caucasus countries. However, the region has significant potential in developing renewable energy sources that can improve electricity supply security.

Currently, there are no joint groups of Georgian and Azerbaijani policymakers to form a cooperative strategy of improving regional energy security and meeting the aforementioned challenges with their combined resources. Such a group does not exist between Georgia and Armenia, either. Therefore, energy security strategies of South Caucasus countries are not coordinated on the regional level. Cooperation on this level could have an important impact on the success of the national supply security strategy. Finally, the international energy community is not actively involved in sustaining and protecting some of the critical energy infrastructure, including oil pipelines that can have a significant impact on the energy security of Europe.

RECOMMENDATION 1: *The governments of Armenia, Azerbaijan and Georgia should take serious actions for ensuring energy supply security.*

ARGUMENTATION:

The countries within the region are interlinked. Joint actions for energy supply security need to be taken. To avoid repeating the energy crisis they experienced after the collapse of the Soviet Union, Armenia and Georgia should increase energy storage. In growing global demand, the synergy between countries' suppliers and countries' consumers must be ensured.

RECOMMENDATION 2: *South Caucasus countries should develop a long term strategy for the mitigation of external factors, which can influence energy supply security and energy policy of the countries in general.*

ARGUMENTATION:

The existing energy policy of the countries is not secured and open for any external negative factors, both political and economic. The regional realities reveal that supply diversification and diversification of the market are the keys, which must be achieved through market rules rather than political activities.

From Azerbaijan's experience, it is evident that Russian attempts to export Azerbaijan's gas to Russia represent nothing more than a goal to minimize Azerbaijan's share of the European market, thus strengthening Russia's position as the region's energy giant. As a result, Azerbaijan has taken all necessary steps to avoid increasing the role of Russia in the energy sector of Azerbaijan. For example, Azerbaijan has incorporated prevention measures into its energy tenders, and prevented the sale of a French petroleum company's shares in the Azerbaijani energy sector to Russian companies.

RECOMMENDATION 3: *South Caucasus countries (except Armenia, since Armenia doesn't see any necessity) should involve international organizations to protect critical energy infrastructure.*

ARGUMENTATION:

The Russian-Georgian War in 2008, and the recent geopolitical crisis in the region, have revealed the vulnerability of the energy infrastructure to external threats. For the protection of critical energy infrastructure, countries need to involve the EU, NATO and other international organizations.

RECOMMENDATION 4: *To strengthen and promote confidence building measures among the countries in the region.*

ARGUMENTATION:

Stability is an important factor for energy supply security. Energy can be used to increase stability, while strengthening and deepening cooperation among countries. Therefore, continuous discussions and dialogues can build ties that will support the stabilization of the geopolitical situation in the region.

The dialogues with other Caspian riparian countries, in particular with Kazakhstan and Turkmenistan, also need to be broadened.

DEVELOPMENT AND DEPLOYMENT OF CLEAN ENERGY TECHNOLOGIES

The South Caucasus has significant potential for developing renewable energy sources. These resources are mainly hydropower, wind and solar energy, which can contribute significantly to the electricity supply security of the region. Furthermore, energy poverty is still problematic in the South Caucasus, where a significant proportion of the population uses firewood for heating purposes in winter. This is due to accessibility, affordability and lack of information about energy efficiency and renewable energy sources. In response to this issue, 7 Georgian towns currently have taken responsibility to reduce their emissions by 20% for 2020 under the Covenant of Mayors' agreement. Furthermore, issues of energy efficiency are incorporated in the EU-Georgia Association Agreement, which includes articles on the improvement of legislation and efficiency in the thermal power generation sector. Armenia, on the other hand, tries to develop energy efficiency and clean energy technologies in the residential sector. The country has a legislative framework and tries to implement its requirements in newly built residential buildings. The work is also done to show the costs and benefits of investing in energy efficiency and to raise awareness. Finally, Azerbaijan tries to strengthen renewable energy technologies through the creation of a legislative framework, as well as through giving financial support and subsidizing private sector projects concerning the development of clean energy technologies. The country especially promotes wind and solar energy technologies, and has created a state strategy for their development. Recently, the country has established the manufacturing of solar photovoltaic panels, and has been attempting to grow its production capacity.

RECOMMENDATION 5: *The governments of Armenia, Azerbaijan, and Georgia should accelerate the adoption and implementation of relevant technical regulations, guidelines, standards and recommendations for harmonization of legislation with the EU within existing cooperation programmes.*

ARGUMENTATION:

South Caucasus countries are rich with renewable energy sources, including wind, solar, bio and hydro energy. The countries of this region have made tremendous achievements in the development of this sector. The improvement of Clean Energy forecasts the future decrease of dependence on external energy sources,, which can guarantee energy security. Improvements need to be made in the renewable energy policy of the countries; therefore, existing barriers must be analyzed, and recommendations to overcome them must be presented to the governments.

