



ANNUAL REPORT

GEORGIAN STATE ELECTROSYSTEM

2021|2022

The report is prepared by the International Projects and Reporting Department, JSC "GSE"

This document contains forward-looking statements based on currently available plans and forecasts. Given the dynamics of the energy sector development, the company cannot guarantee the accuracy and completeness of these forward-looking statements. Unforeseen circumstances include, but are not limited to, exceptional income and expense items, unexpected economic, political and foreign exchange developments. Statements issued by the company must always be assessed in the context of the events, risks and uncertainties of the market and environment in which the company operates. These factors could lead to actual results being materially different from those expected.

This document contains information on the year 2021 as well as on the 1st and 2nd quarters of the year 2022.

CONTENTS

Message from the Director General	2
About Us.....	6
Major Achievements 2021-2022	14
Interview With Mr. Robert Rossner	16
Financial Highlights 2021	18
GSE Dispatch.....	20
Dispatch Highlights 2021.....	22
GSE Transmission	28
Transmission Highlights	30
Capital Investment Projects.....	36
Strategic Planning 2021-2031.....	46
Hr & Organizational Developments 2021	52
Raising Public Awareness	56
Environmental Protection & Social Safeguards.....	58
Consolidated Financial Statements	61

MESSAGE FROM THE DIRECTOR GENERAL



George Gigineishvili - *Director General*

”

It is important to effectively and profitably execute our plans and continue working towards the financial soundness of GSE. The power transmission system of Georgia shall become even more stable and reliable, to decrease reliance on imported electricity and obtain full power independence.

I am pleased to present to you an annual report for the Year 2021 and key highlights of the first half of the Year 2022 from the Georgian State Electro system JSC (GSE). First of all, I would like to note that I joined the company in February 2022 and I believe, with our professional team we will be able to contribute further to the development of Georgia's infrastructure. Considering its abundant hydrological resources, our Country has particularly extensive power prospects entailing new opportunities for electricity exchange between our neighboring countries.

An increase in power consumption is common for all countries with a growing economy and Georgia is not an exception either. A high level of power consumption necessitates investing in a transmission network and having infrastructure, which would ensure reliable and safe transportation of electricity, integration of new capacities into the grid, and new opportunities for power trade. This is our goal today and GSE is the crucial stakeholder to take specific actions in response to existing challenges and to achieve new prospects.

In this regard, the Ten-Year Network Development Plan of Georgia (TYNDP) is a key tool. It considers modernizing the network from a long-term perspective. I believe that projects that are foreseen by the TYNDP and vital to the power sector of Georgia shall be implemented in the shortest terms.

It is important to effectively and profitably execute our plans and continue working towards the financial soundness of GSE. The power transmission system of Georgia shall become even more stable and reliable, to decrease reliance on imported electricity and obtain full power independence.

I would like to note several important projects from the TYNDP:

We have recently completed the Jvari-Khorga Interconnection Project funded by EBRD and KfW and considering the construction of 500 kV Substation in Village Jvari, arrangement of 220 kV double-circuit transmission line from Substation Jvari to Substation Khorga and approximately 8 km long double-circuit 500 kV overhead line as a tie-in of the 500 kV transmission line Kavkasioni. Thus, the Georgian power system has added a reliable and stable power network.

Construction of two key facilities is about to start: Jvari-Tskaltubo 500 kV power transmission line and Tskaltubo 500/220 kV substation. These projects are financed by the World bank within its Energy Supply Reliability and Financial Recovery Project (ESRFRP). Implementation of these projects will ensure the safe transfer of new capacities from western Georgia (integration of Enguri HPP into Jvari SS), development of opportunities for power generation and transmission, and integration of new HPPs into the Georgian power system. Jvari-Tskaltubo line will ensure the Imereti-500 line, one of Georgia's most significant transmission lines.

On February 18, 2022, we signed a contract with KEC International Limited on the construction of Overhead Transmission Lines (OHL) Tskaltubo-Akhaltzikhe and Akhaltzikhe-Tortum. This project is financed by KfW and its value is approximately EUR 62 Mln. The project envisages the construction of Tskaltubo-Akhaltzikhe 500kV approximately 103km-long double-circuit OHL and Akhaltzikhe-Tortum 400kV approximately 34km-long single-circuit OHL connecting Georgia-Turkey power systems. After completion of the project the Country's power network capacity and reliability will be increased significantly, a reserve network will be created for 500kV power line Enguri-Zestaponi-Akhaltzikhe and shutdowns and volume of undelivered electricity will be decreased, which on its part will facilitate cross-border trade. The project shall be completed in 2025.

This project will be implemented within the framework of the Energy Network Improvement Programme (ENIP) with the financial support of KfW and the EU. Total investment in the ENIP program includes funding from the German Bank for Reconstruction and Development (KfW) and the European Bank for Reconstruction and Development (EBRD) and a grant from the European Neighborhood Investment Platform (NIP), with a total investment of EUR 270 mln. The infrastructure components of ENIP are located across all of Georgia. Under IP, approximately 500 km of transmission lines and 5 substations will be constructed and extended.

In 2023 the construction works of "Lajanuri-Tskaltubo", "Namakhvani-Tskaltubo", "Namakhvani-Tvishi-Lajanuri" and "Lajanuri-Lajanuri HPP" have been commenced. The project will be implemented with the financial support of the European Bank for Reconstruction and Development (EBRD) and the estimated completion date is the Year 2025.

In particular, the following other projects have been recently commenced: Construction of 220/110 kV substation in Lajanuri; Construction of 220/110 kV substation in Ozurgeti; Extension of 500 kV and 400 kV AC switchyards in Akhaltzikhe converter station; Construction of 220 kV Loop in Loop out Paliastomi - into Ozurgeti Substation and 110 kV double-circuit overhead line from Ozurgeti Substation to Zoti HPP.

These voluminous projects will enable us to ensure that the growing electricity demand is duly met.



In terms of international relations, another noteworthy endeavor is the recently commenced feasibility study for the Georgia-Romania Black Sea submarine electricity and digital interconnection. The feasibility study is financed by the World Bank under the Energy Supply Reliability and Financial Recovery Project.

In conclusion, I would like to summarize that the implementation of the above-noted large-scale projects will increase the conductivity of the regional infrastructure, strengthen its reliability, and maximize the utilization of the power export and transit potential of Georgia.

In line with the development of the national power system, GSE is also aiming to further develop towards being a front-runner company to equalize with transmission system operators of developed countries.

In this regard, I would like to express my gratitude, first of all, to GSE employees and the managing team, as well as to our government counterparts and international donor partners for their continuous support.



ABOUT US

Who We Are...

GEORGIAN STATE ELECTROSYSTEM JSC (GSE) provides transmission and exclusive dispatch services to eligible companies in Georgia. 100% of GSE shares belong to the state. GSE was formed in 2002 from the merger of JSC “Electrogadatsema” and JSC “Electrodispetcherizatsia”. Under the oversight of the independent regulator (Georgian National Energy and Water Regulatory Commission - GNEWRC), GSE exercises technical control over the entire power system to ensure the availability of the system for uninterrupted and reliable power supply. GSE also transmits the electricity imported or generated in Georgia to distribution companies, other direct customers, or the power systems of neighboring countries. GSE was operating under the respective perpetual transmission and dispatch licenses issued by GNEWRC on December 20, 2002.

On March 4, 2021, GNEWRC decided on the preliminary certification of GSE as a transmission system operator. Later, by the decision of the Commission N20/1 dated May 13, 2021, the new electricity transmission license № 008 (series 12) was issued to the GSE, which came into force on July 1, 2021. Immediately after the implementation of this decision, the electricity transmission license (No. 004, series 12) issued to GSE was abolished. Accordingly, from July 1, 2021, the status of the transmission system operator came into force for GSE. In this status, the company provides the overall coordination of the country’s electricity system and balancing of electricity supply and demand. Our company also regulates the exchange of electricity with neighboring countries and is actively cooperating with network operators in neighboring countries.

On January 4, 2021, an agreement was signed between GSE and JSC United Energy System Sakrusenergo according to which the right of perpetual use (perpetual lease) of power transmission lines owned by JSC UES Sakrusenergo was transferred to JSC Georgian State Electrosystem (transmission system operator), which came into effect on the day of entry into force of the decision of the Georgian Energy and Water Regulatory Commission on the issuance of an electricity transmission license to the GSE (July 1, 2021).

On May 28 of 2022, based on GNERC’s Decision N39/3, GSE also obtained the Electricity Market Operator License to operate the Balancing and Ancillary Services Market. The Balancing and Ancillary Services Market is planned to launch on September 1st of 2022. Before the launch, GSE made numerous steps to prepare for the new market model. Training sessions have been held for the market participants and fundamental legal amendments took place in consultation with our international experts. The relevant software named Market Management System (MMS) has also been developed which will facilitate the trade, nominations as well as many other activities that are necessary for the market operation.

