

This policy brief is one of Green Alternative analytical surveys, covering topical issues of Georgia's sustainable development. It aims at raising urgent problems of public policy specific areas and support dialogue on the ways of harmoniously reaching economic and social development, and environmental goals.

The present brief is intended for decision-making bodies and persons, responsible for public policy and good government. It might be useful also for those who try to influence Georgia's public policy with the view of its improvement.

This policy brief is also available in Georgian.

ENVIRONMENTAL AND SOCIAL ISSUES RELATED TO THE CONSTRUCTION AND OPERATION OF TRANSMISSION LINES

INTRODUCTION

Since 2009, Georgia has actively started implementation of projects on construction and reconstruction of electricity transmission lines (ETL). According to the ten-year development plan of Georgia's transmission network, implementation of these projects will facilitate improving electricity supply and service within the country as well as increasing its sustainability and reliability, developing new power capacity and making Georgia as a regional hub and using transit potential.

The implementation of six projects that are reviewed in the research has been started since 2009. These are:

1. Black Sea Regional Transmission Network Project - construction of 500 kV and 400 kV overhead lines;
2. Construction and Exploitation of 110kV Substation BP-Jandara and 110 kV Transmission Line BP in Gardabani;
3. Reconstruction of 110 kV Transmission Line Dariali within the 220 kV profile;
4. Construction of Akhaltsikhe-Batumi 220kV Transmission Line;
5. Construction of 500/220 kV Substation of Jvari-Khorga Interconnection Power Transmission Network;
6. Construction and Exploitation of 500 kV Ksani-Stepantsminda Transmission Line

The research is focused on issues related to environmental and social impact of ETL construction and exploitation as well as systemic problems in current practices for implementation of ETL construction and reconstruction projects. Also, it points out existing gaps in the current legislation which fail to ensure the protection of rights and interests of the local population due to the implementation of ETL projects.

It should be noted that the Law of Georgia on Environmental Impact Permits has been replaced by the Environmental Assessment Code (effective as of January 1, 2018). However, the problems raised in the research have not been solved by enactment of the Code. Likewise, the practice of review and implementation of the projects has not been changed.

PROBLEMS RELATED TO ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

Installation of high voltage (of 35 kV and more) air and cable ETLs as well as the placement of substations (of 110 kV and more voltage) requires ecological examination. Thus, an implementer of the activity is obliged to conduct an environmental impact assessment (EIA) to prevent or minimize adverse environmental impacts.

As a result of the study, it was identified that the Law on Environmental Impact Assessment has been violated in the process of developing EIA reports on ETL projects. Moreover, the significant shortfall of the reviewed projects is that EIA reports do not contain information related to:

1. All possible sources that have an impact on the environment;
2. Nature and quality of an impact;
3. Integrated environmental, social and economic impact assessment.

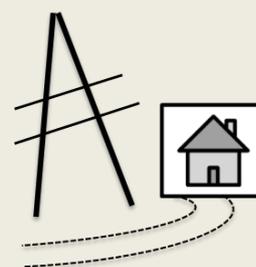
The key features of the project are often vague and unknown, even such as the number of towers and their locations. As a result, adverse environmental impacts are neither avoided nor reduced.

INCOMPLETE ENVIRONMENTAL IMPACT ASSESSMENT DOCUMENTS

The bad practice of the Environmental Impact Assessment of ETL projects and the violation of requirements of the Regulations on Environmental Impact Assessment has been illustrated by the Jvari-Khorga Power Network Construction Project whose EIA report has been prepared in accordance with the “Design and Built” Principle. This implies that location of transmission towers and auxiliary buildings (access roads, construction camps) is specified after the contractor receives a permit for the ETL construction. Consequently, the EIA document does not include the comprehensive information on the expected impacts.

Locations, quantity and distance of access roads and construction camps are not clear in the research reviewed projects (except for the BP-Jandara project). Moreover, in most cases the EIA reports do not include the exact number of transmission towers as well as the land area required for their installation. As a result, the scale and type of impacts on the natural and social environment have not been discussed and identified.

Impacts related to access roads, construction camp and tower foundation arrangements:



- Cleaning of the area from vegetation cover;
- Removal of soil layer;
- Damaging or destructing animals habitats and disturbing them during the reproduction due to transport movement.

SHORTFALLS RELATED TO CONDUCTING FIELD SURVEYS

Field surveys are not conducted properly during the environmental impact assessment process. Often the researchers are unaware of the project design and technical details while the research time is insufficient.

