



UNECE



19-20 OCTOBER 2017

New Opportunities for Developing Renewable Energy in Azerbaijan



HARDTALK

RECOMMENDATION PAPER

Outcome of the Hard Talk 2017

on

***“NEW OPPORTUNITIES FOR DEVELOPING RENEWABLE ENERGY IN
AZERBAIJAN”***

Held in Baku, Azerbaijan on 19-20 October 2017

Organised in the framework of the Assignment

“Realization of a UNECE Hard Talk as part of the RE-Uptake Project”

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1. INTRODUCTION

Context of assignment

The Hard Talk “**New Opportunities for Developing Renewable Energy in Azerbaijan**” was held on 19 and 20 October 2017 in Baku. The Hard Talk was organized by United Nations Economic Commission for Europe (UNECE) together with the State Agency for Alternative and Renewable Energy Sources of the Republic of Azerbaijan, within the scope of the “RE-Uptake” project realized by the German Energy Agency (dena) and supported by the Federal Ministry of Economic Affairs and Energy. “RE-Uptake” supports know-how transfer on renewable energies within the UNECE region. The German Energy Agency (dena) contracted Revelle Group sprl to organize and realise this Hard Talk in Azerbaijan.

The ‘Hard Talk’ is a specific policy dialogue event format developed by UNECE and Revelle Group which had been already implemented in two countries (e.g. Georgia and Ukraine in December 2016). The purpose of the Hard Talks is to promote an open and frank dialogue between all involved stakeholders on how to increase sustainable energy uptake and promote renewable energy investments in a specific UNECE country.

The Azerbaijan Hard Talk formed the third such Hard Talk held in the region and aimed to:

- Investigate barriers that hinder the full unfolding of renewable energy potential in Azerbaijan;
- Facilitate the exchange between political decision makers, project developers, investors and technology providers and thus between the public and private sector; and
- Point out solutions to improve the investment climate for renewable energies and to foster discussion to what the UNECE can provide with similar initiatives.

The event was a first of its kind dialogue in the country, built around a practical problem/solution discussion format to help achieve a common view on the actions needed to meet the country's renewable energy targets. The multi-stakeholder exchange brought together 40 representatives of policy and decision-makers, project developers, investors, technology providers and NGOs as well as international donors and financial institutions. The final agenda is included in [Annex 1](#) and the final list of participants in [Annex 2](#).

Preparation of the Discussion Paper

A key feature of the Hard Talks is the development of a “problem/solution” format discussion paper to facilitate a practical dialogue. In preparation, Revelle undertook a review of the renewable energy situation in Azerbaijan to identify issues which could potentially interfere with uptake of renewable energy sources in the country and, particularly, with private sector investment in renewables. Subsequently, recommendations were formulated, based on international experience and best practices that could contribute in de-blocking private investment by addressing the issues identified.

The first version of this Discussion Paper was introduced to the first-day, expert-level participants of the Hard Talk event, with the purpose of focusing the discussions. The outcomes of the first-day discussions were incorporated into an updated Discussion Paper, adding participant's perspective and viewpoints, and were presented to the participating decision-makers during the second day of the event. The decision-makers had the chance to offer insights on the second version of the Discussion Paper.

After the conclusion of the event, the input of the participants from both days of the event was incorporated into the Discussion Paper and the final result, dealing both with issues identified and recommendations proposed, is the basis of the present Recommendation Paper. In [Annex 3](#), the Recommendation Paper is presented in the same format as the original Discussion Paper for easy reference.

2. ISSUES & RECOMMENDATIONS

2.1 Market Risk

Issues

There are two main issues associated with general market risk that prospective investors have identified. The first issue involves the general policy framework for renewables in the country whereas the second issue has to do with the absence of a comprehensive, dedicated legal framework of implementation of State policy on renewable energy sources (RES).

The general policy framework is mainly set out in the *“State Programme on Use of Alternative and Renewable Energy Sources in the Republic of Azerbaijan”* of 2004 and the *“Strategic Road Map in the Public Utilities Sector of the Azerbaijan Republic”* adopted in December 2016. The older *“State Programme”* of 2004 is focused on renewables, but it is outdated and most of the existing tasks described therein have been completed. The more recent (but also more generic, dealing with all public utilities) *Strategic Road Map* outlines the key milestones, but there is a need for more thorough research on the targets themselves as well as for more detailed planning on the Road Map’s implementation.

The main targets set out in the country’s RES policy are to reach an installed electricity generation capacity of 420 MW by 2020, to increase the RE installed capacity to a total of 1000 MW by 2025 and to bring the RE installed capacity to a total of 1800 MW by 2030. For the short-term target of 420 MW by 2020, a List of Projects has been compiled, consisting of projects at the pre-feasibility or feasibility study stage, for total capacity of 350MW from wind, 50 MW from solar and 20 MW from biofuels.

A dedicated and independent State Agency on Alternative and Renewable Energy Sources is spearheading the country’s RES uptake.

