

On issuing the Environmental Decision on operating condition modification of the two-stage Project on the Construction and Operation of Namakhvani HPPs Cascade (Tvishi HPP with 100 MW installed capacity and Namakhvani-Zhoneti - 333 MW installed capacity) by ENKA Renewables LLC, on the Rioni River in the Municipalities of Tskaltubo and Tsageri

For the purpose of environmental decision-making, Enka Renewables LLC has submitted the Environmental Impact Assessment Report and accompanying documentation required by law, on modifications in operation conditions (Lower Namakhvani) in the two-stage Project of Construction and Operation of Namakhvani HPPs Cascade (Tvishi HPP with 100 MW installed capacity and Namakhvani-Zhoneti - 333 MW installed capacity), on which the Ministry ensured the creation of an expert commission and posting information about the planned activity on the official website of the Ministry and on the information board of the Tskaltubo municipality executive body.

On December 25, 2015 the Ministry of Environment and Natural Resources Protection of Georgia issued the Ecological Expertise Report N73 on the Namakhvani HPP Cascade Project to JSC Namakhvani. On May 10, 2019 by the order of the Minister of Environment Protection and Agriculture of Georgia N2-398, the Environmental Decision was issued on the placement of hydroelectric power plant cascade (Tvishi HPP - 100 MW installed capacity and Namakhvani-Zhoneti HPP - 333 MW capacity) by JSC Namakhvani, in accordance with Article 48, paragraph 4 of the Environmental Assessment Code.

On May 27, 2019, by order of the Minister of Environment and Agriculture of Georgia #2-451, the company handed over the Environmental Decision to Clean Energy Group Georgia LLC, which changed its name and is currently planning its activities as Enka Renewables LLC.

Enka Renewables LLC has undertaken project optimization work to prepare a construction / detailed design of the HPP Cascade, resulting in a decision to make changes to the basic design of the Project. According to Article 12, paragraph 5 of the Environmental Assessment Code, a Screening Report of the changes made to the Project has been submitted to the Ministry of Environment Protection and Agriculture of Georgia, on which The Minister of Environment and Agriculture of Georgia issued a Screening Decision N 2-143 dated February 14, 2019 and modifications in the Namakhvani HPP Construction and Operation Project (modification of operating conditions) were subjected to environmental impact assessment.

On June 13, 2019, for the purpose of obtaining a Scoping Decision by Enka Renewables LLC, a Scoping Report on making amendments in operation conditions (Lower Namakhvani) of two-stage Project on Construction and Operation of HPPs Cascade (Tvishi HPP with 100 MW installed capacity and Namakhvani-Zhoneti - 333 MW installed capacity) on the Rioni River in the Municipalities of Tskaltubo and Tsageri have been submitted to the Ministry. Ministry ensured posting information on its official website and on the information board of the Tskaltubo municipality executive body. On September 6, 2019, the public hearing of the Scoping Report on the above mentioned modifications was held at the Tskaltubo City Hall Administrative Unit Building. As a result of the scoping procedure, the Ministry has identified and established a list of studies required to prepare a EIA report

of the planned activity, information to be obtained and to be studied, and issues to be studied in detail during the EIA process (Order N2-943).

Based on the information given in the Environmental Impact Assessment Report, on modifications in operation conditions (Lower Namakhvani) of the two-stage Project considering the results of the additional studies carried out during the preparation of the detailed / construction Project, the following changes are planned for the Lower Namakhvani HPP Project:

- Moving the Powerhouse about 1.5 km upstream of the Rioni River from the site designated by the Ecological Expertise Report N73;
- Arrangement of the tailrace channel of approx. 1.5 km length in order to lower the downstream level and consequently increase the pressure;
- Arrangement of the intake next to the dam, instead of 2 km from the dam, as planned by the Report N73;
- Due to changes of locations of water and the powerhouse, as considered by the Report N73, relocation of headrace tunnel corridor;
- Arrangement of a construction diversion tunnel on the right bank slope, instead of the left bank, as designed under Report #73;
- Increase of reservoir maximum flooding level by 1.5 m.

