

**GRPO**  
**E&S Monitoring Report for**  
**2023**



GEORGIAN  
RENEWABLE  
POWER OPERATIONS

## Table of contents

- I. **Basic Information**
  - a. Reporting period
  - b. Current project status
- II. **Progress on implementation of the requirement defined by Section 4.02. Environment and Social Compliance of the Framework Agreement between GRPO JSC and EBRD**
- III. **Progress on implementation of some important requirement defined by ESAPs**
- IV. **Compliance per Performance Standard**
  - PS1 Social and environmental assessment and management system**
    - a. Progress/change ESMS (assessments, management program, monitoring, and reporting)
    - b. Organizational capacity
    - c. Current project status
  - PS2 Labor and working Condition.**
    - a. Human Resources Policy
    - b. Primary Conditions of Employment (incl. non-employee workers)
    - c. Occupational Health & Safety
    - d. Supply chain
  - PS3 Pollution, prevention, and abatement**
    - a. Prevention of waste & pollution and use of hazardous materials
    - b. Emergency preparedness & response planning
    - c. Resource conservation and energy efficiency
    - d. Greenhouse gas emissions
    - e. Pesticide use & management.
  - PS4 Community, health, safety, and security**
    - a. General community health & safety impacts
    - b. Security Personnel
  - PS5 Land acquisition and involuntary resettlement**
    - a. Consultation process
    - b. Grievance mechanisms
    - c. Compensation and benefits
    - d. Resettlement planning and implementation
  - PS6 Biodiversity conservation and sustainable natural resource management**
    - a. Protection and conservation of biodiversity
    - b. Management and use of renewable natural resources
  - PS8 Cultural heritage**
    - a. Protection of cultural heritage
    - b. Management and use of cultural heritage

## **I. Basic Information**

*Georgia Renewable Power Operations JSC (“GRPO”), a renewable energy affiliate of Georgia Capital PLC (“GCAP”), and consolidates operational renewable energy assets, including four hydropower and one wind power plant of total 71 MW installed capacity.*

*GRPO operates 1 wind farm (20.7 MW) and 4 hydro-power plants with total installed capacity of 50.4 MW, all constructed during the period of 2014-2019.*

*Mestiachala 2 HPP with capacity of 30.0 MW was built and commissioned in 2019, while the other facilities were acquired by the company at the operational stage from different owners/developers in 2019, including Qartli Wind Farm (20.7 MW) and three HPPs with the total capacity of 20.4 MW - Debeda (3.2 MW), Kasleti (8.1 MW), and Akhmeta (9.1 MW).*

*Mestiachala 2 (30.0 MW) and Kasleti 2 (8.1 MW) HPPs are run-of-river power plants, while Akhmeta (9.1 MW) and Debeda (3.2 MW) HPPs are both located on irrigation channels and operate only around 8 months per year during non-irrigation seasons (September -May).*

### **a. Reporting period**

*June 10<sup>th</sup>, 2023 – December 31<sup>st</sup>, 2023*

### **b. Current project status**

*In 2022 environmental and social appraisal was conducted by international finance institutions (EBRD, FMO, ADB, IFC) which included a review of E&S performance in line with IFI’s standards. Environmental and Social Audit conducted by DG Consulting LTD in 2022, describes in detail the Company’s compliance with IFC’ E&S Performance Standards.*

*Identified applicable IFC Performance Standards for GRPO’s activities are:*

***PS1: Assessment and Management of Environmental and Social Risks and Impacts***

***PS2: Labor and Working Conditions***

***PS3: Resource Efficiency and Pollution Prevention***

***PS4: Community Health, Safety and Security***

***PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources was triggered as two HPPs (Kasleti 2 and Mestiachala 2) operate in areas of aquatic natural habitat.***

*This project involves existing operational assets and no incremental changes to the project’s physical footprint are expected, hence PS 5: Land Acquisition & Involuntary Resettlement and PS 8: Cultural Heritage are not applicable. No Indigenous Peoples have been identified in the vicinity of any of the GRPO’s assets, thus PS 7: Indigenous Peoples is not applicable.*

*It was declared that the management of E&S aspects associated with the company operations are based on a management system aligned with good international practice. The Company has adopted policies addressing environmental, social, health and safety, and labor aspects and implemented several E&S procedures, which are supported by a number of topic-specific management plans.*

However, based on detailed review of the documents and management interviews, E&S gaps were identified throughout the course of the E&S Gap Analysis. In order to cover all E&S gaps, Environmental and Social Action Plans (ESAP) were developed by FMO, IFC and ADB.

Since November 1, 2022, GRPO’s relevant departments have begun intensive works on the implementation of activities envisaged by the Environmental and Social Action Plan (ESAP) agreed with IFIs.