Moreover, the framework for implementation of RES policy is fragmented. Currently, there are four (4) main legislative documents governing electricity, none of which deals specifically with RES. There are also a number of secondary legislation instruments regulating specific aspects of electricity generation by renewable sources (e.g. investment protection, environmental protection, taxation, etc). There is a distinct lack of a unified, comprehensive law on energy from Renewable Resources. A draft law on electricity production from RES was prepared a few years ago (along with a draft Law on Energy Efficiency) but they never entered into force and are now considered to be largely obsolete.

Recommendations

To address those two issues relating to market risk, a number of steps are proposed:

1. The first proposal is to undertake, with donor support, a Study on renewable energy development options to meet and exceed targets, taking into account the advantageous synergies between gas and renewables for power generation. In light of this study, the aforementioned mid- and long-term targets (1000MW by 2025, 1800MW by 2030) should be re-evaluated, taking into account the Study's outcomes and perspectives.
2. Based on the Study, formulate a comprehensive National Renewable Energy Action Plan (NREAP) that addresses mid- and long-term targets, with a clear vision regarding the involvement of the private sector. The NREAP should be the cornerstone of an update to the 'State Programme on the Use of Alternative and Renewable Energy Sources in the Republic of Azerbaijan'.
3. Develop a comprehensive, unified and dedicated legal instrument that clearly and efficiently regulates Renewables. A new "Law on Energy from Renewable Resources", that not only incorporates current best practices but also properly responds to the needs and realities of Azerbaijan, would help transform the policy objectives into concrete national goals with a clear framework to achieve them.

4. In order to keep momentum, the State Agency should proceed on Alternative and Renewable Energy with the implementation of the 2020 target of 420 MW by realizing the projects included in the Project List and use the lessons learned from these initial projects for the post-2020 phase.

2.2 RES Support Mechanism

Issues

Another issue interfering with private sector investment in renewables involves the lack of comprehensive, transparent, clear and horizontally applicable support mechanism for renewable energy generation. Although a fixed tariff system is in place, projects can be negotiated and agreements with investors can be concluded on a case-by-case, bilateral basis, undermining the transparency of the system. Moreover, the lack of a transparent support mechanism makes investors reluctant to be involved even in pre-screened, financially viable projects (such as those included in the Project List). While it was generally agreed that, at this point in time, renewable energy must be subsidized, clear rules on the financing of the subsidy scheme do not exist.

Recommendations

In order to address the aforementioned lack, the following recommendations are put forth:

1. A comprehensive support scheme must be developed, providing for subsidies as incentives for the increased uptake of RES but also maintaining a clear focus towards sustainability.
2. The support scheme should be included in updated versions of existing laws and in the proposed new law that will regulate the area of renewable energy.
3. Investment environment (including support measures, remuneration, connection terms, etc.) should be stable and known in advance and applicable to all interested parties in the same way.

4. Establishment of a 'Special Fund for RES' (funded with additional export revenues of natural gas saved by the use of RES) should be established to support payments to RES producers.
5. In view of the RES support scheme to be developed, international best practice with national regulators should be considered and the option of establishing an independent regulatory authority should be examined.
6. The support scheme should take into account other uses of renewable energy (e.g. for transport, rooftop solar, heating, and off-grid solutions for remote areas) while also ensuring that energy efficiency and environmental aspects are duly considered (nexus approach).

2.3 Tariffs

Issues

Currently, the tariffs for electricity generated from renewable sources are regulated by the Tariff Council, established in 2005 as part of a State initiative to address inflation.

Currently, the tariffs for RES generation are: 0,055 manat/KWh (0,028€/kWh) for wind, 0,050 manat/KWh (0,025€/kWh) for small hydro and 0,057 manat/KWh (0,029€/kWh) for other RES.

The Tariff Council's methodology in calculating the renewable energy tariff, though, is opaque. There is no supporting computational methodology that guarantees that the tariff is the product of the application of transparent and reasonable principles, therefore investors are reluctant to trust it.

Recommendations

In order to attract private investors, renewable energy tariffs should take into consideration the following:

1. In a globalized investment environment, global return on investment (ROI) rates for similar projects should be taken into consideration, particularly taking into account the specific economic conditions in Azerbaijan.
2. Donor-funded technical assistance for developing a computational methodology should be requested.
3. Tariffs should incorporate and reflect added benefits from renewables (health, environmental, Natural Gas savings, etc.).

2.4 Permitting

Issues

Another issue associated with private sector investment in the renewable energy sector of Azerbaijan is the permitting process. Despite the fact that a “one-stop-shop” mechanism exists in principle, it has not been tried in practice. Moreover, the complicated legal environment makes the procedure of permitting in the field not easily accessible for foreign investors.

Recommendation

In order to address this issue, a clear, concise and practical Guide must be written (with donor support) and made available to investors, describing the project development process. This will make the environment more accessible and understandable to foreign investment actors.