Our Subsidiaries

- GEORGIAN ENERGY EXCHANGE, an operator of the electricity market, with 50% GSE shareholding, responsible for the operation of day-ahead, intraday electricity market, and bilateral contracts (forward) market;
- KARCAL ENERJI JSC, the other GSE subsidiary, with 99% GSE shareholding, is a general licensee for wholesale power trading in Turkey

Dispatch

The National Control Centre (NCC) of Georgian State Electrosystem is located at GSE headquarters, in the center of Tbilisi. The NCC:

- provides efficient control over the Georgian power system;
- is responsible for the safe, reliable, and effective operation of 500/400/330/220/110/35kV transmission network and equipment and overall power system stability;
- ensures proper operation of the overall power system under normal operational mode as well as in emergencies;
- is equipped with state-of-art information and operation technologies which enables Dispatch to get the system information online, ensure remote control and efficient restoration after incidents;
- gets accurate information from substations, and as a result of upgrading the database, respective personnel efficiently reacts to any system faults or emergencies.

Transmission

Transmission assets of GSE include 500/400/220/110/35kV overhead lines with the total length of 4 357 km and 93 substations with the total installed capacity of 13 433 MVA, including six (6) strategically important 500kV substations and eighteen (18) 220kV substations throughout the territory of Georgia.

Market Operator

GSE is licensed to operate the Balancing and Ancillary Services Market. As a Market Operator, GSE, among other rights and obligations, operates the market, establishes the balancing products, calculates the imbalance price, establishes the price of the relevant collateral and ensures the facilitation of a fair and transparent environment for settlement purposes.

ABOUT US

Mission Statement

GSE's mission is to develop, maintain, and operate a safe, reliable, economically-viable, efficient, and accessible electricity transmission system for all customers.

Vision Statement

GSE will be a regional leader in the energy sector and a transmission hub providing high-quality services to our domestic or international customers. Optimized system efficiency, preserved reliability, market and customer orientation, and a corresponding organizational culture support the delivery of the required corporate results. This will be achieved through the consolidated use of grid resources that improve our ability to respond to dynamic market and operating conditions across market borders.

This Broader Goal Will Be Achieved Through:

- Optimizing the flow of electricity within Georgia and across borders;
- Coordinating the management and business planning processes that facilitate transmission investments in support of reliability, economic efficiency, and public policy activities;
- Deploying smart grid technologies that maintain system balance through the use of robust data, communications, and automated systems.

Strategic Objectives

1. Network reliability improved
2. Readiness ensured for facilitating regional electricity trading
3. Financial stability maintained
4. Information technologies introduced
5. Organization effectiveness increased
6. Commercial orientation & knowledge management culture transformed.





George Gigineishvili - *Director General*



Kakhaber Keburia

First Deputy Director General / Member of the Board of Directors / Director of Project Management



Davit Tetunashvili

*Member of the Board of Directors / Deputy Director General for Financial Affairs
Member of the Board of Directors / Acting Director of Finance*



Vano Zardiashvili
*Member of the Board of Directors / Director of Legal,
Environmental, Social Affairs and Permits*



Zviad Gachechiladze
*Member of the Board of Directors /
Director for Organized Markets Development and
Electricity Accounting*



Giorgi Gelashvili
*Member of the Board of Directors /
Director of Procurement and Logistics.*



Giorgi Amuzashvili
*Member of the Board of Directors /
Director of Energy Dispatch*



Vakhtang Kinkladze
*Member of the Board of Directors /
Director of Technical Affairs*



ABOUT US

The electric transmission system plays a much more significant role than simply connecting generation and transporting electrons. Transmission serves as the backbone of the energy delivery system – the energy highway. It promotes policy objectives by allowing renewable resources to connect to the grid and be efficiently transported, providing cleaner and sustainable sources of energy. And, transmission is the impetus to spur and sustain economic development by providing reliability and ensuring equal access to the least cost sources of generation.

Reliability

Our business model is quite simple. As a sole transmission system operator (TSO) of Georgia, GSE and its subsidiaries are singularly focused on improving the reliability of the electric transmission grid. It is the foundation on which our companies are built and our continuing motivation.

Our intensified efforts to replace aging transmission facilities and equipment across the GSE service territory have resulted in increased reliability and efficiency while paving the way for the non-discriminatory integration of new generating resources, including renewable resources.

Our capital projects support and enhance the flexibility and availability of our systems by increasing capacity. Our focus on preventive maintenance further enhances the resiliency of our systems by reducing unplanned outages. This resiliency was demonstrated through the outstanding performance of our systems under stressed conditions in the summer and winter months during periods of extreme heat and cold, driving electrical demand to the highest levels.

Energy Efficiency

When electricity travels long distances on lower-voltage electric lines, efficiency is compromised. Congested lines also significantly reduce energy efficiency, while GSE's investments in the transmission grid reduce energy losses, thereby increasing efficiency. Extra-high-voltage transmission lines, such as those built under our projects, are more efficient and are inherently more reliable.

Through the use of advanced technology, we are able to efficiently manage our transmission systems which span multiple regions. ABOUT US Our state-of-the-art National Control Center (NCC) allows for direct monitoring and control of our systems 24 hours a day, seven days a week. System operators employ a variety of situational awareness tools to quickly identify and resolve operational issues on the grid.

Operational Excellence

GSE's vigilance in overseeing its transmission system is an essential element in protecting electric reliability as well as preserving national security.

Protecting geographically dispersed assets in a mix of urban and rural settings requires substantial thought, planning and effort. GSE has earned national recognition for its best-in-class operations and efforts to safeguard the reliability of its high-voltage electric system.

Safety

For our employees and contractors, safety remains an integral part of our culture and day-to-day operational performance. We are ingraining safety into our corporate culture that is evident from our safety performance. GSE Transmission met the ultimate safety standard of zero lost-day work cases and zero recordable injuries for the last few years.

Envisioning Future

We have made significant progress toward improving electric reliability, but we recognize that there remains much work to be done. GSE will continue to look ahead in order to lay the groundwork that will allow us to continue in our mission.

It is imperative that we make investments in transmission infrastructure in order to preserve and improve the reliability of our grid. While a definitive national energy policy is designed to further energy independence and development of cleaner, more sustainable resources, and regardless of how these policy objectives ultimately materialize, the resulting development of our nation's renewable generation portfolio will require investment in new transmission infrastructure. No company in our industry is better positioned to serve as a leader in the development and build-out of this transmission infrastructure than GSE.

MAJOR ACHIEVEMENTS 2021-2022

- In 2021, the “Jvari-Khorga project was completed foreseeing an increase of 220 kV network reliability in Western Georgia. This project, together with Tskaltubo-Zestafoni project, will increase the capacity of the entire 220 kV network of Western Georgia and will reserve 500 kV OHL Imereti to some extent, which will reduce the number of consumers to turn off in case of shut down. The project value is EUR 18.4 million.
- Implementation of four large projects have been started as well:
 - Construction of Tskaltubo-Akhaltzikhe 500kV and Akhaltzikhe-Tortum 400kV OHL project financed by KfW with the value of approximately EUR 62 million. The project envisages the construction of 103km-long 500kV OHL Tskaltubo-Akhaltzikhe and 34km-long 400kV OHL Akhaltzikhe-Tortum connecting Georgia-Turkey power systems. As a result, the Georgian interconnection will be reinforced with the Turkish power system, as well as with Europe. This project will create another important precondition for use of Georgia’s rich hydropower resources. Construction contract was signed with an Indian company KEC International Limited in February 2022.
 - Construction of overhead lines in Guria region, which is financed by KfW with a total value of EUR 9.9 million, is one of the most important strategic projects for the Georgian transmission network development. It comprises construction of a 3.3km 220 kV Loop in Loop out Paliastomi into Ozurgeti Substation and a 47 km 110 kV double circuit overhead line from Ozurgeti Substation to Zoti HPP. The project will result in the reinforcement of transmission infrastructure in Guria and Adjara regions, in order to integrate small hydropower plants within the grid and increase network reliability. The contract agreement for construction was signed with the Turkish company Mitas Energy and Metal Construction Inc. in July 2021.
 - Contract agreement was signed with the Greek company Mytilineos S.A (Metka) with the amount of EUR 35,6 million financed by KfW. The project considers construction of a 220/110kV substation in Lajanuri, construction of 220/110kV substation in Ozurgeti (Guria) and extension of 500kV and 400kV AC switchyards in Akhaltzikhe converter station. The commencement date of the contract was October 2021 and the estimated completion date is April 2024.
 - Georgian State Electrosystem JSC signed a contract agreement with Larsen & Toubro Limited (India) on construction of transmission lines 500 kV Lajanuri-Tskaltubo, 220 kV Namakhvani-Tskaltubo and Namakhvani-Tvishi-Lajanuri and 220 kV New Lajanuri-Lajanuri HPP. The project is financed under an EBRD loan and its value is EUR 33.8 Million. The project will facilitate the integration of Racha-Lechkhumi prospective hydropower plants into the grid, enhancement of the transmission network and improvement of reliability. Construction works are to be completed in 2025.
- The Italian consulting company CESI SpA was selected through an international tender for the full technical and economic study of Georgia-Romania underwater transmission and digital connection line construction. The contract was signed in April 2022. Research works began in May 2022. The feasibility study is financed under the World Bank loan of ESRFRP and is valued at approximately EUR 2.5 million.
- According to the decision of the National Energy and Water Supply Regulatory Commission of Georgia in May 2021 GSE was granted an electricity transmission license. Under the decision, the license came into effect in July 2021. GSE is authorized to carry out the transportation of electricity from the receiving points of the electricity

transmission system to the delivery points for its cross-border transfer, distribution, and/or final consumption purposes, to perform other functions related to electricity transmission, including operation, maintenance, and development of the transmission system, also, if necessary, interconnection of the transmission system with other systems and, to meet the reasonable requirements related to electricity transmission, ensuring the long-term capability of the system.