Akhaltshikhe-Batumi ETL construction and exploitation project EIA: “Despite the great efforts dedicate to the bird survey, it was impossible to properly examine all issues. During the spring survey, the birds fly over near the Goderdzi Pass was not examined adequately because the area survey had been postponed due to snow “.

It is noteworthy that the biodiversity impact assessment is mainly based on the existence of species within the corridor of the transmission line project as a result of the review of the literary data, and less on the particular species identified during the field works. Therefore, the existing environmental situation cannot be assessed comprehensively.

Ksani-Stepantsminda construction and exploitation project EIA: “In the study area (including the Kazbegi National Park) there are over 64 species of terrestrial mammals. Most of these species have been known from published literature sources.”

When producing EIA reports, the authors copy information from other EIA reports they have produced for already implemented projects. This is a significant shortfall of the assessment document that demonstrates the irresponsible attitude of the authors towards the EIA process.

Ksani-Stepantsminda ETL construction and exploitation project EIA: the respective chapter of the report on the expected social impact of the project, which identifies the project impact on the local population, had been copied from the Jvari-Khorga project EIA document.

As a result, environmental and social impact assessment of the planned activity at all three stages is not assessed comprehensively in the environmental impact assessment documents.

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|---|--|
| 1 | <ul style="list-style-type: none"> ⇒ Environmental, social and economic impact assessment ⇒ Assessment of the existing environmental situation |
| 2 | <ul style="list-style-type: none"> ⇒ Forecasting the expected environmental situation ⇒ Identification of scales of expected impact |
| 3 | <ul style="list-style-type: none"> ⇒ Identification of mitigation measures ⇒ Identification of compensation measures |

The EIA report produced by the implementer of the activity does not fully cover the issues defined by the Regulations on Environmental Impact Assessment. Therefore, it is not possible to properly substantiate that the implementation of the project does not lead to irreversible qualitative and quantitative changes in the environmental situation and natural resources. Nevertheless, all the projects reviewed in the survey have received positive ecological examination reports.

The report of the ecological examination fails to meet one of the basic principles of ecological examination that is to ensure relevance and legitimacy of the ecological examination report.

EXEMPTION FROM ENVIRONMENTAL IMPACT ASSESSMENT ON ETL PROJECTS

The Law of Georgia on Environmental Impact Permits allowed the exemption from EIA if the common interests of the state required to start activities and make timely decisions. The law did not explain what the common interests of the state are, whether they involve the transmission line construction projects, especially when it comes to ETL construction for private power stations. It is noteworthy that the Environmental Assessment Code, enacted as of January 1, 2018, also envisages the possibility of exemption from EIA. At present, a person may be exempted from EIA in order “to carry out an activity to ensure state security or take measures due to the urgent necessity caused by force majeure”. The Law defines what should be considered as circumstances constituting force majeure; however, the problem remains in terms of identifying activities that aim to “ensure state security”.

In 2011-2016, seven air and cable ETL projects of high voltage (35 kV and more) were exempted from the EIA procedures, including the project related to reconstruction, construction and exploitation of “Dariali” transmission line of 110 kV (within the 220-kV profile).

The reason for exempting the Dariali transmission line reconstruction project from EIA was the inclusion of the Dariali Hydro Power Plant in the energy system. It is unclear whether this represents a common interest of the

state or not. Considering that the HPP was put into operation only in spring of 2017, it is not clear what the reason for exempting from public discussions was.

It should also be noted that one application was rejected on the ground of failure to submit full documentation. This was a case related to exemption from EIA on the project of 220kV Derchi Transmission Line Reconstruction (between substation Tskaltubo 220 and existing #74 Pipeline).

Exempting those projects from environmental impact assessment that envisage the crossing of the protected areas, forests, private property, local agricultural land plots, and placement of towers over such territories, first of all, violates the rights of local inhabitants to have exhaustive information about their living environment and to give consideration to their interests in the project implementation process. For example, Zaza Tsiklauri, the inhabitant of Kazbegi, submitted an administrative claim and requested cancellation of the EIA exemption document for “Dariali 110” ETL reconstruction project, as it was contrary to Article 1 of the Aarhus Convention¹ – the rights of access to information, public participation in decision-making, and access to justice in environmental matters. Moreover, it would have been important to hold public discussions about the project environmental impact assessment, since the installation of the Dariali ETL envisaged the crossing of private property, which would have direct impact on the local population².

The announcement on holding public discussions of Ksani-Stepantsminda transmission line was only available in the premises of Gamgeoba (municipal government). From the Sno gorge, which is under the impact of the ETL project, six people attended the public hearing, out of which four were the municipal government employees. Moreover, only those persons were invited to the public hearing of the Ksani-Stepantsminda ETL environmental impact assessment report held on May 16, 2016, at the Ministry of Environment and Natural Resources of Georgia, who requested to participate in the administrative proceedings in advance.