**II. Progress on implementation of the requirement defined by Section 4.02. Environment and Social Compliance of the Framework Agreement between GRPO JSC and EBRD**

According to Section 4.02. Environment and Social Compliance of the Framework Agreement between Georgian Renewable Power Operations (GRPO) JSC and European Bank for Reconstruction and Development (EBRD), GRPO shall, no later than by 30 September 2023, sign the United Nations Women’s Empowerment Principles and organize at least five women-focused career guidance events to raise awareness of equal opportunities in the industry in which the Issuer is operating.

In order to fulfill above mentioned requirement, on March 14, 2023, GRPO signed United Nations Women’s Empowerment Principles and organized women focused career guidance events to raise awareness of equal opportunities in the Renewable energy industry.

In 2023 GRPC organized women-focused career guidance events to raise awareness of equal opportunities in the Renewable energy industry. Events were held in schools in Tbilisi, Gori and Qareli Region. CFO of GRPO Nuka Mshvidobadze was the main speaker. She talked about career opportunities in industry and the significance of renewable power development. Over 300 High school students attended these events, most of them Girls. Students who attended events will choose their profession in several years, thus it’s important for them to have as much awareness about future opportunities they have as possible.

**III. Progress on implementation of some important requirement defined by ESAPs**

#	Task Description	Status of implementation
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1	<b>PS1.</b> Stakeholder engagement plan updating	<p><i>An external consultant (Geen Steps LLC) has been contracted for development of Stakeholder Engagement Plans for all the facilities of the company. Generic Stakeholder Engagement Plan (SEP) and Site specific SEPs for all GRPOs facilities were updated in 2023. The Generic Stakeholder Engagement Plan has also been uploaded on the website of the company (<a href="https://www.grpc.ge/stakeholder-engagement">https://www.grpc.ge/stakeholder-engagement</a>).</i></p> <p><i>Engagement sessions with local communities were held in April-May 2023. Information about the engagement sessions conducted on sites is included in the Stakeholder Engagement Plans. The meetings with the stakeholders have been planned and organized (with our involvement) by the qualified sociologist from Green Steps LLC</i></p>
2	<b>PS3.</b> Sediment and contamination. Sediment management plan to update	<p><i>The Sediment Management Plans for Mestiachala 2 and Kasleti 2 HPPs have been updated in 2023.</i></p>
3	<b>PS4.</b> Emergency Preparedness and Response Plan (all power plants). Operational issues to identify and include. Review of the emergency scenarios, identification of potential resources for support	<p><i>Site-specific Emergency Preparedness and Response Plans for GRPOs facilities were reviewed in 2023.</i></p>
4	<b>PS3:</b> GRPO shall improve its storage procedures and ensure that all bulk storage containers holding hazardous materials have secondary catchment systems (e.g., collection pallets) and install them as needed.	<p><i>It was taken decision to purchase collection pallets for all GRPO's facilities in order to improve existing oil storage procedures.</i></p> <p><i>In total 18 collection pallets have already been purchased and distributed on all GRPO's facilities according to the quantities of stored lubricants within the timeframe set by ESAP</i></p>
5	<b>PS4.</b> GPRO shall conduct additional H&S risks assessment at Ahkmeta HPP to determine whether additional health and safety measures are needed to reduce risks from rapid water level	<p><i>An external consultant (Gergili LLC) has been contracted for evaluation of the outlet channel operation including emergency overflow in order to assess community health and safety risks related to tailrace channel.</i></p> <p><i>In late November 2022 the Company received official notification from Georgian Amelioration Agency about planned rehabilitation works of some infrastructure facilities</i></p>

	<p>changes in spillways and in the tailrace channel. If determined that safety to employees and community members can be improved, recommended mitigation measures will be implemented</p>	<p><i>on Alazani Irrigation Channel. Considering the abovementioned circumstances, the operation of Akhmeta HPP was suspended. The operation of the HPP was resumed after rehabilitation works on Alazani Irrigation Channel were completed and the water supply was fully restored. IFC was informed about above mentioned circumstances. The HS Risks assessment of the outlet channel was done once the operation of Akhmeta HPP was resumed. The report on H&amp;S risks assessment of tailrace channel of Akhmeta HPP, where the main risks are identified and the recommendations to reduce the identified risks are provided has been provided on September 26th, 2023.</i></p> <p><i>All recommendations and mitigation measures to reduce the identified HS risks provided in the report developed by HS experts of Gergili LLC have been fully implemented by February 2024.</i></p>
6	<p><b>PS6.</b> Development of the enhanced methodology and implementation and adequate reporting of the Ornitofauna (birds) monitoring activities including the active monitoring surveys for the spring and Autumn migratory periods over 2 years</p>	<p><i>An external consultant (DG Consulting LLC) has been contracted for Ornitofauna (birds) monitoring surveys at Qartli Wind Farm site.</i></p> <p><i>Draft enhanced methodology of Ornitofauna (birds) monitoring was developed. According to the monitoring methodology provided by DG Consulting LLC, the site visits will be undertaken by the consultant during the days when the migration of birds is active. At least 6 days of site visits will be undertaken during each migration season. Specialists will be visiting the site and will undertake walk over of site from south to the north direction along the central line of the project footprint. The land surface will be inspected in parallel to the observation of migratory birds. During the migration the bird species will be identified, the number of flocks and number of birds in each flock in accordance with the internationally recognized methodology. The monitoring works will be led by Gia Edisherashvili, professional ornithologist /zoologist. He will be supported by DG consulting’s team. All information for each monitoring session (1 report per migration session – Spring and Autumn) will be summarized in the report.</i></p> <p><i>Two monitoring reports (Spring and Autumn 2023) have been developed in 2023.</i></p>
7	<p><b>PS6.</b> Contract specialists with recognized expertise in the functioning of fish</p>	<p><i>ToR for hiring the consultant on evaluation of effectiveness of the fish passages at the Mestiachala 2 HPP and Kasleti 2 HPP was developed with assistance of biodiversity expert. The</i></p>