RECOMMENDATION 6: *To mainstream the development of the Clean Energy Production via creation of Clean Energy Funds.*

ARGUMENTATION:

Representatives of the Ministries of Energy of the South Caucasus countries stated they observe a lack of readiness of international financial institutions to cooperate with their respective governments on subsidizing the Clean Energy sector. This can be explained, on other hand, by the unwillingness of the governments to lead countries into debt by obtaining international subsidies.

The incentives include: improved regulations, traffic of benefits, feeding tariffs, and subsidizing of the Clean Energy sector.

RECOMMENDATION 7: *The governments of the South Caucasus countries, in cooperation with international organizations, should support capacity-building measures for promoting Clean Energy through awareness raising campaigns, technical trainings for relevant institutions, establishing networking in order to create the capacity for regional integration and pilot projects' demonstrations.*

ARGUMENTATION:

Capacity building is one of the barriers to the deployment of Clean Energy in South Caucasus countries. The governments should ensure financing of measures to enhance awareness among specific groups, institutions, and the general public.

Civil Society organizations should play an active role in conducting public awareness campaigns to promote the benefits of Clean Energy to general public.

RECOMMENDATION 8: *To apply international experience in the development of Clean Energy production.*

ARGUMENTATION:

Decreasing dependence on external sources of energy can guarantee energy security for South Caucasus countries. Such developments would certainly have important implications, not only for greater Caucasus region but also for Europe. Therefore, further steps must be taken to overcome such obstacles as integration to the main grid, and to increase technical and institutional capacity by using international experience. In order to eliminate these obstacles and transform the clean technologies as a main driver of energy sustainability of the countries, international technical assistance is increasingly necessary.

CROSS BORDER COOPERATION

Following the collapse of the Soviet Union, several cross-border projects started in the South Caucasus. The largest such projects are the Baku-Tbilisi-Ceyhan and Baku-Tbilisi-Supsa oil pipelines, which created cooperation for the strengthened energy trade and energy security of South Caucasus and Turkey. Furthermore, Soviet energy infrastructure throughout the South Caucasus is actively utilized for energy trade purposes. Electricity and natural gas sectors are good examples of such cooperation in the South Caucasus, where Georgia plays the role of the regional energy hub. Furthermore, the potential of the region in renewable energy can benefit all three countries as they strive for more secure and sustainable energy supplies. One of the recent developments in this regard is building high voltage transmission lines between Georgia and Turkey that will enable Georgia and Azerbaijan to expand their export capacity. Projects such as the Southern Corridor for natural gas supply from Azerbaijan create a basis for deeper cooperation of the region with Turkey and Europe, and also contribute to the development of energy infrastructure in South Caucasus.

The main constraints to cross-border cooperation are regional conflicts, which do not allow countries to create a joint energy infrastructure and cooperate in the development of regional energy policy, which will ensure energy security in South Caucasus. Finally,, there is no collaboration to converge the energy legislative framework of the countries.

RECOMMENDATION 9: *To contribute to the sustainable development of the region by streamlining skillful redistribution of countries' roles of the region in energy supply, as well as the exchange of electricity on a reciprocal basis.*

ARGUMENTATION:

There is a certain energy sector in each country which is a priority, and successful developing of these sectors (such as renewable and nuclear energy for Armenia; petrol, gas and renewable energy for

Azerbaijan; and renewable energy in Georgia) is important. These countries can benefit from mutual cooperation without external support.

RECOMMENDATION 10: *To facilitate the development of cross-border infrastructure and convergence of legislative frameworks to mitigate existing political disagreements and other barriers to regional cooperation.*

ARGUMENTATION:

Harmonization with the EU energy community within the EU/Georgian Association Agreement will open new opportunities for Georgia to access EU markets. The South Caucasus region has a great volume of natural and renewable resources, which can be exported to the EU through close cooperation among countries.

RECOMMENDATION 11: *To streamline the establishment of alternative cooperation schemes and formats in the region.*

ARGUMENTATION:

To ensure energy supply security, alternative cooperation schemes and routes need to be established. Serious measures have been taken for diversification of resources. Azerbaijan started negotiation with the Caspian riparian countries and Iran for the export of natural and renewable resources of those countries to the European market via alternative routes.