Namakhvani HPPs Cascade Construction and Operation Project envisages utilization of the Rioni hydroelectric potential between 357 and 205 m elevations above sea level.

Considering the changes made to the Project, most of the HPP area is located in the Tskaltubo municipality, with the tail of the reservoir located in the vicinity of the villages of Korenishi and Orkhvi in the Tsageri municipality.

According to the Project modifications, the installed capacity of the HPP instead of 333 MW will be 324 MW and the average annual electricity generation will be 1135.7 MWh/year instead of 1170 MWh. However, the designed and environmental flow of the HPP remained unchanged. Specifically, the environmental flow is 16 m³/sec (10% of the average multi-year flow of 50% provision). The Reference Design as well as the Basic Design, envisages arrangement of the so-called “eco HPP” in the dam body. Environmental flow (16 m³/sec) from main dam will be carried via the “eco HPP”, which will operate continuously and ensure passage of the environmental flow. The “eco HPP” will also consider generators, transformers and other auxiliary equipment, and will be connected to the lower Namakhvani HPP with a 35 kv transmission line. The length of the line will be reduced by 1.5 km due to the above modifications and will be approximately 4.5 km.

According to the EIA Report, the Lower Namakhvani HPP main structure is a rammed concrete gravity dam, which, according to the Environmental Evaluation Report N73, as well as the modified design, is planned to be constructed above the village Namokhvani, in the narrow valley of the Rioni river. According to the results of additional topological geodesic and engineering-geological and surveys, alluvial sediments were found 6 m below the alignment of the dam and required lowering of the dam bottom, which led to an increase in the height of the dam. Namely, it will be 105 meters instead of 99 meters, and the crest will remain unchanged and will be 314 meters above sea level. Due to the above changes, the reservoir operational level has increased (instead of 310 m above sea level it will be 311.5 m). Consequently, the total capacity of the reservoir will increase (instead of 154.4

million m³ to 167.5 million m³) and the mirror surface area will be 510 ha instead of 500 ha. The dam will be equipped with a spillway and lower water discharge structures. It is planned to construct a spillway inside the dam body, which will ensure water flow control during the flood. Four sections will be arranged on the spillway and each section will be equipped with a radial lock gate, which will also ensure control of water discharge in the spillway. According to the Project modifications, the area of impact will additionally include 2 homesteads and 10-12 private lands.

According to the EIA Report, it is planned to install the following control and measuring equipment on the dam of the Lower Namakhvani.

- Vertical sections of pendulum to monitor the horizontal movement of the dam foundation;
- Water measuring posts, to monitor water filtration from the sides and foundation of the dam.
- Geodezic measurement network (for straightening and horizontal movement), which will be connected to the network of the external columns of the dam;
- Piezometers to measure the lifting forces at the base of the dam, and thermometers to measure the temperature of the concrete;
- Equipment for monitoring vertical jointing displacement in galleries;
- Accelerographs to record dam acceleration in the event of an earthquake;
- Meteorological station (with air temperature, wind, precipitation sensors);

According to the 2015 EIA Report, the dam was designed to have 3 free surface spillway closures. With the changes made, the modified Project plans to install 4 smaller locks that will reduce the size of conventional concrete structures on the dam crest and increase their reliability.

The modified design includes the following geometrical characteristics of the spillway:

- Four-span surface spillway;
- Two spans with segmental locking;
- Two spans with segmental locking with valve shield on the crest;

Water outlets at the bottom will serve to control the initial filling of the reservoir, enabling rapid discharge of the reservoir in emergency situations, maintaining a specific water level during repair (for example: repair works on regulated spillway or inlet), washing-out of sediments, as well as the passage of high water and washing-out (sluicing) the debris during floods.

Prior to the construction of the dam, a temporary diversion tunnel will be constructed to change the direction of the river to bypass the dam construction site. The diversion tunnel is planned to be constructed on the right bank of the river instead of the left bank foreseen by Environmental Evaluation Report N73, though the tunnel's technical parameters have not changed. As a result of this change, the arrangement of a new bridge will not be required.