	<p>passages to undertake an independent evaluation on the effectiveness of the fish passages at the Mestiachala 2 HPP and Kasleti 2 HPP and adopt any recommendations made by the specialists.</p>	<p><i>tender for hiring the consultant was carried out and the agreement with the winner of the tender has been signed. The surveys for evaluation of effectiveness of the fish passages on the Mestiachala and Kasleti Rivers started in May 2023.</i></p> <p><i>According to the latest information received from the contractor, the final report of the first year of fish passages monitoring is in the process of completion and it will be provided to the Company in the near term.</i></p>
8	<p><b>PS6.</b> Contract specialists with recognized biodiversity expertise to undertake an independent evaluation of the suitability of methodology and practices used by GRPO to establish the status and distribution of migratory fish along the Mestiachala River and Kasleti River above and below the dams in different seasons (spring floods and November-December during spawning)</p>	<p><i>ToR for hiring the consultant on evaluation of the suitability of methodology and practices used by GRPO for migratory fish monitoring on the Mestiachala and Kasleti Rivers was developed with assistance of biodiversity expert. The tender has been awarded to Blue Rivers Environmental Consulting and the agreement has been signed.</i></p> <p><i>The site visit of Blue Rivers team/experts conducted in May 2023 and the final report on Aquatic Monitoring Program for the Mestiachala and Kasleti Rivers was delivered to the Company, on July 11, 2023.</i></p>
9	<p><b>PS6.</b> Contract a third-party specialist to conduct independent Environmental Flow Assessment (EFA) of the Kasleti 2 HPP considering also the IFC's Good Practice Handbook on Environmental Flows for Hydropower Projects to determine if the project's current ecoflow regime has the potential to be improved to meet No Net Loss objectives for fish species</p>	<p><i>ToR for hiring the consultant on Environmental Flow Assessment of the Kasleti River was developed. The tender for hiring the consultant was carried out and the agreement with the winner of the tender has been signed. The surveys on Environmental Flow Assessment on the Kasleti River conducted during whole year (2023).</i></p> <p><i>The report on Environmental Flow Assessment of the Kasleti River was delivered by the consultant in late March 2024</i></p>

## IV. Compliance per Performance Standard

### PS1 Social and environmental assessment and management system

#### e. Progress/change ESMS (assessments, management program, monitoring, and reporting)

*Corporate system of ES management.* The GRPO corporate Environmental and Social Management System is based on corporative ES Policy Statement, which follows the main principals adopted worldwide and used to achieve environmentally friendly and socially responsive operation of all facilities under the GRPO ownership and management. The ESMS system was created based on the above policy, requirements of local environmental legislation and international best practice for environmental and social performance.

GRPO is focusing on energy generation projects. Mestiachala 2 HPP, Kasleti 2 HPP, Qartli Wind Farm, Debeda HPP and Akhmeta HPP projects belong to the GRPO and are managed under the corporative management system.

The operation of facilities and all staff involved in operation as well as environmental and social management follows the principles and requirements of the environmental and social management policy, management plans and procedures adopted for the operation.

The ESMS system for all target facilities is built on internationally recognized standards, including IFC performance standards.

After the \$80 mln Green Bond issuance in 2022 the Company started to restructure its ES and HS governance. GRPO is reviewing and updating its ESMS system and procedures and relevant ESMPs to make them well-tailored to the O&M activities and ensure they meet the requirements of IFC Performance Standards (PSs), good international industry practice (GIIP), and applicable WBG Environmental Health and Safety (EHS) Guidelines.

*Identification of Risks and Impacts.* Prior to acquisition of Debeda, Kasleti, Akhmeta HPPs and Qartli Wind Farm, which all were operational, the Company conducted technical and ES due diligence to assess risks and potential liabilities related to environmental and social issues. Additionally, in 2020 the Company completed a looking-back analysis of land acquisition practices against IFC PS5 requirements, which confirmed that land plots during the development of its current portfolio facilities had been acquired on 'willing-buyer' 'willing-seller' principle, no physical/economic displacement implemented, and PS5 requirements had not been triggered.