- In 2021 a new consulting service project was signed with a consultant Fichtner to provide several directions, including support of GSE to perform the role of TSO (transmission system operator) under the rules of the third energy package of the European Union; GSE's support in terms of cooperation with ENTSO-E, Energy Union.
- In 2021-2022, GSE actively conducted negotiations with facilities with renewable energy sources built based on the memorandum signed with the Government of Georgia regarding the signing of agreements for the long-term export of electricity generated by them. In this direction, an agreement was signed with "Austrian Georgian Development" Ltd. in 2021 for the provision of long-term electricity export transmission services, namely for the export of electricity generated by the company's hydroelectric power stations "Lakhami-1" and "Lakhami-2", according to which agreement, for electricity export, the inter-system 400 kV "Akhaltsikhe-Borchkha" bandwidth was reserved for 10 years from 2021. A similar agreement was also signed with "Energy Development Georgia" LLC in 2022, on the provision of services for the export of electricity generated by the company's "Sashuala-1" and "Sashuala-2" hydroelectric power stations. To export electricity, the company is reserving the inter-system 400 kV "Akhaltsikhe-Borchkha" bandwidth for 9 years from 2022.
- To reduce the cybersecurity risks in the SCADA / EMS system, a Domain system has been established, and, also, on the bases of "Solar Wind" a network monitoring system has been introduced for improving the quality of service.
- "Georgian State Electrosystem" has already obtained the quality management certificate of the international standard ISO 9001 for the third time. GSE was the first energy company in Georgia to be awarded the certificate in 2014. October 2023 was set as the validity period of the new certificate.
- Electricity supply security rules, which include the main provisions of the 2019/941 regulation of the 4th energy package of the European Union, define the development of a risk preparation plan. The development of the mentioned plan has been carried out since March 2022 by CSE with the support of the Secretariat of the Energy Union.
- WAF (Web Application Firewall) Project - Brandmauer web application is being installed, which is a web application platform to protect – the GSE website, Market Management System (MMS), GCAP, GCAT, etc., and prevent cyber attacks.

INTERVIEW WITH MR. ROBERT ROSSNER



*Portfolio Manager of Energy Network Improvement
Program Projects, KfW*



KfW is one of the most important financial partners of Georgia, with more than 20 years of its contribution. What are the key development priorities of KfW in Georgia, specifically in the energy sector?

There are three key priorities for the German Financial Cooperation with Georgia in the energy sector: power transmission, energy efficiency and policy reforms. A fourth area - green hydrogen – is currently under development. Furthermore, KfW provides funding for the exploration phase of an underground gas storage facility.

A “recipe for success” is to address energy issues at both the policy and investment levels, which is particularly reflected in the power transmission sector. With an active portfolio of EUR 225 million, the Federal Republic of Germany through KfW is the largest bilateral donor in the power transmission sector and promotes infrastructure investments to expand the transmission grid. At the same time, German Financial Cooperation supports numerous reform measures in the Georgian energy sector, including electricity transmission - both at the political level in the context of the PBL (policy-based lending) and in the context of institutional-organizational support for the GSE.

.KfW has already successfully implemented several transmission infrastructure development projects. As for now, a large-scale energy programme is ongoing with GSE, envisaging development of important transmission lines and substations throughout Georgia. Please share with us your expectations about these projects.

In the last decade alone, 470 km of transmission lines and 4 transformer stations were newly constructed or rehabilitated in the context of German Financial Cooperation with Georgia through KfW, enabling (small) hydropower plants with a total capacity of more than 400 MW to be connected to the Georgian electricity grid. Thereby, KfW funded transmission infrastructure to strengthen and expand the Georgian transmission grid to make a significant contribution to grid stability, the integration of renewable energies into the national grid and to enable cross-border energy exchange with neighboring countries, such as Turkey, Armenia and Russia. As one of the results, Georgian-Turkish energy exchange have increased, and unplanned supply interruptions were reduced.

Within ENIP, co-financed by the Federal Republic of Germany through KfW, European Union and EBRD, infrastructure measures are being financed to further expand the Georgian electricity transmission grid in various regions of Georgia, such as in Adjara and Guria as well as in Kakheti region. So far, three construction contracts were signed within ENIP, the latest in February 2022. Under the last, so far largest construction contract amounting to EUR 62 million, a 500kV transmission line from Tskaltubo to Akhaltsikhe and from there a 400kV transmission line to the Turkish border (and on the Turkish side to Tortum) is constructed. This builds upon the previous transmission infrastructure development projects mentioned above with the aim to not only further strengthen the connection of the Georgian-Turkish electricity trade but also the transmission to the European power grid.

As a Portfolio Manager of KfW, how would you assess performance of GSE as the Project Executing Agency? What would be your key recommendations for GSE for further development?

KfW appreciates the important role of GSE as a TSO in Georgia and in the development of a regional energy market with its neighboring countries. The partnership between GSE and KfW for the implementation of transmission projects in Georgia is strong, reliable, and long-standing. The operational day-to-day work is characterized by highly committed counterparts on the side of GSE, doing great efforts to find proper solutions for the adequate preparation and implementation of transmission infrastructure projects. Thereby, the preparation, implementation, and operation of transmission infrastructure within ENIP needs to be in compliance with international regulations, notably with regard to environmental and social standards as well as sector specific EHS Guidelines. German Financial Cooperation supports GSE in establishing an environmental and social management system in accordance with international requirements to meet international standards regarding environmental and social compatibility.

GSE plays a key role in the development of the Georgian energy market as well as in the regional integration of the transmission grid with neighboring countries. As much as the Georgian electricity sector has evolved from a single-buyer model to an increasingly competitive model, GSE as a transmission system operator (TSO) is in the process of adapting to these changes within the Georgian energy market. These changes imply the adaptation of the rules on legal and functional unbundling under the Directives set by the European Energy Community. On an institutional level, German Financial Cooperation continues to support GSE in adapting to these changes to meet the requirements as a certified TSO in accordance with EU standards and to strengthen its capacities in a coherent, regional energy market.

We would also like to hear your expectations and recommendations for GSE during the challenging path towards implantation of the Ten-Year Transmission Network Development Plan (TYNDP) of Georgia.

The TYNDP provides the framework in which investments under ENIP are identified, assessed, prepared, and implemented. Within ENIP, the details of the specific infrastructure measures are defined during project implementation. This approach allows the Georgian side to flexibly set priorities for grid expansion based on the TYNDP in coordination with KfW and to respond to changes and adjustments.

During the detailed assessment of the projects and investment needs initially provided in the TYNDP, adaptations and changes concerning technical, environmental, and social compatibility for the final route of transmission lines are often needed. I can only encourage GSE to continue taking – sometimes difficult – decisions regarding agreed routes of transmission lines and to stay with these decisions to reduce potential delays for the implementation of transmission projects.

FINANCIAL HIGHLIGHTS 2021

The year 2021 was noted for further growth in revenues. The revenues showed 63% increase this year up to 182 million GEL (2020) from 297 million GEL (2021). This is mainly due to the increase in the volume of transmission services and the reflection of the lease value of Sakrusenergo assets as a component of the tariff, which is reflected in the same amount of outflows.

At the year-end, the company had cash of 21 million GEL. As effective cash management boosts the company's short-term liquidity and working capital, we can meet the targeted revenues and expense levels.

In 2021, cash paid for capital expenditures - the upgrade/rehabilitation of transmission and dispatch facilities totaled 110.2 million GEL, including 54 million GEL from GSE's funds.

Independent auditor, KPMG GEORGIA LLC, audited separate financial statements of GSE for the year 2021. The auditors gave a clean opinion, stating that: "the financial statement presents fairly, in all material respects, the financial position of GSE as of December 31, 2021, and its financial performance and its cash flows for the year then ended by the International Financial Reporting Standards." The date of the statement is August 1, 2022.

The financial condition of GSE for the year ended December 31, 2021 is demonstrated in the statement of financial position, profit and loss, changes in equity as well as cash flows from the Independent Auditor's Report, as given in the following pages.

Revenues

Revenues from the domestic market for export, dispatch and transmission services increased by 63% as compared to the previous year.