While implementing ETL projects it is important to involve stakeholders in the decision-making process. Insufficient communication from the implementer of the activity with the stakeholders may lead to protest demonstrations, boycotts, environmental damage and termination of activity.

! The construction of current projects that are reviewed in the survey have been protested by the local population. One of the reason was the lack of their involvement in the process and insufficient communication from the implementer of the activity.

PUBLIC DISCUSSIONS AS A FORMAL PROCESS

The review process of the projects has identified the main problems related to public discussions. The implementer of the activity on holding public discussions does not provide adequate information to the stakeholders. As a result, the affected population becomes aware of the project only upon its implementation.

TRANSMISSION LINE’S IMPACT ON NATURAL ENVIRONMENT

TRANSMISSION LINE’S IMPACT ON BIRDS

All the survey reviewed projects envisage crossing of migratory bird corridors and water reservoirs, habitats for the conservation for birds. Consequently, at the exploitation stage the birds collision with the transmission towers might occur which often ends with their death. In addition, there is also a risk of destruction of bird habitats at the construction stage. This was the case during the implementation of BP-Jandara transmission line project when a fact of destruction of habitat of the Imperial Eagle (*Aquila heliaca Savigny, 1809*) enlisted in the

¹ [The UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters](#)

² [Zaza Tsiklauri vs. the Ministry of Environmental Protection and Natural Resources, 2016](#)

Red List has been observed. It is important to note that at the national level as well as according to the International Union for Conservation of Nature (IUCN), the habitat loss or habitat destruction is one of the reasons for reduction of the imperial eagle species.

IMPACT ON PROTECTED TERRITORIES AND THE “PRIORITY PRINCIPLE”

TRANSMISSION LINE’S IMPACT ON THE PROTECTED TERRITORIES

As a result of the review of all six ETL projects it became clear that all of them cross or pass near the boundaries of the protected territories as well as a valuable natural landscape that is part of the protected territories to be created in the future. The Law of Georgia on the System of Protected Territories stipulates that reducing protected territories or downgrading of protective categories can only be possible in case of catastrophic and irreversible breakdown of the protected ecosystems, when it is necessary to carry out activities to restore the biodiversity and after the demarcation of the boundaries of the protected territories. Consequently, areas should not be removed from the protected territories due to the implementation of ETL projects. However, it has been the practice of removing areas from the protected territories due to the energy-related projects. For example, several towers of the Dariali transmission line are located on the territory excluded from the Kazbegi National Park.

GOOD PRACTICE OF APPLICATION OF THE “PRIORITY PRINCIPLE” IN THE FRAMEWORK OF THE BLACK SEA TRANSMISSION LINE PROJECT

According to the “priority principle” envisaged in Article 5 of the Law of Georgia on Environmental Protection, activities that are less likely to pose risks and are costly should replace those that cause more damages to the environment (unless their costs exceed compensation costs for damages caused by ecological harm as a result of less costly activities).

This project is also distinguished in the sense that the route selected for its implementation envisaged the crossing of the Borjomi-Kharagauli National Park and the protected areas of Ktsia-Tabatskuri and Gardabani. Especially problematic was the crossing of the forest cover of the Borjomi-Kharagauli National Park. As a result of the advocacy campaign of local groups and international organizations, the fourth alternative route was selected, which would have the least impact on the forest cover of Borjomi-Kharagauli National Park. The European Union Delegation has allocated additional funds (3 million euros), and, as a result, the implementer of the activity has agreed to the existing proposal and the project has been implemented with the fourth alternative route having less impact on natural and social environment, which is a good example of application of the priority principle.

IMPACT OF ETL PROJECTS ON FOREST COVER

DISCUSSION OF LEGAL FRAMEWORK RELATED TO ETL PROJECTS AND FOREST COVER

ETL projects have a significant impact on vegetative cover, which implies cutting of all timber, or permanent control of vegetation cover in the corridor of the transmission line once in 6-8 years in order to eliminate fire hazards and prevent failure of transmission lines.

Resolutions of the Government of Georgia on Rules of Establishing the Boundaries of the Forest Fund of Georgia and on Approval of Rules of Forest Use envisage the removal of the area from the state forest fund and the use of the state forest fund for special purposes.