Full Environment Impact Assessments (EIAs), in compliance with national regulations were developed and approved by the Ministry of Environmental Protection and Agriculture, for all projects. Proposed ESIAAs were meeting all the lenders' requirements; additionally, for the Qartli Wind Farm and Kasleti 2 HPP international funds were raised.

*Management Programs.* For each facility there are individual management plans and procedures are developed, that cover environmental, health and safety (EHS), and social issues such as waste management; pollution prevention; monitoring of ecological flows and operational and maintenance



procedures. The corporate contractor management procedure is in place and GRPO staff provides supervision and oversight of works performed by contractors.

*Emergency Preparedness and Response.* Appropriate site-specific plans for operational accidents and emergency situations for different scenarios including flood, avalanche, debris flow fires, and failures at powerhouse and headworks facilities and penstock damage are available.

*Monitoring and review.* The Company implements environmental (biodiversity (fish and bird monitoring), environmental flow), health & safety (working conditions), geological (geohazards, ground water level, satellite pictures), hydrological, as well as engineering and structural integrity monitoring.

HPPs are equipped with automatic gauging systems downstream of water intakes, which provide daily measurements of ecological flow and quarterly reports are submitted to the state authorities.

- In accordance with the ESMS, GRPO conducts internal audits by the corporate ESHS team with involvement of on-site ESHS representatives. In addition, daily checks, periodic visual controls, and site visits are conducted by the on-site EHS team.

#### **f. Organizational Capacity and Competency.**

At the corporate level, GRPO has an ESHS team who report to the Technical Director and supported by the field EHS team members, consisting of an Environmental Specialist, OHS engineer, and Community Liaison Officer. ESHS team who is responsible for overall operation of facilities in compliance with general and specific responsibilities of the Company. The specialists from GRPO ESHS team are involved in permitting, documentation development, internal auditing of the specific facilities. As it was mentioned above ESHS team on corporate level is supported by ESHS management staff on each site. Each facility has a dedicated person responsible for implementation of the management system, supervision of performed works in accordance with safety instructions, incidents recording, and investigations.

The organization chart of the company includes division for environmental and social issues and division for health and safety issues.

Contractors are engaged for equipment maintenance services, limited construction/repairing works, security, and specialized services such as geological/biodiversity monitoring and waste management. A contractor management plan exists at the corporate level, which specifies EHS requirements, control, monitoring, and reporting measures. Equipment repairing and maintenance works, and monitoring are provided by outsourced service providers and equipment manufacturers (e.g., Vestas, etc.) under long-term service agreements. External contractors are responsible for managing EHS related activities, ensuring staff training, spill prevention and the provision of PPE. During these works we provide coordination and oversight of works performed by contractors and EHS clauses are specified in the servicing contracts. EHS training for employees is conducted on a regular basis, including on requirements of IFC PSSs.

## **g. Training**

*E&S training and qualification programs for staff are under the control and management of the corporate EHS team. The training modules are developed at the corporate level and implemented by the corporate E&S team. EHS training programs are in place for employees, which cover such topics as occupational health and safety, first aid, fire safety, electrical safety, emergency preparedness and response, and environmental issues. The Qartli Wind Farm staff have undergone specialized training related to equipment maintenance and OHS risks management when working at height and in proximity to the turbines (e.g., use of lifts and emergency rappelling kits)*

*Trainings conducted in 2023:*

- *Training on the procedures of Stakeholder Engagement and Grievance Redress Mechanism and the requirements of Pollution Prevention and Waste Management Plans;*
- *Training on gender equality principles, gender equality in the workplace, zero tolerance to gender-based violence and anti-sexual harassment;*
- *Trainings on First Aid, Occupational Safety issues and Electrical Safety Works;*
- *Hazard Identification training and firefighting training;*
- *Drill to use of fire extinguishers;*
- *Training on Emergency Preparedness and Response;*
- *The employee responsible for Internal grievance management is trained in sensitive complaints related to gender-based violence.*

## **PS2 Labor and working condition.**

### **a. Human Resources Policy**

*In 2023 the Company employed 91 people at facilities and head office, whereas 58 are operational and technician workers at the plants, 33 are management and administrative staff. The number of female employees were 13, this fraction is common for the power generation industry, which remains one of the least gender diverse sectors in country. However, female representation at the head office, particularly in management and administrative positions, reaches 45%. All employees have written contracts as required by the Georgian Labor Code.*

*Human Resources (HR) Policies and Procedures. The Company has in place HR policies and procedures that specify recruitment, orientation, training, compensation, internal rules, working age, leaves, and termination of employment. HR policies are supplemented by the code of conduct and ethics and other corporate-wide policies including anti-harassment policy; grievance policy; and procurement policy, which specifies ethical standards for contractors. The Human Resource Policies are based on requirements of Georgian labor legislation and aligned with ILO and PS2 requirements.*