This is attributable to the increase in the volume of transfer services. Revenues reflect the leasing component of Sakrusenergo assets, which is also reflected in expenses.

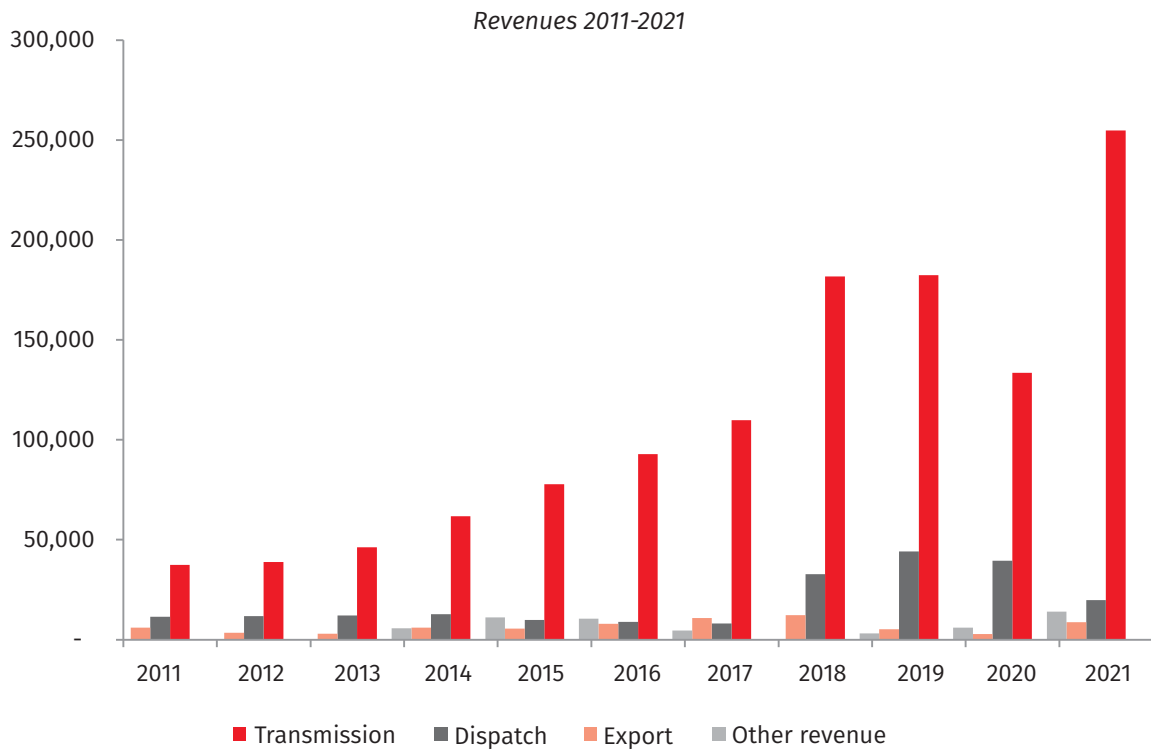
Capital Expenditures

Cash Paid for Acquisition of Property, Equipment and Intangible Assets amounted to 100.4 mln GEL

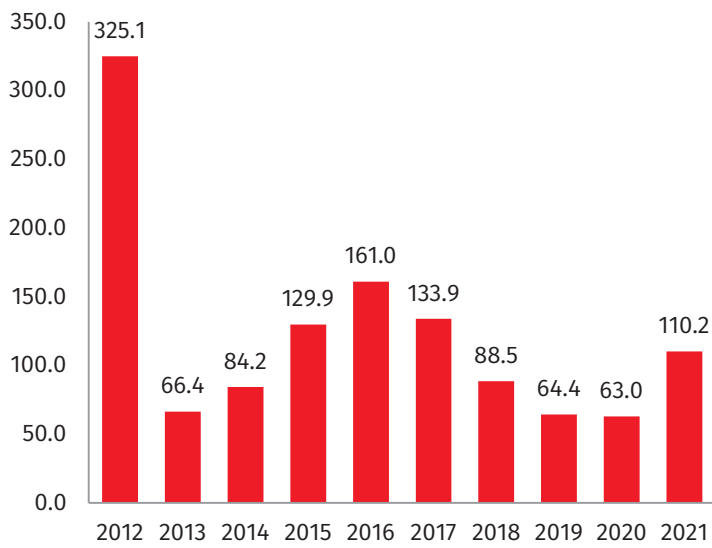
Ebitda

Earnings before Interest, Taxes, and Depreciation expenses increased and totaled 188.7 mln GEL

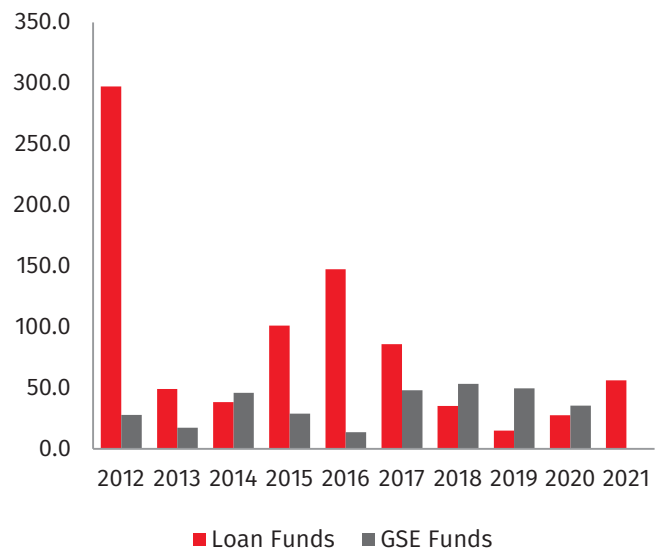
Net annual income from GSE's activities constituted 234.8 mln GEL



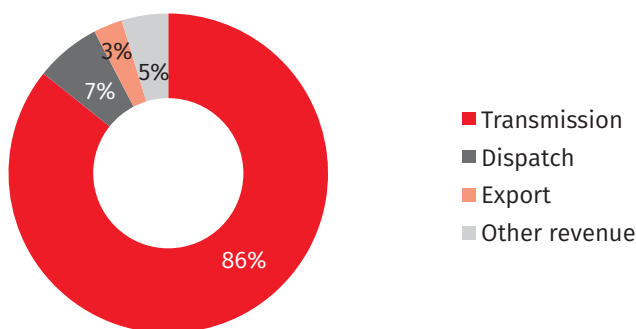
The Capital Expenditure (mln GEL)

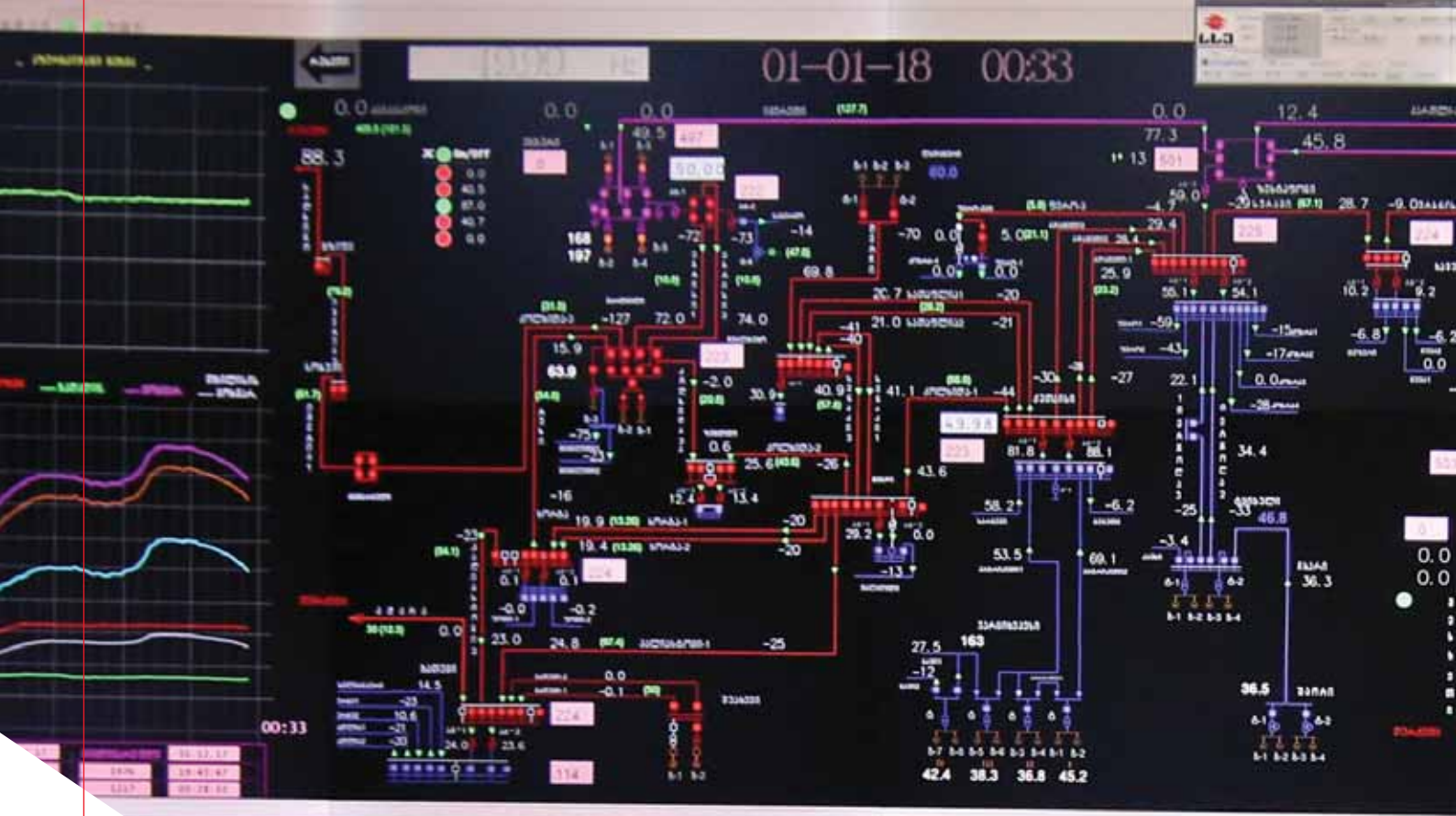


Capital Expenditure by Source (mln GEL)