According to the Resolution on Rules of Establishing the Boundaries of the Forest Fund of Georgia, the boundaries of the forest fund might be corrected because of cuts during the implementation of infrastructural projects related to water supply and energy of the state and local importance. Under the Resolution on Approval of Rules of Forest Use, the use of the state forest fund is carried out for different purposes, including design

and/or engineering-geological works of power transmission communications projects. Also, special cuttings are allowed on the slope of 30 degrees.

According to the Resolution of the Government of Georgia on Rules of Protection of Electricity Grid Linear Facilities and Establishment of Protection Zones, the electrical grid owner is entitled to timber and bough cutting within the transmission lines protection zone with the purpose of ensuring operation and safety, arranging access roads, bridges and other facilities, protecting cutting line. Consequently, if we take into account the transmission line protection zones, timber cutting should be carried out on both sides from the outer wires within the following distance:

- For 330,400,500 kV ETL - 30 meters;
- For 150,220 kV ETL - 25 meters;
- For 110 kV ETL - 20 meters;
- For 35 kV ETL -15 meters;
- Up to 1 kV ETL - 20 meters.

FOREST AREAS REMOVED DUE TO ETL PROJECTS

Due to the implementation of ETL projects in 2000-2016 and before May 2017, the total number of areas removed from the State Forest Fund under LEPL National Forestry Agency (NFA) is up about 953.621 hectares.

For the purpose of construction of Ksani-Stepantsminda and Jvari-Khorga transmission lines, the right to use forest for a special purpose (with timber cutting rights) was granted over the following land areas:

- Ksani-Stepantsminda - 93.1527 (ha), from which 895 units of different species protected by the Red List have been removed;
- Jvari-Khorga - 38.5975 (ha) from which 485 units of various species protected by the Red List have been removed.
- According to the Decree of the Government of Georgia, the JSC "Georgian State Electrosystem" has been granted a permit to extract 3966 units of species from the Red List with the purpose of construction of Akhaltsikhe-Batumi 220 kV air transmission line.

IMPACT OF ETL PROJECTS ON SOCIAL ENVIRONMENT

HEALTH RELATED ISSUES

Nowadays, Georgian legislation does not envisage the protection of population from negative effects of electromagnetic fields produced from ETL. The Order of the Minister of Labor, Health and Social Affairs of Georgia sets up regulation only for the sanitary rules and norms of the working conditions of the staff working in the ETL impact zones³. The main argument of the activity implementer given in the environmental impact assessment reports that the current projects are safe for the health of the population is the distance as defined in the Resolution of the Government on the Rules of Protection of Electricity Grid Linear Facilities and Establishment of their Protection Zones:

- protection zone from the outer wires of 330, 400, 500 kV transmission lines – 30 m;
- In the case of 150, 220 kV voltage - 25 meters⁴.

³["Sanitary rules of labor conditions for personnel serving in the impact zones of electric fields of electrostatic, industrial frequency, electrical and different frequencies", 2002](#)

⁴ [Resolution #366 of the Government of Georgia on the Rules of Protection of Electricity Grid Linear Facilities and Establishment of their Protection Zones, 2013](#)

However, the norms defined by the Resolution of the Government are the safety distances from the transmission line and cannot be considered as zones for protecting residents from electromagnetic fields near the transmission line.

The Order of Minister of Labor, Health and Social Affairs of Georgia adopted in 2003 on Approval of Sanitary Protection Zones and Sanitary Classification of Enterprises, Facilities and Other Objects defined the sanitary zones for protecting citizens from electromagnetic fields produced from the electricity transmission lines, the nearest distance from the power transmission line to the settlement area, which should have been no less than:

- 250 meters - from 500-kW up to 700 kW voltage lines
- 300 meters - up to 1150 kW voltage lines.

This Order was abolished in 2007, thus, currently there is no normative act defining the distance of the placement of transmission line from settlement areas in order to reduce the negative impact of the electromagnetic fields on the health of the population.

ISSUES RELATED TO DEPRIVATION OF PROPERTY FOR PRESSING SOCIAL NEEDS

The main problem related to implementation of ETL projects is the restriction of ownership rights of the population affected by the project. According to the Constitution of Georgia, the right to property and heritage is recognized and inviolable, however, it may be restricted in case of deprivation of property for pressing social needs (Article 21).

The Law of Georgia on Rules of Deprivation of Ownership for Pressing Social Needs defines those activities that envisages deprivation of property for pressing social needs. The construction of power transmission and distribution lines is among them.

Transmission lines may have a strong impact on families when they lose their land forever, completely or in part (more than 10% of the fertile land) and partially - when they are restricted from using their land plots and prohibited from growing trees and plants as well as constructing/placing facilities.