The diversion of the river to the tunnel will be carried out by means of specially arranged locks in the upper-stream side of the dam. The geological conditions on the right bank of the river are relatively better expressed and it will be possible to place the tunnel portals in solid rock and therefore the amount of open excavation work will be minimized. Its excavation methodology remains unchanged and in accordance with the Environmental Evaluation Report N73, will be carried out

using the drilling and blasting method. The arrangement of the explosive storage facility is planned in the lower sections of the intermediate construction gallery of the access tunnel. The storage will be arranged in the building of relevant standards. In order to direct the river to the diversion tunnel, the arrangement of the floodgates is designed in the upgrade-stream side and tail-water of the dam, with calculations for a 20-years flood expectation.

According to the Environmental Evaluation Report N73, the accesses tunnel intake channel was designed to run 2 km along the left bank of the reservoir above the dam, which did not allow for sediment removal at the intake channel. Thus, would cause the need to undertake base dredging works during the operation period. The dam's base spillway would not allow for efficient handling of solid debris in front of the intake channel. If the reservoir is emptied and washed, it will not be possible to remove debris from the water intake surrounding area. Given the debris accumulation rate in the reservoir, a large amount of debris is expected to accumulate at the entrance of the intake, which will hinder its operation. Due to these circumstances, in the process of optimization, the location of the intake was changed in the Modification Project, in particular: The water intake will be relocated directly to the dam axis. Protection from the solid sediment will be provided by the spillway. Protection from the debris will be carried out with the use of base spillway. As a result of all the above modifications, there will be no need to design of a new 4.5km long access road to the intake as planned in the initial Project, which will reduce significant environmental impact.

According to the geological engineering survey carried out during the Detailed Project preparation phase, the Project was modified to relocate the HPP building to approximately 1.5 km upstream (adjacent to the bridge built on the Rioni River within the Namakhvani HPP Cascade Project), as the selected area has a relatively smooth terrain and is more stable in terms of dangerous geodynamic processes. In addition, the arrangement of access roads on the slopes of the tunnel exit portal provided for in the Environmental Evaluation Report N73 may cause the activation of erosion processes. As a result of these changes, significant impacts on the environment have been reduced, access road to the HPP building will no longer be required.

Due to the modifications in the Lower Namakhvani HPP Project, the location of the powerhouse and the intake has changed, and the access tunnel corridor has undergone a change. The tunnel will be excavated along a new alignment. According to the proposed change, the tunnel length will be 4 400 m instead of 4 300 m as envisaged in the original design, as for the other tunnel parameters (diameter (9 m), shape in section, and curvature type) - no change is planned and they will be identical to the original design. The headrace tunnel will connect the water intake to the surge chamber and steel pressure pipelines for the construction of which an intermediate construction gallery will be arranged. The steel pressure pipeline will start at the surge shaft with the distribution pipeline and will distribute water through the three pressure (turbine) pipelines. Each pressure pipeline will connect to the corresponding hydraulic aggregate installed in the powerhouse. In accordance with the Project modifications, pipeline parameters have changed - instead of 100 m length and 5.2m diameter it will be approximately 120 m length and 5 m diameter.

The powerhouse will have the usual layout of rock-based concrete foundations, concrete foundations for turbines, load-bearing structures, bridge traveling crane, generators, transformers, and various auxiliary equipment. Inside the load-bearing construction of the HPP building will be located the main generator room and a control unit consisting of a control room, maintenance sections, stores, office zones and rooms for staff. It is an over ground structure (91m long, 47m wide 40m high) and will accommodate a three units of vertical Francis turbine. From the outlet tunnel, the water is supplied to the turbines located in the HPP building with three units of 5 m diameter and 120 m long metal pressure pipeline. The total design flow of the turbines is 334.16 m³/sec (per turbine flow 111 m³/ sec) and the minimum design flow is 45.16 m³/sec. The HPP building will house a 220-kv substation. The generated electricity will be supplied by a 220-kv transmission line that will be connected to the 500-kv substation “Tskaltubo 500”.