Operational Revenue 2021

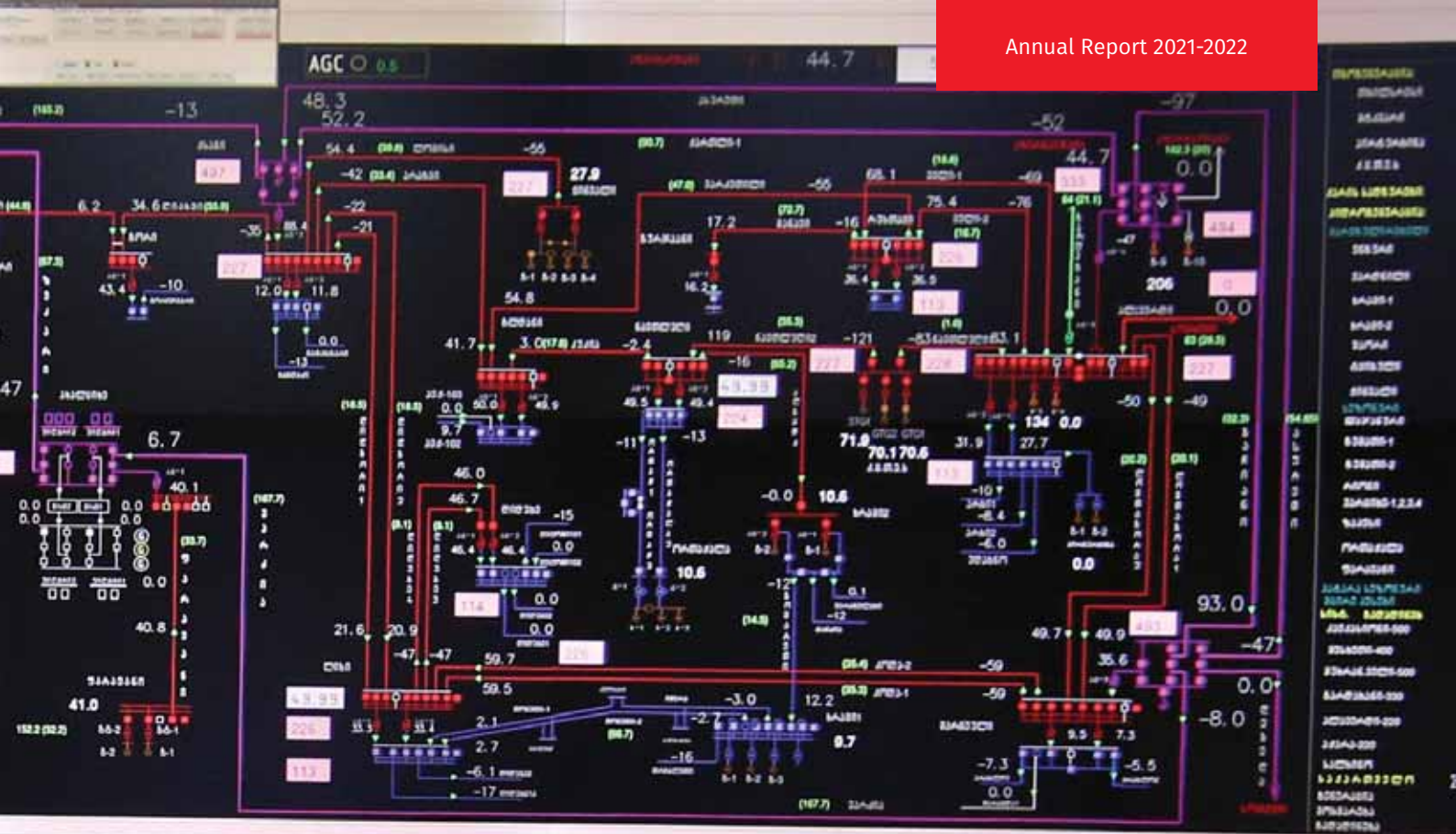




GSE DISPATCH

The National Control Centre (NCC) of Georgian State Electrosystem is located at GSE headquarters, in the center of Tbilisi. The NCC:

- Provides efficient control over the Georgian power system;
- Is responsible for safe, reliable and effective operation of 500/400/330/220/110/35kV transmission network and equipment and overall power system stability;
- Ensures proper operation of overall power system under normal operational mode as well as in emergencies;
- Is equipped with state-of-art information and operation technologies which enables Dispatch to get the system information online, ensure remote control and efficient restoration after incidents;
- Gets accurate information from substations, and as a result of upgrading database, respective personnel Efficiently reacts to any system faults or emergencies.



DISPATCH HIGHLIGHTS

2021

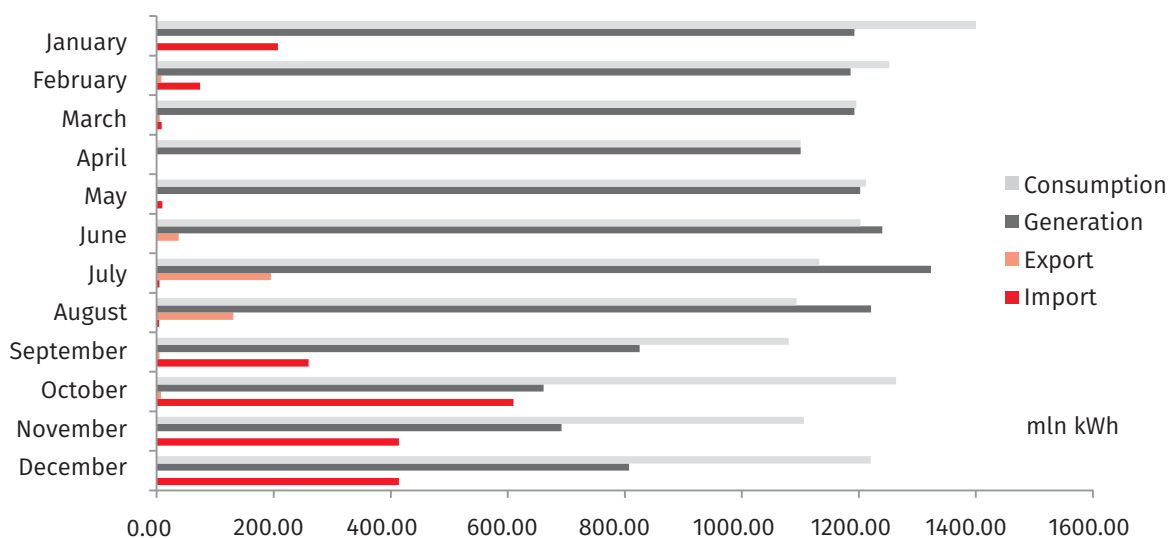
Peak consumption (mln kWh)	48.44
Peak load (MW)	2,338.0
Generation by seasonal power plants (mln kWh)	4,863.9
Generation by regulatory power plants (mln kWh)	5,318.1
Generation by thermal plants (mln kWh)	2,379.6
Kartli Wind Power Plant (mln kWh)	83.4
Export (mln kWh)	391.0
Import (mln kWh)	2,006.2
Total consumption (mln kWh)	14,260.3
Total generation (mln kWh)	12,645.0

Energy generation by seasonal power stations totaled 4 863,9 million kWh which on average totaled 13.3 million kWh per 24 hours.

The peak load of 2338 MW occurred on December 25, 2021 and the maximum daily energy consumption of 48.4 million kWh was fixed on December 25, 2021.

The system frequency was stable within acceptable tolerances and was kept within standard frequency deviations ranging between 49.999-50.004 Hz.