*Workers organization. GRPO is committed to complying with relevant laws of the country related to employees' freedom of association and has specified in its HR Policy. Currently employees are not members of any trade union, and the Company doesn't prevent workers from unionization.*

*Non-discrimination and Equal Opportunity/Protection of Workforce. The Company has a policy which focuses on the provision of non-discrimination and equal opportunities. All job opportunities are announced on the portal and the applicants are treated equally regardless of race, gender, skin color, religion, nationality, age, etc.*

*The Company has adopted a zero-tolerance policy on the sexual harassment at workplace and committed to investigate each case with diligence and provide prompt and effective response on allegations of sexual harassment. Each case of sexual harassment shall be considered seriously, with respect and protection of confidentiality. An Anti-sexual Harassment Policy is committed to provide a safe environment for all employees, which is free from any type of discrimination and harassment at the workplace, including sexual harassment.*

*The Company is non-tolerant of child and forced labor use and it's clearly specified in the HR Policies.*

*Grievance Mechanism. Employees/workers of the Company are encouraged to express their opinion and concerns on any topic, such as working conditions, labor discipline, career development, and promotion. The HR Department conducts interactive meetings with employees to share updated information, discuss concerns, and get feedback. The employee grievance policy explains how employees/contractors can voice their complaints, as well as describes an investigation and reporting process, which is managed by the HR Department. Any grievances could be submitted via private communication, official letters, through our public website, intranet, or anonymous grievance boxes installed in offices. The established grievance mechanism allows submitting anonymous grievances as well as collective claims.*

## **b. Occupational Health & Safety**

*The occupational health and safety (OHS) management system at the facilities of the Company is supported by procedures, a package of organizational and technical safety measures embedded into the technical design, as well as in standards, instructions and operational procedures. Maintaining risk registers of hazards and mitigation measures are fostered on operational sites and offices. OHS safety procedures are developed for each type of operation and employees are trained in their application. Working clothes and personal protective equipment such as safety helmets, boots, high visibility vests, electrical safety tools, noise reduction headphones, and earplugs are provided to employees in accordance with the type of performed works.*

*EHS training programs are in place for employees, which cover such topics as occupational health and safety, first aid, fire safety, electrical safety, emergency preparedness and response, and environmental issues. The Qartli Wind Farm staff have undergone specialized training related to equipment maintenance and OHS risks management when working at height and in proximity to the turbines (e.g., use of lifts and emergency rappelling kits). Fire safety systems are in place and maintained in accordance with national requirements.*

*Internal EHS audits are conducted periodically with involvement of HSE manager, plant supervisor and Chief Electrical Engineer. The Company also practices conducting cross-audits, which are implemented by*

EHS teams from other facilities. The audit is conducted through the interview of the personnel, visual inspection of the equipment and the workplace, inspection of necessary documents, and assessment of the compliance of the safety rules by the workers. All audits are verified, and corrective action plans are set, with responsible parties/individuals indicated.

**Table:** GRPO Health and Safety Statistics 2023

Akhmeta HPP, Debeda HPP, Kasleti 2 HPP, Mestiachala 2 HPP, Qartli Wind Farm Health and Safety Statistics_2023														
List of Key Figures		Month												Total
		January	February	March	April	May	June	July	August	September	October	November	December	
1	Total number of Employee	69	69	69	69	69	69	69	69	69	69	69	69	69
2	Number of Employee 8 hour - day	45	45	45	45	45	45	45	45	45	45	45	45	45
3	Number of Employee 24 hour - day	24	24	24	24	24	24	24	24	24	24	24	24	24
4	Total working hours	16,080	13,296	16,080	15,120	16,080	15,120	16,080	16,080	15,840	16,080	15,840	16,080	187,776
5	Total Number of Accidents	0	1	0	0	0	0	0	0	0	1	0	0	2
5.1	Minor Accident	0	1	0	0	0	0	0	0	0	1	0	0	2
5.2	Accident of Medium Gravity	0	0	0	0	0	0	0	0	0	0	0	0	0
5.3	Severe Accident	0	0	0	0	0	0	0	0	0	0	0	0	0
5.4	Fatal Accident	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Near-Miss Incidents	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Occupational Disease	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Health and Safety Internal Inspection	0	0	0	0	2	3	0	0	0	2	3	0	10
9	LTIF (Lost Time Incident Frequency)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.65
10	First Aid	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Property Damage	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Road Traffic Accident	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Risk Identification	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Kilometers Driven	12,570	16,200	18,450	20,300	23,000	18,760	14,470	15,690	14,340	12,880	14,200	14,140	180,530
15	Number of Stopped Works for Safety Reason	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Incident Investigation	0	0	0	0	0	0	0	0	0	0	0	0	0
17	Incident Reports	0	0	1	0	0	0	0	0	0	1	0	0	2
	Health and labour Safety	0	0	1	0	0	0	0	0	0	1	0	0	2
1	First aid skill-building drill	0	0	0	0	0	0	1	0	0	0	0	0	1
2	Fire safety	1	0	0	0	0	0	1	0	0	0	0	0	2
3	Firefighter skill-building drill	1	0	0	0	0	0	1	0	0	0	0	0	2
4	Electrical safety	0	1	0	0	0	0	0	1	0	0	0	0	2
5	Emergency Preparedness and Response Plan requirements	1	0	0	0	0	0	1	0	0	0	0	0	2
6	Environmental and Social issues	0	0	0	0	1	0	0	0	0	1	0	0	2