Outflow from the HPP building to the tail-water is provided by a canal with an approximate length of 1.5 km. Canal will be cut into alluvial soil and eroded rocks, with the use of mechanical devices. The canal will be separated from the existing river by an embankment that will prevent debris from entering the outflow channel during floods.

In connection with the implementation of the HPP Construction and Operation Project, the Kutaisi-Alpana-Mamisoni highway of state importance will need to be relocated to the upper elevations, which will be accessible to the HPP facility using a bridge constructed within the Project. Approximately 1.1 km long and 16-18 m wide new road will be constructed to serve the exit portal of the access tunnel and pressure pipeline corridor. And its corridor will be located on the slope adjacent to the power plant node. There is no plan to arrange a new road to access the dam construction site, and the remaining part of the dam alignment will be used for construction services. A temporary 2.65 km-long road will be arranged to reach the intermediate entrance gallery of the access tunnel, which will be used to transport the tunnel's excavated rock to the waste dump. After completion of construction works, the tunnel intermediate entrance will be closed and the road will be re cultivated.

Personnel employed in the construction of the lower Namakhvani HPP will to be housed in two construction camps located in the villages of Opurchkheti (99 930 m²) and Zhoneti (17 326 m²). Areas selected for construction camps belong to the non-agricultural category and are state-owned. Selected sites are areas of high anthropogenic impact with virtually no fertile soil or vegetation.

The construction infrastructure will be located in the areas adjacent to the construction sites, in particular: Upstream of the dam and on the construction site of the planned HPP building site.

According to the report, the area of the HPP construction site will be 300 m away from the nearest populated area and 900 m from the dam construction base. Accordingly, appropriate mitigation measures foreseen in the EIA report will be undertaken to determine the expected noise impacts. The construction infrastructure is designed in the upgrade-stream side of the dam approximately 1.5 km of the dam. It will serve the constructions works of the dam, intake and access tunnels. The area of the territory is approximately 1.4 ha, and it will be located in the flooding area of the reservoir.

Drinking water will be delivered to the construction site, and technical water will be taken from the Rioni River. 2 concrete nodes (with 175 m³ / h and 60 m³ / h capacities) and auxiliary infrastructure will be arranged on the site. There will also be a parking lot for construction equipment and vehicles, a repair site and a fuel station. The mentioned area is located at approximately 2.2 km from the village of Namakhvani, and 3.5 km from the Molekula village.

The Modification Project of the EIA Report provide for the arrangement of the disposalsites, to discharge untreated excavated tunnel rocks, as well as dead ground generated during the treatment of foundations for the various main and auxiliary structures of the HPP, arrangement of access roads, dam base deepening works and reservoir slope processing. Some of the cut and excavated rocks will be used for backfilling and arrangement of road subgrades, and the main part - approx. 3 500,000 m³ will be permanently placed. The Environmental Evaluation Report N73 of 2015 envisaged arrangement of N2 and N3 disposal sites. In the course of changes made to the Lower Namakhvani HPP Design and the Company's field assessment, as well as for the purpose of elimination of transit transportation through the village of Namakhvani, a decision was made to replace the aforementioned sections N2b and N2c with new disposal sites, whereas the sites N4, N5, N6, N7 and N8, which were designed to discharge dead ground generated during the construction of the Lower Namakhvani HPP, coincide with the areas pointed in the Environmental Expertise Report N73. After the completion of construction, most sections of the disposal sites will fall into the reservoir area.

For the purpose of making environmental decision, the EIA Report provides information on re cultivation works, including the demobilization of temporary structures and equipment used during construction, restoration of areas damaged during construction, removal of contaminated soil / ground for remediation. After the completion of the construction works, re cultivation work is planned to be carried out in accordance with the requirements of the technical regulation approved by the Government of Georgia Decree No. 424 of December 31, 2013 “On Removal, Storage, Use and Re cultivation of the Soil Fertile Layer”. All categories of damaged soils as well as adjacent plots that have partially or completely lost their productivity due to the adverse impact of damaged soil will be subjected to re cultivation.