Generation, Consumption, Export, Import 2021

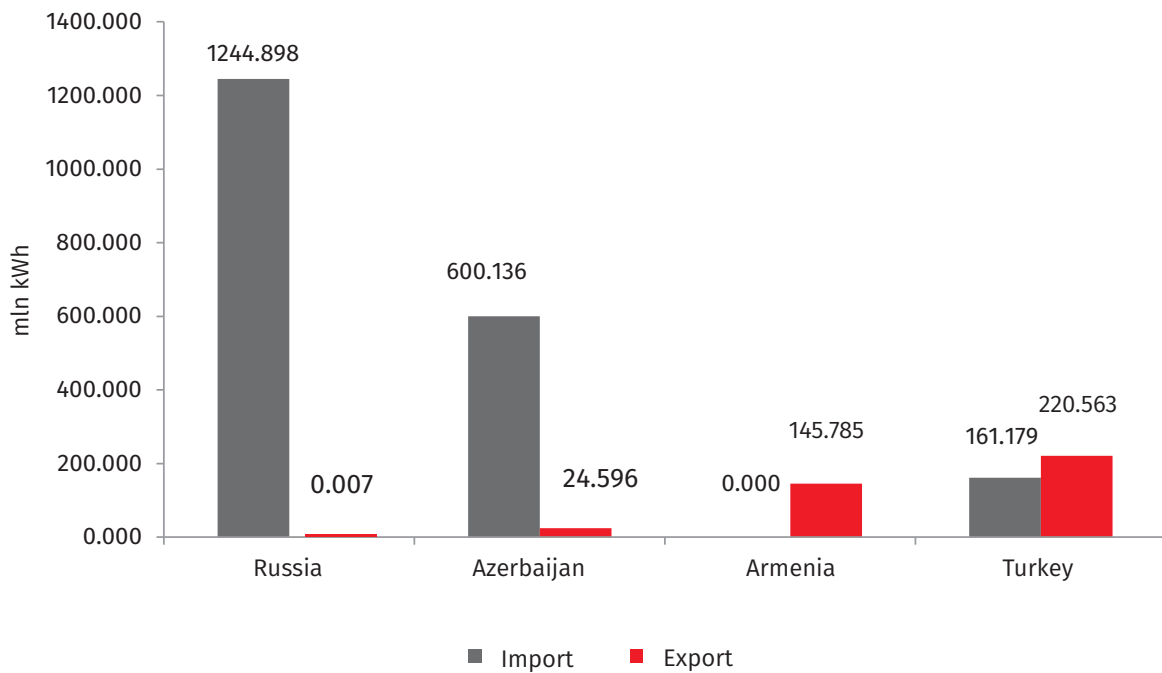


In 2021, the Georgian power system operated in parallel mode with Azerbaijan and Russian power systems.

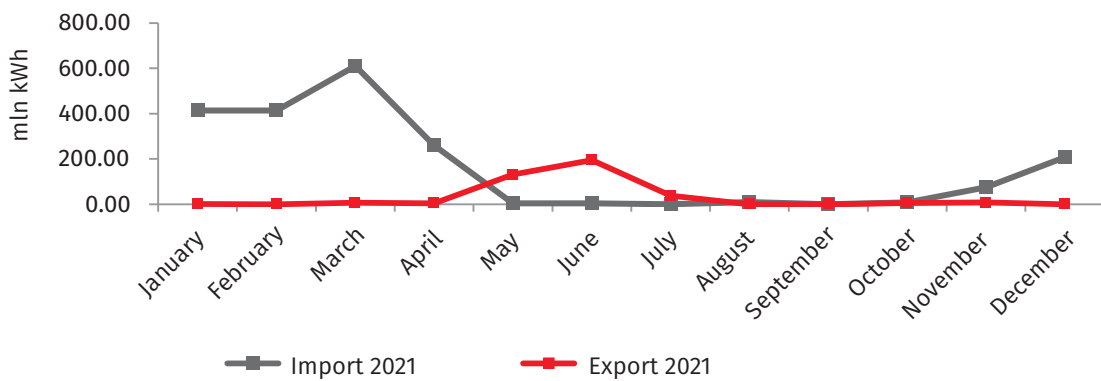
Power is imported in winter to meet domestic demand and exported in summer months when Georgia has excess hydrooutput.

The energy balance with the Russian power system totaled 1244,9 million kWh (import 1244,9 million kWh and export 0,007 million kWh); The energy balance with Azerbaijan power system totaled 1089.87 million kWh (import 600,1 million kWh and export 24,6 million kWh); The energy balance with Armenian power system totaled - 145,8 million kWh (import 0,0 million kWh and export 145,8 million kWh); The energy balance with Turkish power system totaled - 59,4 million kWh (import 161,2 million kWh and export 220,6 million kWh).