### PS3 Pollution, prevention, and abatement

#### a. Prevention of waste & pollution and use of hazardous materials

Operational hydropower plants do not typically generate significant waste and wastewater. One of the primary sources of solid waste results from floating debris trapped by screens in the water intake structures. Debris consists primarily of woody materials such as tree trunks, branches, and leaves, as well as other solid wastes in river systems. The waste is collected at the grills upstream from sedimentation basins and removed by municipal waste service organizations or private licensed companies in accordance with local legislation. Settling basins that collect sediment, stones, and sand before sending the water to

*the powerhouse is extracted by contractors that utilize the material for construction purposes or it is returned to the river system downstream from HPP powerhouses.*

*Typical hazardous materials stored at GPRO's facilities include turbine and transformer oil stored in metal barrels designed for oil and oil products, and maintenance materials or chemicals (such as paints and solvents). Small amounts of oil and oil products used for wind turbine maintenance are held at the turbine locations. The overall amounts are limited and easily manageable.*

*The transformers at all the HPPs have secondary containment structures integrated into the plant designs to capture accidental spills or leaks. GRPO has no Polychlorinated biphenyls (PCB)-containing equipment at its facilities.*

*GRPO continuously monitors its storage procedures at each of its facilities and ensures that all bulk storage containers holding hazardous materials also have secondary catchment systems (e.g., collection pallets) and install them as needed.*

*Hazardous wastes streams for operational HPPs and wind farms are generated during rehabilitation, repair works, and during operation of electric power distribution facilities. Most hazardous waste is comprised of used oils and other lubricants. Hazardous waste is managed by specialized contractors with relevant licenses and permits in place. The overall amount of hazardous materials and waste managed by the Company is minimal.*

#### **b. Emergency preparedness & response planning**

*The Company has developed emergency and response plans for operational accidents and emergency situations for different scenarios including flood, avalanche, debris flow fires, and failures at powerhouse and headworks facilities and penstock damage.*

*Based on the outcomes of geological and natural hazards research completed following the flooding and rock falls experience at the Mestiachala 1 HPP in 2019, an emergency preparedness and response plan for the Mestiachala 2 HPP was amended to address identified risks, such as re-routing of evacuation routes and the relocation of assembling points, car parking, etc.*

*The Emergency Preparedness and Response Plan for Qartli Wind Farm was prepared by Vestas – the wind turbine manufacturer and adopted by GRPO. The documentation identifies the procedures to be followed by the Qartli Wind Farm and Vestas staff in case of different emergency scenarios, provides the contact details and notification procedure of emergency services available in the region, and contact information to access external service providers.*

*Emergency drills on fire safety issues have been conducted in February and in March 2023 on all Company's facilities (Mestiachala 2 HPP, Kasleti 2 HPP, Akhmeta HPP, Debeda HPP, Qartli WPP) according to scenarios and requirements provided by Emergency Preparedness and Response Plans.*

*All buildings and installations have valid Fire Safety equipment which is controlled and managed by a specialized contractor with relevant licenses and permits in place.*

*No emergency situations have occurred during the reporting period.*

### c. Resource conservation and energy efficiency

#### Water Consumption Efficiency

		This Reporting Period	Reporting Period- Previous year (January/2022) through (April/2023)
Water	Water Consumption (m3)	600 (well + water network + trucked)	730
Usage	Water Source (well, water network, trucked etc.)	<b>Well</b> in Akhmeta HPP <b>Well</b> in Debeda HPP <b>Trucked</b> in Qartli WPP <b>Water network</b> in Mestiachala 2 HPP <b>Water network</b> in Kasleti 2 HPP	<b>Well</b> in Akhmeta HPP <b>Well</b> in Debeda HPP <b>Trucked</b> in Qartli WPP <b>Water network</b> in Mestiachala 2 HPP <b>Water network</b> in Kasleti 2 HPP

### d. Greenhouse gas emissions.

Direct GNG emissions from GRPO operations is 0. Insignificant indirect emissions are from the fossil fuel used by GRPO vehicles and equipment.

The heating systems of GRPO's offices operate entirely on electricity, generated from renewable energy sources. No fossil fuel is used by the heating systems.