2.5 Transmission and Distribution Grid

Issues

Some issues associated with the technical specifications and costs for grid connection, as well as the technical capacity of the grid operator to accept renewable energy, dis-incentivize foreign investors due to the perceived risk of long delays and unjustified costs. In particular, the technical standards for connection are not well regulated and the connection costs are not cost-efficient and there is a large margin for more efficient management. Moreover, the existing

grid operation rules are not on par with international standards and need to be updated and concentrated into a comprehensive Grid Code. Finally, there is a lack of awareness and knowledge of the grid operator to develop technical solutions to accept renewable energy integration into the grid and provide cost-efficient connection terms.

Recommendations

In order to eliminate these perceived hindrances, the following steps are recommended:

1. Utilizing donor support in the form of studies and technical assistance, an updated Grid Code should be prepared and introduced.
2. Information on connection points and available capacities should be made available to interested parties.
3. The technical standards (including type of connection method) for the integration of renewable energy sources into the grid should be clearly defined and adopted in advance.
4. Grid expansion should incorporate renewables resource mapping for technologies where it is available (e.g. wind).
5. Know-how of the grid operator should increase, particularly through exchanges of best practices and cost-efficient solutions to renewable grid integration and connection with international counterparts.

2.6 Resource and technology risk

Issues

Another factor that hinders proliferation of RES in Azerbaijan is the lack of technical knowledge and capacity in new RES technologies and methods.

Recommendations

In order to overcome this challenge, Azerbaijan should strive to increase domestic technical capacity through:

1. Technical education programmes, courses and degrees

2. Advanced learning on RES for trained professionals
3. Establishment of knowledge validation and certification programmes

2.7 Bankability

Issues

A very important factor that needs to be addressed, and which is a direct result of other identified challenges, such as the lack of a Support Mechanism and the opaque tariff methodology, is the issue of bankability of RES Projects. Given the current situation in the country, high interest rates (reaching 30% per annum) and high securities requirements from local banks make local financing extremely difficult. Banks are reluctant to finance RES projects and, when they do, the increased risk they undertake is reflected on the high interest rates they request.

Recommendations

In order to address this issue, a possible measure could be to involve donors and international financial institutions to reduce risks and build capacity for local banks to provide funding for renewable energy projects.

2.8 PPA Terms

Issues

Another issue affecting the attractiveness of RES projects, particularly for international investors, is that the existing model of the Power Purchase Agreement (PPA) is not according to international standards.

Recommendation

In order to overcome this issue, a standard template of PPA should be adopted which should be in line with modern, bankable PPAs and should accommodate specific requirements of different technologies. Donor support for preparing such a revised PPA could be made available.

3. RECOMMENDATIONS CONSIDERED TOP PRIORITY FOR ACTION

In light of the above, the following steps are prioritized as having the potential to drastically alter the perception of the country's attractiveness for investment to international investors.

1. Secure support from Donors to prepare a Study that analyzes the renewable energy potential and options for a long-term sustainable increase of RES in the country, with concrete, realistic and achievable goals, should be undertaken. This Study should be supported by accurate data and should take into consideration international current best practices, while at the same time adapting to the particular needs of Azerbaijan. This Study will provide the foundation for the country's renewable energy policy for the foreseeable future.
2. Formulate, with donor support, a comprehensive RES Support Scheme with a specific, clear role for private sector investors, transparent pricing and subsidy financing rules and competitive tariffs that guarantee project viability.
3. Prepare, with donor support, a model Power Purchase Agreement that is in line with modern best practices and can help with bankability of RES projects.
4. Secure donor support to increase understanding of the environmental and financial long-term benefits of renewables and to improve technical, regulatory and administrative know-how in the relevant sectors of the State.
5. In order to preserve momentum, proceed with the short-term target of 420MW, utilizing the experience gained to better be prepared for the mid- and long- term RES adoption.

4. CONCLUSION

Azerbaijan is in a unique position to introduce renewable energy sources in its energy mix. The country's dependence on natural gas for electrification provides substantial synergies for the proliferation of RES. Moreover, there is a long-term financial benefit from exporting a scarce fuel resource (with prices bound to increase) while utilizing renewable sources for domestic consumption, an argument that guarantees the viability and sustainability of RES in the country.

In order to change the landscape, of course, changes need to be made. It is, though, without a doubt the best time to proceed with such change. International practice is now mature enough, both in successes and failed experiments, to ensure that a viable model without significant risks can be identified. Moreover, international support is available to address most, if not all, hindrances and to help in overcoming them.

The most important thing required is focus on behalf of the country's various stakeholders and actors; focus in comprehending the enormous potential and demonstrating the desire to reach it. It is in light of this need for focused decisions and actions that the present Recommendations Paper was drafted and will hopefully be of value.

5. ANNEXES

Annex 1 - Final Agenda

Annex 2 – Final List of Participants

Annex 3 - Final Recommendation Paper (in discussion paper format)