Export-Import by Countries 2021



Export-Import by Months 2021



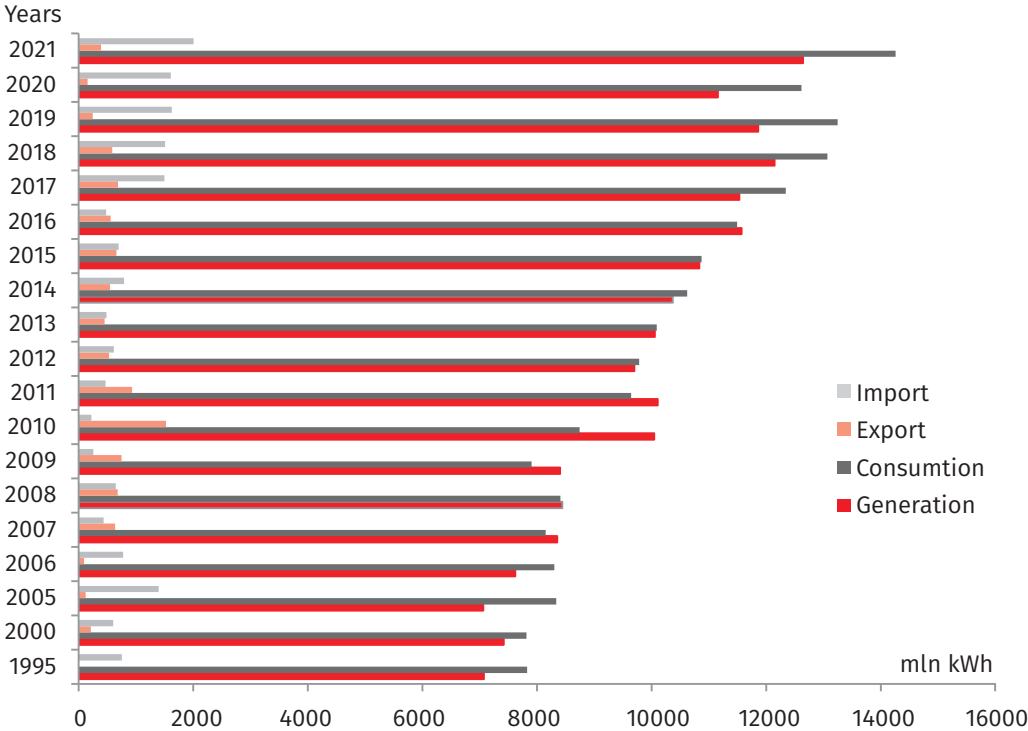
DISPATCH HIGHLIGHTS

2020-2021

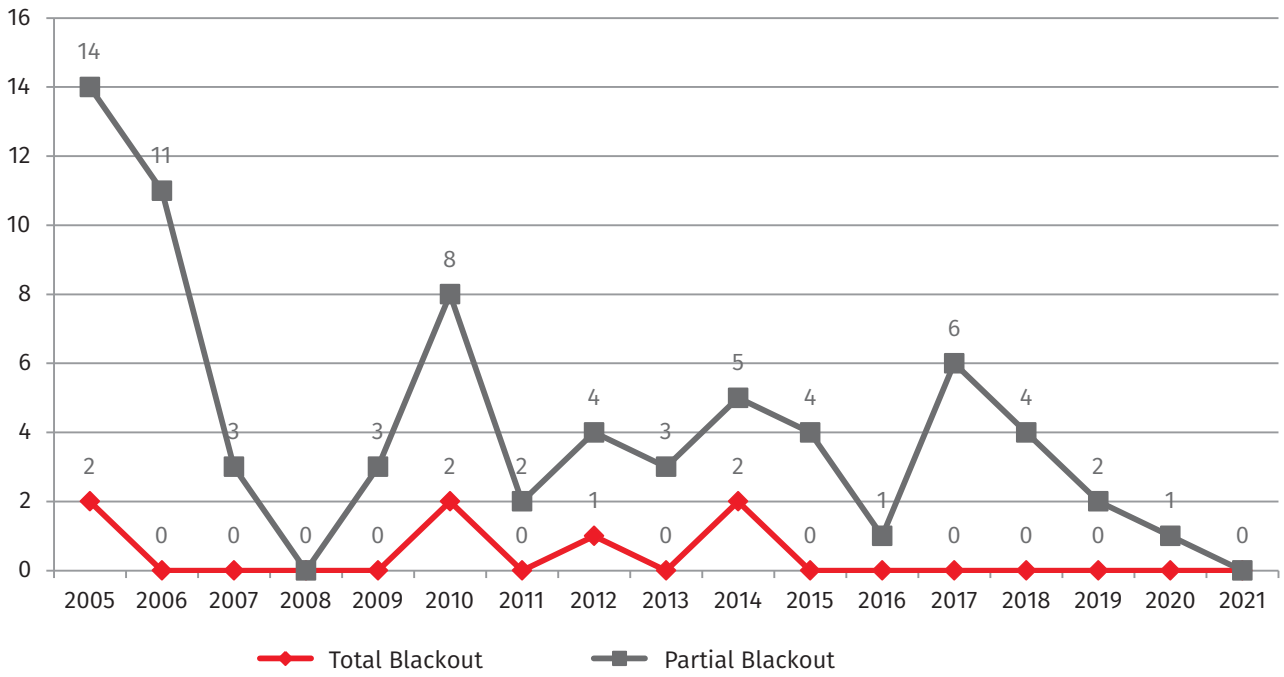
Electricity demand is highly seasonal in Georgia, with peak demand in winter and lower demand in summer. This is the inverse of the seasonal hydropower generation pattern: hydropower generators tend to produce at their peak in the summer months and at their lowest levels in winter. This enables Georgia to export energy during the summer, but also requires hydropower generators to spill large amounts of water. Due to low hydropower output in winter, Georgia relies on thermal generation, which makes up 18-19% of total electricity generation annually, though this rate increases in winter, and decreases to less than 1% in summer. Georgia has an installed generating capacity of around 4564 MW comprising a mix of hydro and thermal power plants (HPPs and TPPs). The dominant generator is the Enguri HPP with an installed capacity of 1300 MW and an operational capacity of 1250 MW, which is responsible for around one-third of total electricity generation in Georgia. The other large HPP is Vardnili. Together, the Enguri HPP and Vardnili cascade with other middle-size and smaller HPPs provide around 3354 MW of regulating HPP capacity (with 1992 MW from reservoir HPP, 389 MW from daily regulatory HPP, and 973 MW from run-of-the-river HPPs).

The total existing operational capacity makes up 4200 MW, including 3170 MW of HPPs, 20,7 MW of wind power plant, and 1010 MW of operation capacity of TPPs. It is estimated that an additional capacity of new HPPs and TPP will be

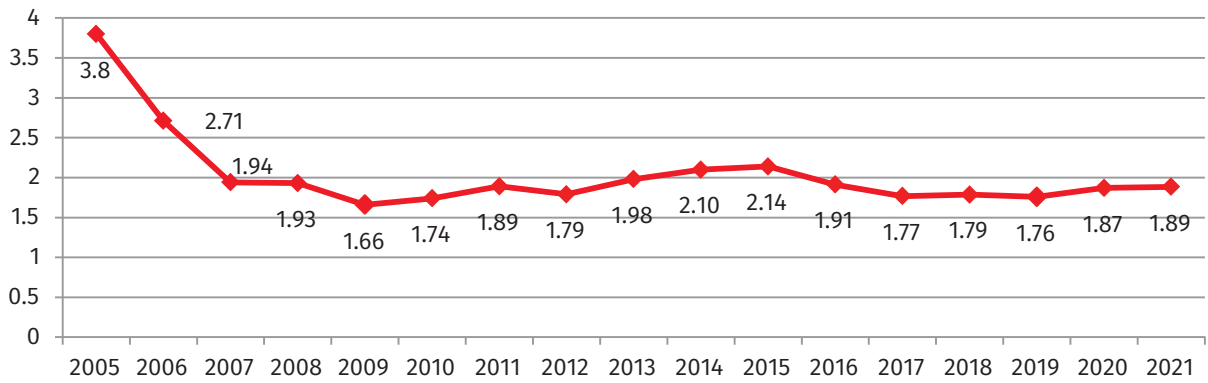
Generation, Consumption, Export, Import 1995-2021



Blackouts 2005-2021



Technical Losses % 2005-2021



added by 2022-2032 which will increase the installed generation capacity to 4580 MW by 2022. From 2023, wind and solar installed capacities will be added to existing hydro and thermal capacities and the total installed capacity will increase to 7742 MW (including 5383 MW of HPPs, 1689 MW of thermal and 499 MW of wind, and 171 MW of solar power plants capacities) by 2027, and to 10086 MW including 7465 MW of HPPs (4326 MW regulatory HPPs, 3139 MW of run-of-the-river HPPs), 760 MW of wind power plants, 171 MW of solar power plants, 110 MW of gas turbines, and 1579 MW of high efficiency combined thermal power plants replacing outdated Gardabani units No 3, 4 and 9 by 2032. The proportion of HPPs in total installed capacity will be up to 74% by 2032, with 43% of regulatory power plants in the total installed capacity of the country. This will ensure utilization of water collected during high water season in low water periods, and decrease of reliance on imported fuel for electric power and thermal plants. It should be noted that the proportion of wind and solar power plants will be approximately 10% by 2032.

While Georgia has interconnections with Russia, Turkey, Azerbaijan, and Armenia, the vast majority of its trade is with the first two countries. Trade with these countries comprises imports in winter months to meet Georgian demand, with exports in summer months when Georgia has excess hydro output. There are very small quantities of exports to Armenia, besides, electricity exchange through the transit lines of the Georgian power system is carried out from Russia to Turkey and Armenia, from Azerbaijan to Turkey.

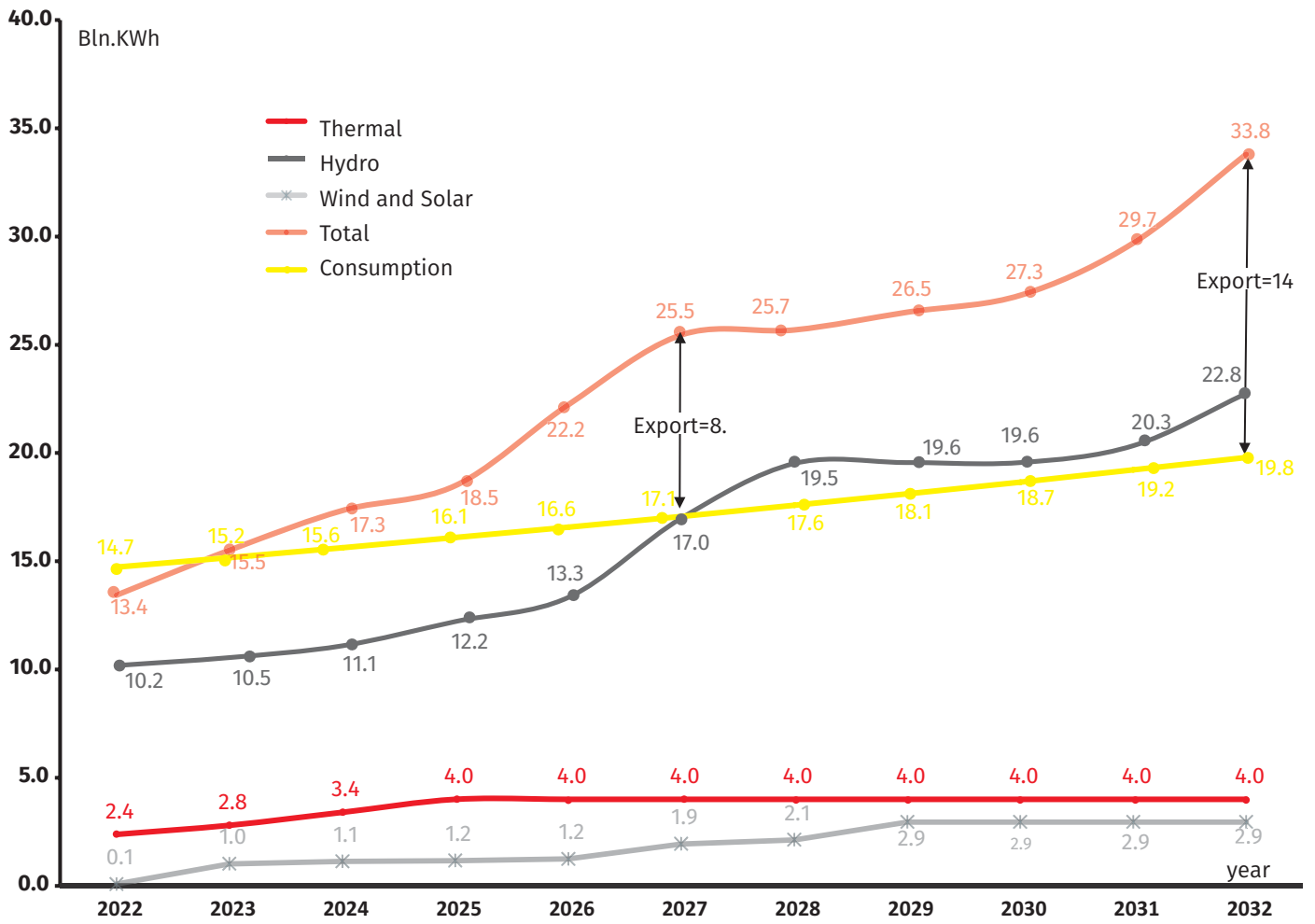
In 2006 -2010 exports increased every year. Due to the increase in consumption, a subsequent decrease in exports was seen from 2011-2018. In 2019 Georgia exported 0.243 billion kWh in total, representing a 0.346 billion kWh decrease over the equivalent period in 2018. It should be noted that Georgia imported 1.626 billion kWh in 2019, representing a 0.116 billion kWh increase over the import amount for 2018.