GHG emission reduction of the wind and hydro power plants, owned by GRPO were calculated according to the actual energy generations of power plants. GRPO's hydro and wind power plants do not emit any GHG emission, while generating the electricity and hence, clean energy produced by these plants substitutes the electricity generated by the thermal power plants (TPPs), all of which work on the gas in Georgia. In this case, the amount of the reduced GHGs will be equal to those emitted from the TPPs, when generating the same amount of electricity.

The method, formula and coefficients for the calculation have been taken from the latest IPCC1 guidelines, recommended, and officially recognized by the UNFCCC2 for GHG emissions calculation (2006 IPCC Guidelines for National GHG Inventories, v.2 Ch.2 Stationary Combustion).

GHG Emissions Avoided Due to Renewable Energy Generation by GRPO's facilities in 2023:

Electricity generated by plants (MWh)	GHG emissions in t/CO <sup>2</sup> e	CO <sub>2</sub> emissions avoided from solar power generation (tCO <sub>2</sub> ): C = A x B
Qartli WPP <b>84770.414</b>	17,139.49	N/A
Akhmeta HPP <b>31895.843</b>	6,448.93	
Debeda HPP <b>19193.495</b>	3,880.68	
Mestiachala 2 HPP <b>100862.436</b>	20,393.09	
Kasleti 2 HPP <b>32965.206</b>	6,665.14	

#### **e. Pesticide use & management.**

*GRPO does not use any types of pesticides during its operations.*

### **PS4 Community, health, safety, and security**

#### **a. General community health & safety impacts**

*GRPO has internal design capacity and extensive technical expertise to maintain operations of generation and distribution assets. The company has developed and implemented procedures to manage potential operational risks at its HPPs and maintenance and rehabilitation programs are prepared regularly based on the results of technical investigations and diagnostics. Visual controls of operational equipment and facilities are conducted on a daily basis by staff. In the case of the Qartli Wind Farm, turbine management and maintenance are conducted by the Danish company Vestas as part of agreed supply/operation contract.*

*Power generation and distribution facilities can represent risks to users and other community members. In general, the project sites are located in mountainous areas (Mestiachala 2 and Kasleti 2) or in agricultural areas (Debeda HPP, Akhmeta HPP, and Qartli wind turbines) and away from residential areas. GRPO use signs and physical barriers to fence/lock equipment and access, unarmed security guards, and community awareness raising campaigns. Security for physical assets and access control are provided by licensed third party service providers which have codes of conduct and operating procedures and ensure proper selection process and training of staff.*

*Heavy vehicles are used periodically for maintenance activities by employees and contractors. A Contractor Management Plan exists to ensure a systematic approach to the management of contractors so that their work does not adversely impact the health and safety of themselves or others. A corporate-level Transport Management Plan exists which identifies required actions to minimize negative impacts to the environment and stakeholders that may be caused by the GRPO operations, maintenance, and construction activities.*

*Georgia is at risk of hydrometeorological hazards and natural disasters. Frequent natural disasters include landslides, floods, flash-flooding, mudflows, droughts, avalanches, heavy winds, and storms which are expected to be exacerbated and heightened through expected climate changes. GRPO has developed Community Emergency Preparedness and Response Plans for each project site which outline the main risks and establish procedures to be followed by staff in emergency situations. Glaciological and geological monitoring are conducted by the Company on a quarterly basis by a contracted specialist at the Mestiachala 2 HPP and Kasleti 2 HPP sites, which are in mountains areas. Employees are also trained to identify potential hazards through visual inspections following significant weather events.*

*Site-specific Community Emergency Preparedness and Response Plans have been developed which outline the main issues in this regard, establish procedures to be followed by staff in emergency situations. During the audits carried out on GRPO's facilities in 2023, the signs of high risks for the community health and safety had not been identified, but emergency preparedness and communication is very important. local staff is aware of procedures and will be acting in emergency situations in accordance with the instructions given in the Community Emergency Preparedness and Response Plans.*

*Local staff of GRPO's facilities periodically inform the population about the main requirements of the Community Emergency Preparedness and Response Plans. During the reporting period no emergency drills with community participation have been conducted.*

## **b. Security Personnel**

*All GRPO's facilities are well protected, access is well secured to ensure that no unauthorized entrance can happen. GRPO has the contract with Security Police Department of Georgia. There are security guard units on each GRPO's facility.*

*GRPO has the contract with Security Police Department of Georgia. The security guards provided by the Security Police Department are not armed and they do not use dogs to guard the area. The Security Police Department of Georgia is responsible to train its staff.*

*No grievance submissions regarding the security guards were recorded during the reporting period. The Grievance redress mechanism of the Company is available on the corporative level. The grievance collection system covers the possibility for grievance collection through mails/e-mails, through grievance boxes at head office and at each facility operated by the Company, through CLO's and all personnel working on sites and submission of official letters using mail services. The grievance system provides the possibility to submit anonymous grievances as well as collective claims. Anyone can submit a grievance to the Company if they believe a practice is having a detrimental impact on the community, the environment, or on their quality of life.*