According to the project resettlement action plan, 2041 families will be affected by the implementation of Batumi-Akhaltzikhe, Jvari-Khorga and Ksani-Stepantsminda projects, out of which 169 families will lose more than 10% of the fertile land while 42 families will have to resettle physically. ETL projects may also have an impact on the lands of traditional use that are under unregistered common ownership of local inhabitants and are used for the community interests, such as pasture. Implementation of ETL projects on the lands of traditional use can result in loss of access to significant resources for the inhabitants.

DISCUSSION OF PROBLEMS RELATED TO THE FORCED RESETTLEMENT ON THE EXAMPLE OF AKHALTSIKHE-BATUMI PROJECT

Part of the population living on Khikhani Street is against physical resettlement, even in the case of receiving the desired compensation, because they find it unacceptable to leave their place of residence. For instance, one of the inhabitants living in the immediate vicinity of the tower, marked the area of his yard with the red tape, signaling that he is not going to abandon his place of residence.



Main Problems related to the Forced Resettlement caused by ETL Projects

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| <p>Insufficient information on compensation options</p> | <p>According to the World Bank Resettlement Policy, those persons who have to be resettled should be informed about the compensation options for the lost property (alternative land or residence). According to the inhabitants of Khikhani street, only money compensation is being provided and, thus, there are no discussions about the compensation options.</p> |
| <p>Paying compensations</p> | <p>Although the project resettlement action plan requires payment of compensation before starting the resettlement and construction process, the project is being implemented so that the part of the population has not received any compensation amount.</p> |
| <p>Insufficient money compensation</p> | <p>According to the World Bank Resettlement Policy, standards of living before the start of the project should be maintained by compensation and rehabilitation conditions. According to the population, the compensation amount proposed by the implementer of the activity varies from 7 to 23 GEL per m2 of the land plot considering the location of the land plot and the value of the property located on it. As the inhabitants of Khikhani street claim, land value for m2 at Khikhani Street is much higher than offered by the company. Thus, the amount offered by the implementer of the activity is unacceptable and insufficient not only to maintain but to improve the initial conditions of the place of residence.</p> |
| <p>Loss of agricultural land</p> | <p>The agricultural activity is a significant source of revenue for the population living under the transmission lines. According to them, the deprivation of agricultural land is equal to the loss of their livelihood. For the purpose of public needs, in order to locate the 220-kV double circuit transmission lines the JSC “Georgian State Electrosystem” has been granted the right of expropriation of private land plots of 19 families.</p> |

RECOMMENDATIONS

We suggest that the following recommendations will significantly contribute to lessen the impact on natural and social environment during the implementation of ETL projects, as well as to reduce the conflict between the population and the activity implementers.

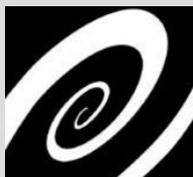
- The activity implementers should ensure maximum involvement of stakeholders from the early stages of decision-making process;
- It is necessary to conduct surveys during the environmental impact assessment process to identify all objects, sources and types of impacts in order to fully assess the expected risks;
- Project alternative routes should be justified and discussed that will contribute to reducing environmental and social impacts of the projects;
- The permit-issuing authority should issue a positive ecological examination report only if the environmental impact assessment procedures are carried out in compliance with the requirements of the Georgian legislation;
- Exemption from the environmental impact assessment procedure should be justified in order to not to violate the environmental and social interests of the affected population;
- It is necessary that respective administrative bodies conduct thorough monitoring to ensure that the activity is not implemented without the environmental impact permit;
- In the process of implementation of ETL projects, it is important to minimize or eliminate forced resettlement, restriction of property rights; if resettlement is necessary, a fair compensation should be made to enable local population to resettle and improve their initial living conditions;
- It is important to provide compensation of the lost property for those people who do not have registered property;
- It is necessary to create relevant legislative regulations, which will define the placement of transmission lines within safe distance for the population. Before the elaboration of national legislation, the State should be guided by the recommendations reflected in the guidelines of the World Health Organization, in accordance with the principles of “prudence” and “precaution”;
- Issues related to prevention of impact on birds during the ETL construction (to protect against collision and power hitting) should be developed and covered by legal acts, taking into consideration the specific features of local species.

The Policy Brief is focused on issues related to environmental and social impact of Electricity Transmission Lines construction and exploitation as well as systemic problems in current practices for implementation of Transmission Lines construction and reconstruction projects. Also, it points out existing gaps in the current legislation which fail to ensure the protection of rights and interests of the local population due to the implementation of Transmission Lines projects.

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