The impact on the vegetation cover during the construction stage of the HPP Project will be related to the works of reservoir flood zone, other communications of the HPP, and arrangement of construction and / or access roads. As already noted, the modifications to the Project design provide for the relocation of selected areas of the power node and pressure system to the less sensitive areas compared to the initial Project areas, as increasing the level of flooding of the reservoir by 1.5 meters. Based on the above, additional field studies were conducted on the biological environment, according to which the affected area does not include any different habitat. According to the forest boundaries determined under GOG resolution #299 of August 4, 2011, According to the boundaries of the State Forest Fund, the 38566 m² project area is located in the forest fund under the management of LEPL National Forestry Agency.

The main sources of noise during the operation phase are the hydraulic aggregates installed in the powerhouse. According to the EIA report, the turbines will be housed in an enclosed building (casing) with a high noise absorption rate. Noise will also be reduced by noise insulation materials

installed in the interior and by the HPP building (considering these factors will noise will be reduced by approximately 25-30 dB). The noise level at the HPP buildings will be around 70-80 dBA. The shortest distance from power nodes to the nearest settlement Zhoneti is 300 m. With this in mind, the noise emission levels at the boundary of the nearest populated zone do not exceed the standard values.

During the Project construction stage of HPP, risks of contamination of surface water are expected, which will be due to the construction works near the surface water body, including untreated wastewater. Accordingly, appropriate treatment facilities are provided for the purification of household and industrial (car-wash) wastewater generated in the areas of construction camps, and “bio-toilets” will be installed at the construction sites, which will be discharged in accordance with the legislation.

For the purpose of making environmental decision, the EIA Report, along with various important studies such as geological, geophysical, engineering-geological and hydrological studies, also includes the Microclimate Impact Assessment Report, which discusses potential impacts on local temperature and humidity changes, including changes of bioclimatic parameters in the vineyards adjacent to the designed reservoir. According to this report, examples from different countries and academic studies on microclimate changes around large reservoirs have shown that in environments similar to the Project environment, horizontal effects on temperature and humidity can be observed within 100 meters from the reservoir bank. Accordingly, microclimate effects (temperature, wind, humidity) will be localized on the surface and around the reservoir (100 m from future reservoirs). Temperature changes can be affected in the vicinity of the Project (within 100 m of the reservoirs). Thus, the Project will not affect the bioclimatic parameters in the vineyards of the gorge of the Rioni River. However, changes in temperature and other climate factors are expected in the future, including global climate change. According to the same Report, after commencement of works, a network of weather stations and temperature / humidity sensors will be installed to monitor the local climate of the affected areas. In addition, the Microclimate Change Report provides a so-called "mitigation strategy" which discusses adoption of various mitigation measures.

In order to fully assess the environmental impact of the planned activities, within the framework of the administrative proceedings initiated for environmental decision-making, the Ministry requested Enka Renewables LLC to submit further information and clarifications, including seismological risks and other issues.

The above information and explanations were submitted by the Enka Renewables to the Ministry on 28 January 2020 in the form of relevant annexes. The submitted documentation was also posted on the official website of the Ministry and interested parties were given time to make written notes and comments. Additional studies of seismic calculations (modeling) is attached to the documentation, which provides a computational methodology for dam and construction stability, namely: certain deterministic (DSHA) earthquake scenarios and a probabilistic model (PSHA) that generates the probability of exceeding ground movement at different levels. According to the Report, both analyzes provide potential estimates of expected ground motion at the dam site, such as geology, geophysics, seismology, geotechnical and structural engineering. The Report (for selecting seismic evaluation

parameters) discusses and provides information on the stability of the design dam and auxiliary structures. These additional studies indicate that the seismic factor for the location of the Lower Namakhvani HPP dam is 0.3 G for a 10,000-year return period. It should be noted that there were no notes or comments from the public regarding the additional information / documentation provided by the company.