## **PS5 Land acquisition and involuntary resettlement**

*PS5 is not applicable for GRPO's activities.*

## **PS6 Biodiversity conservation and sustainable natural resource management**

### **a. Protection and conservation of biodiversity**

*Akhmeta and Debeda HPPs are located within pre-existing irrigation channels where river flow was modified prior to the construction of the asset. Only Mestiachala 2 and Kasleti 2 HPPs may have ongoing operational impacts to aquatic natural habitat (and migratory fish). To meet national requirements, monitoring has been undertaken regularly. In order to compensate the damage to fish fauna, appropriate amount of fertilized fish eggs will be purchased and released in the Kasleti (about 36,000) and Mestiachala (about 65,000) Rivers annually under the supervision of the representatives of the Minister of Environmental Protection and Agriculture of Georgia. Operation of fish passages which are constructed at the Mestiachala 2 and Kasleti 2 HPPs are regularly monitored.*

*The Qartli Wind Farm does not overlap with any protected areas and the main potential operational risk for biodiversity is from bird and/or bat collisions with turbines. Integrated Biodiversity Assessment Tool (IBAT) screenings have not identified any species that would qualify the area as critical habitat. The Company conducted birds monitoring over two years post-construction and no risks for avian fauna was*



confirmed. Currently the wind farm undertakes seasonal (spring and autumn) bird monitoring and daily fatality monitoring using a methodology developed by an ornithologist.

### **Bird Monitoring.**

Spring and Autumn migration monitoring was conducted at Qartli Wind Farm in 2023. The bird monitoring reports outline the results of spring and autumn migration monitoring at Qartli wind power plant and provide detailed information regarding the bird species observed, migration patterns and provides the analysis of the monitoring results.

The conclusion of Spring monitoring report is as follows:

- The monitoring results have indicated that the impact of the wind farm on migratory birds, is low, the wind farm territory is not attractive to the migratory birds, and they prefer to avoid the site and migrate using more simple routes attractive in terms of better suitable habitat and food basis.
- The collision of birds to the blades and the turbines were not recorded. The carcass search on the territory did not indicate the bird mortality. The carcasses were not identified despite the fact that the monitoring activities were done in different climate conditions.

The conclusion of Autumn monitoring report is as follows:

- The monitoring works have approved the migration routes and revealed to the fact, that the number of birds and species during the Autumn migration are higher than during the Spring season. This confirms the studies described in the reference sources and is mostly related with different routes used by some species during the Spring and during the Autumn.
- It was also confirmed that only part of migratory birds is flying over the territory of Qartli Wind Farm and the majority are preferring to follow the river valley to the south direction.
- The monitoring results did not indicate any impact of Qartli Wind Farm on the migratory birds. The negative impact was not detected on protected and rare species as well. This can be explained by the fact that the turbines are well visible, they are not located on the active flyway, the turbines are illuminated during the night and are visible all the time. This probably helps the birds to avoid collisions. The flock are not very dense, so the birds are not creating problems in selecting the trajectory to avoid collisions. Also, the number of turbines in Qartli Wind Farm is not high, and turbines are located at far distance from each other giving the space to the birds to avoid collisions.

### **Biodiversity and Fish Monitoring**

The biodiversity surveys have been conducted on Mestiachala 2 HPP project area. The baseline evaluation of the biodiversity was undertaken at the ESIA stage based on studies undertaken by the specialist groups of experts (Flora, fauna fish and river biodiversity). Detailed information is provided in the ESIA study developed for the project. The monitoring of flora, terrestrial- and fish fauna is undertaken during the operation stage as well. At the operation stage of Mestiachala-2 HPP the impact on biodiversity is limited to the impacts on river environment. No other impacts on biodiversity (flora and terrestrial fauna) are expected during the operation.

Fish monitoring study area covers the Mestiachala River, between the Mestiachala 2 HPP water intake and

*the substation, and several tributaries of this river. Based on the monitoring carried out during the reporting period, fish cannot reach Mestiachala 2 HPP water intake. Trout was not observed in the upper reaches of the Mestiachala during the monitoring conducted in 2023.*

*Ichthyology field work on the Kasleti River covers the river Kasleti between the water intake and the powerhouse. River Kasleti is the right tributary of the river Khaishura, which in its turn falls into the river Enguri at the village Khaishi. The named rivers are typical trout breeding rivers characterized with rapid flows. Based on the field study results the adult trout individuals are yet still able to reach the Kasleti River from Enguri dam and from the Khaishura River for reproduction and, communication between the isolated subpopulations must be restored to maintain viable population in the upper reaches of the river. Permanent control of the ecological flow of the river and introduction of respective measures will also be important, especially in the trout spawning period (November-December) to prevent creation of additional barriers for trout by reduced water level.*

### **PS8 Cultural heritage**

*PS8 is not applicable for GRPO's activities.*