Given that the 2015 EIA Report reported 14 landslides in the Lower Namakhvani Project area, according to the information of EIA presented with the purpose of making environmental decision and attached Geological Report, within the framework of modification in the Project design, an additional geological survey was conducted in the areas of power plant location and water intake, and the tunnel area and the impact of reservoir level change on landslide plots were also studied. Due to changes in reservoir volume, the impact of reservoir water level changes on the so-called Goni Masiff was estimated. According to these studies the foot of the southern part of the N6 landslide, below 311.5 m, is composed of terraced sediments, while the lower part of the N8 landslide is relatively active and its base reaches the riverbed, as a whole is stable and its foot is composed of terraced sediments (alluvial). However, the EIA Report provides for mitigation measures, which include installation of a modern instrumental monitoring system in the N6 landslide contour (a network of inclinometers and piezometers), arrangement of a rockfill gabion at the foot of N8 landslide, which will reduce the erosive effect of cutting river bank and the associated dynamics of the landslide process, while for the partial restriction of these processes, on the landslides and adjacent slopes, closed drains will be organized to ensure the flow of ground waters into the nearby gullies and canals.

Within the framework of the Project TEMELSU INTERNATIONAL ENGINEERING carried out a research on the interconnection of the Lower Namakhvani HPP and Tskaltubo thermal waters. According to the Research Report, given the hydro-geological and geological conditions, the reservoir area is composed of volcanic-sedimentary rocks of the Middle Jurassic. Volcanic rocks mainly include basalt and andesite lava, occasionally intercalated with layers of waterproof breccia and tuff. In addition, morphologically, the reservoir area is separated from the Tskaltubo land deposit by the catchment basin of rivers Tskhenistskali and Rioni, with a relative height of about 500 meters. Considering the above, the Lower Namakhvani HPP infrastructure site is not geologically linked to the areas of formation, supply and discharge of Tskaltubo thermal mineral waters and, consequently, the modifications of the Lower Namakhvani HPP will not affect the Tskaltubo resort.

According to the EIA report, the literature sources and fieldwork results show that there are no historical, cultural or archaeological sites within the construction site. A letter from the National Agency for Cultural Heritage Preservation of Georgia, attached to the Project Documentation at the administrative proceedings stage, stated that archaeological research was carried out in the areas of Mechkheri, Zhoneti and Namakhvani to identify cultural heritage and archaeological artifacts in the villages of Zarati, Opurchheti, and as a result of the Project site inspection, no cultural and archaeological heritage artifacts were found on the investigated site land and its vicinity and the planned activities were permitted.

The EIA Report discusses the risks of emergencies and provides an emergency response plan. An environmental monitoring, environmental mitigation and waste management plan is also presented.

During the administrative proceedings stage initiated for environmental decision-making, on December 20, 2019, a public hearing of the Report was held at the Tskaltubo City Hall Administrative Unit Building, attended by representatives of Enka Renewables LLC, EIA Report consulting company, the Ministry of Environment and Agriculture of Georgia and the Ministry of Economy and Sustainable Development of Georgia, as well as the State Representative in Imereti Region, representatives of Tskaltubo and Tsageri Municipalities, residents of Tskaltubo, Kutaisi, villages of Opurchkheti, Zhoneti, Mamatsminda, Mekvena, Tvishi, Vanichala and Oncheishi, NGO representatives and other stakeholders. The public asked a number of questions, including the possible impacts of the construction and operation of a hydroelectric power plant on Tskaltubo thermal waters; seismology research and impact; impact on ichthyofauna; about geological surveys and the economic value of the Project, to which the addressees of the question responded within their competence.

During the administrative proceedings stage initiated for environmental decision-making, Fauna & Flora International, public movement Save the Rioni Valley and the NGO Green Movement The Friends of the Earth submitted written notes and comments to the Ministry, which concerned impacts of the construction and operation of existing HPPs and planned hydroelectric power plants in the Rioni Basin, including impacts on agricultural lands by erosion processes, impacts of the river's hydropower potential in the wake of global climate change, impact of hydro power plants on the Tskaltubo resort in Rioni Basin; impact on surface water quality outside the Project area and adverse impact on ichthyofauna caused by the feculence of the reservoir discharge water. Comments have been discussed by the ministry and as a result, argued views have been reflected into mandatory conditions.

The EIA Report was reviewed by relevant experts and specialists in various fields of environmental assessment, and based on harmonization of their conclusions and evaluation the submitted documentation, as well as Article 12 (1) of the Environmental Assessment Code and paragraph 22 of Annex I to this Code,

Hereby I order:

- 1. An environmental decision to be issued on changes to the construction and operation conditions (lower Namakhvani) of the two-stage HPP cascade on the river Rioni (Tshisi HPP with 100 MW capacity and Namakhvani HPP with 333 MW capacity).**
- 2. The environmental decision referred to in paragraph 1 of the order shall be issued for an indefinite period;**
- 3. Enka Renewables LLC to carry out its activities in accordance with the submitted Environmental Impact Assessment Report and accompanying documentation, technological**

scheme, environmental mitigation measures and emergency response plans, conclusions and recommendations.

4. Enka Renewables LLC to carry out its activities related to Hydropower plant cascade (Tvishi HPP - 100 MW installed capacity and Namakhvani-Zhoneti HPP - 333 MW installed capacity) in accordance with the terms and conditions set under Ecological Expertise Conclusion # 73 approved by the Minister of Environment and Natural Resources Protection of Georgia by order #1014 and conditions of the present order on changes to the construction and operation conditions (Lower Namakhani) of HPP cascade;

5. Within 20 months after issuance of environmental permit, Enka Renewables shall ensure the study on coastline formation dynamics of "Big Ireland" in Poti, discuss coast protection/engineering and compensation activities with involvement of respective entities/organizations and submit to MEPA for agreement the study results.

6. Prior to starting the construction, Enka Renewables shall submit to MEPA the LNK construction transport scheme bypassing Kutaisi, agreed with respective entities;

7. Prior to starting the construction of the dam, Enka Renewables shall submit to MEPA the conditions of stilling the flow energy passed through the bottom outlets.

8. Prior to starting the construction of the tunnel, Enka Renewables shall submit to MEPA for agreement a draft project and program of filtration water monitoring system from diversion-pressure tunnel during operation;

9. Within 2 months after issuance of environmental permit, Enka Renewables shall submit to MEPA the list of equipment and facilities needed to implement preventive and elimination measures for emergency turbine oil spilling.

10. Prior to starting the construction of the dam, Enka Renewables shall submit to MEPA flood transformation conditions in the reservoir and water discharge regimes downstream (volume, periods), considering norm of minimum available discharge downstream river Rioni.

11. Within 2 months after issuance of environmental permit, submit to MEPA for agreement the schedule of reservoir filling (first filling), with indication of water discharge volume downstream.

12. Prior to starting the construction, Enka Renewables to conduct periodic visual monitoring of the areas where the infrastructure facilities will be placed and landslide areas around (aiming the control of impact on the stability of the reservoir), as well as during the construction and operation phase conduct monitoring of landslide processes and present the results to MEPA for discussion once every 6 months.

13. Enka Renewables to arrange an instrument monitoring system on the N6 landslide (Goni Massive) and for above purposes conduct relevant preliminary research and submit the results to MEPA. Research may be done in parallel with the construction of the HPP, and the monitoring system installation should be ensured prior to commissioning of the reservoir. Whereas it's planned to install piezometers and inclinometers on landslide body, boreholes shall be made to determine the landslide body capacity (climbing depth or weakening zone depth) and information shall be submitted to MEPA for agreement.

14. Enka Renewables shall conduct detailed engineering-geological survey of the diversion as well as headrace tunnel route (in parallel with tunnel construction) and present the results to MEPA;

15. Enka Renewables shall submit a detailed monitoring plan to the MEPA for approval that considers monitoring system for emissions and dust emissions during construction. If necessary, develop additional mitigation measures and agree it with the Ministry.

16. Enka Renewables shall annually submit to MEPA hydrogeological monitoring results of the sources within the project area. Particular attention shall be driven to the water supply facilities of the settlements and, in the event of possible reduction or loss due to the impact of HPP infrastructure, alternative water supplies shall be provided to the population;
17. Prior to starting the operation of HPP, Enka Renewables, in agreement with other HPPs on Rioni, based on additional detailed studies, shall submit to MEPA results of the study on the change of the Rioni water regime due to the construction, reflecting the nature / extent of the impact of the construction as well as preventive measures and in case of necessity mitigation measures in relation to water biodiversity.
18. Flushing regime of the reservoir and periodicity shall be agreed among Enka Renewables LLC and other upstream and downstream HPP operators, subject to the results of additional studies on sturgeon and aquatic biodiversity. Prior to each flushing, inform the Ministry indicating the discharged water flow;
19. Enka Renewables shall arrange a fish avoiding structure in accordance with the GOG Resolution N423 of December 31, 2013 on Approval of the Technical Regulation on Fishery and Fishery Protection.
20. Enka Renewables shall conduct study by modern research methodology considering the Ichthyofauna seasonal change dynamics prior to construction, as well as during operation and submit the results to the Ministry for discussion.
21. Enka Renewables to provide monitoring of river water temperature - before reservoir, at the surface and depth of the reservoir. As for the temperature of the water coming out of the dam, measurement shall apply directly at the dam and downstream of the dam. Water temperature monitoring system, reporting form and frequency shall be agreed with the Ministry;
22. Enka Renewables shall ensure constant monitoring of air and soil temperature and humidity through agro-meteorological stations, as well as wind speed, solar radiation and other meteorological parameters. It agrees with the Ministry on the type of stations, location, frequency of data collection and the frequency of reporting; Ensure that additional mitigation/compensatory measures are agreed with the Ministry if identified;
23. Enka Renewables to monitor the quality of grapes and wine in Tvishi as in the EIA report for ensuring comparability of data and undertaking appropriate mitigation and / or compensation measures. Monitoring shall start prior to construction and continue after commissioning. Mitigation and / or compensation measures shall be agreed with the Ministry of Environment and Agriculture.
24. Prior to construction Enka Renewables, shall ensure installation of flow measuring equipment at HPP headwork and within one year of commissioning, ensure determination of river flow on quarterly basis and submission to MEPA. After one year of commissioning, company shall measure daily river flow during the entire period and report the results to MEPA once in 3 months.
25. Prior to construction Enka Renewables, shall submit to MEPA disposal area projects and respective Shape Files for approval;
26. Prior to construction Enka Renewables, shall submit to MEPA of Construction Site / Camp Projects with Shape Files for approval.
27. Enka Renewables shall carry out construction works in accordance with the requirements of the technical regulation approved by the Government of Georgia Decree No. 424 of December 31, 2013 on Removal, Storage, Use and Reclamation of Soil Fertilizers;

28. Prior to construction Enka Renewables to develop a Waste Management Plan and agree with the Ministry in accordance with the Order N211 of the Minister of Environment and Natural Resources Protection of Georgia on August 4, 2015;
29. Enka Renewables shall undertake any action in the areas of Forest Fund in accordance with the legislation and ensure compliance with the National Forestry Agency LEPL prior to construction;
30. In the event of an archaeological site being discovered during construction work, Enka Renewables shall cease work and immediately notify the National Agency for Cultural Heritage Preservation, in accordance with Article 10 of the Law of Georgia on Cultural Heritage.
31. Enka Renewables shall immediately notify the Ministry of Environment and Agriculture of Georgia about the completion and commissioning of the works;
32. In case of transferring the environmental decision to another person, transfer shall be made according to the procedure established by the Environmental Assessment Code;
33. The order should be immediately sent to Enka Renewables;
34. The order shall enter into force upon receipt of this order by Enka Renewables;
35. Within 5 days after the decree enters into force, the environmental decision shall be posted on the official website of the Ministry and on the information boards of the executive and representative bodies of the Tskaltubo municipality;
36. This order may be appealed to the Administrative Cases Panel of the Tbilisi City Court (Tbilisi, D. Agmashenebeli Alley, 12th km. N6) within one month from the date of its official notification.