In 2020 Georgia imported 1.61 billion kWh, which equaled the import of 2019, although, due to the pandemic, consumption in 2020 compared to 2019 is reduced. In addition, from the half-century archives, there are no records regarding the shallow (dry) year similar to 2020. Unprecedented water shortages have led to a significant reduction in hydropower generation. Therefore, despite the reduction in electricity consumption, the need for imports has not diminished.

In 2021, Georgia's consumption increased sharply to 14.26 billion kWh, while the output of the system accounted for 12.65 billion kWh. To cover the increased consumption, 2.01 billion kWh of electricity was imported, while exports amounted to 0.391 billion kWh. Increased imports and reduced exports were led by growth in system consumption and delays in the commissioning of generation facilities. In 2021, the transit of electricity through the Georgian energy system between neighboring energy systems amounted to 1.184 billion kWh.

Following the forecasts of the Ten Year Network Development Plan of Georgia 2022-2032 the rough estimates show that annual domestic consumption of electricity will increase by about 3% each year (up to about 17.1 billion kWh by 2027, 19.8 billion kWh by 2032), annual generation will rise on average 10% per year (up to about 25.5 billion kWh by 2027 and 33.8 billion kWh by 2032). Accordingly, up to about 8.4 billion kWh per annum will be subject to export by 2027, and 14 billion kWh - by 2032.

Forecast for 2030 (billion KWH)



GSE TRANSMISSION

Transmission assets of GSE include 500/400/220/110/35kV overhead lines with a total length of 4 357 km and 93 substations with a total installed capacity of 13 433MVA, including six (6) strategically important 500kV substations and eighteen (18) 220kV substations throughout the territory of Georgia.

Georgia's transmission network operates at 500kV, 400kV, 330kV, 220kV, 110kV and 35kV voltages. A backbone 500kV transmission line (Kavkasioni – Imereti – Kartli-2 – Kartli-1) connects Russia and the large generators (notably Enguri hydropower plant (HPP)) in the northwest to Tbilisi. There is a reasonably extensive 220kV grid connecting other demand centers and generators.

The Georgian grid is interconnected with Russia at 500kV and 220kV (through Abkhazian AR), with Azerbaijan at 500/330kV, Armenia at 220kV, and Turkey at 220/400kV. There are also isolated 110kV connections with Armenia and Russia. The 500kV line, 330kV interconnection with Azerbaijan, and 220kV interconnection lines with Turkey are owned by JSC Sakrusenergo, 50%-owned by the State, and 50%-owned by Russia's Federal Grid Company, while the majority of the 220kV and part of 110kV lines and 35kV network which is used for transmission services is owned by GSE.

GSE, also, owns and operates 500kV transmission lines Vardzia, Gachiani, and Zekari and 400kV Meskheti interconnection with Turkey constructed as part of the Black Sea Transmission Network Project. The new lines provide additional security to Georgia's transmission network, by adding a second West-East 500kV link and creating up to 1,050MW export capacity to Turkey.

During the past few years, GSE has invested vast funds in improving the reliability of the transmission grid and diminishing the risks of outages or incidents. Replacement of primary or secondary hardware, installation of remote-control systems, intelligent electronic devices, and state-of-the-art equipment across the transmission lines and substations have helped to minimize the number of total blackouts and provide quality services to customers.

In terms of maintaining operational reliability, GSE prolongs implementation initiatives or projects aimed at further improving and expanding its transmission infrastructure and dispatch capabilities to better meet the new requirements imposed by the intensification of cross-border trading of electricity.

Transmission Capacity Of GSE

Lines		Substations		
Voltage (kV)	Length (km)	Voltage (kV)	No	Capacity (MVA)
500	954	500	6	7034
400	32			
330	21			
220	1907	220	18	5708
110	955	110	27	500
35	486	35	42	188



TRANSMISSION HIGHLIGHTS

Georgian State Electrosystem continues the development of its transmission infrastructure. Significant progress was made on several large-scale projects. Among them, it is notable the project financed by the European Bank for Reconstruction and Development (EBRD), which comprises the construction of a 220 kV double-circuit power transmission line (about 60 km) from “Jvari” SS to “Khorga” substation and the looping-in the 500 kV “Kavkasioni” power transmission line (about 8 km). Construction works are completed and the line provides transmission of electric power.

Georgian State Electrosystem carried out significant works for strengthening the transmission line network at its costs. Implemented projects and carried out works:

Production and construction of reinforced concrete constructions

- Setup of the cable plant at SS “Gori 220”;
- Setup of concrete pads for foundations at SS “Tskaltubo 220”;
- Setup of cable plant at SS “Marneuli 220”;
- Setup of the road at SS “Teleti 220”;
- Setup of foundations at SS “Gardabani 220/330/500” autotransformers;
- Foundations for 3 autotransformers with corresponding firewalls have been constructed;
- 60 m3 concrete has been produced for foundation pads;
- Foundation pads and roofing panels installed at SS “Didube 220”;
- Reconstruction of damaged foundations at Alaverdi 220 OHL;
- Cable canals and pits constructed at SS “Napareuli 35”;
- Setup of cable canals and pits at 110 kV. Open control valve of SS “Gardabani 500”.

Construction-rehabilitation of Substations

- Revision of 110 kv. Autotransformer breaker-1 at SS “Marneuli 500” – repair works to eliminate gas leakage;
- Revision and repair work to eliminate gas leakage at 220kv. autotransformer-2 and Veli-1 OHL at SS Rustavi 220;
- Replacement of 6kv. transformer breaker of T-1 at SS Navtlughi 220;
- Replacement of 6kv. transformer breaker of T-2 at SS Navtlughi 220;
- Reconstruction of 330kv and 220kv open control valves at SS Gardabani 500 in connection with double circuiting of 330kv Gardabani OHL;
- Installation of 10kv bushing and 110kv neutral grounding on T-1 transformer at SS Batumi 220;
- Installation of 10kv bushing and 110kv neutral grounding T-2 transformer at SS Batumi 220;
- Rubbering and installation of 220kv and 110kv equipment on AT-2 at SS Tskaltubo 220;
- Installation of new 35kv. power cables at T-3 transformer of SS Didube 220;
- Addition of gas in 220kv breaker and revision of AT-1 at SS Gurjaani 220;
- Replacement of damaged phase “C” of Zugdidi-1 110kv OHL breaker at SS Zugdidi 220;
- Replacement of 110kv transformer at SS Tskaltubo 220;
- Repair works of 500kv reactor at SS Gardabani 500;
- Setup of 35kv power cable compartment at SS Napareuli 35;
- Doubling of 110kv rubber system at SS Kutaisi 220;
- Doubling of 110kv rubber system at SS Kutaisi 220;
- Setup of compartment block at SS Marneuli 500;
- Setup of the compartment for Eksimgroup OHL at SS Kutaisi 220;
- Setup of 110kv compartment for Zugdidi-1 OHL at SS Zugdidi 220;
- Setup of 110kv compartment for Cable Factory OHL at SS Navtlughi 220;
- Setup of 110kv compartment for OHL Mzis Sadguri at SS Gardabani 500;
- Setup of 110kv neutral breaker for T-1 and T-2 at SS Didube 220;
- Setup of 220kv compartment at SS Khashuri 220;
- Replacement of phase “C” of AT-4 at SS Gardabani 500;
- Setup of 220kv compartment at SS Khashuri 220;
- Diagnostic of power cables of Sololaki-2 Towers at SS Shindisi 35;
- Exit of damaged phase “B” of Algeta OHL transformer at SS Teleti 220;
- Regulation of 35kv OHL Kvaloni-4 breaker at SS Menji 220;
- Revision of gas pressure manometers of 220kv and 110kv breakers of AT-2 at SS Gori 220;
- Ongoing reconstruction works of 330kv open control valve in connection with double circuiting of 330kv OHL Gardabani at SS Gardabani 500;

- Transformers replaced for 35kv OHL DataHub at SS Gldani 220;
- Section breakers installation in 35kv container N7 at SS Teleti 220;
- Ongoing installation of compartments for 35kv OHL Tbilisi HPP at SS Navtlughi 220.

Installed equipment at SS	Unit	Quantity
El.Gas	piece	13
Breakers	piece	44
Current transformer	piece	39
Voltage transformer	piece	24
Power increase limiter	piece	35
Neutral earthing	piece	4
Power cable	meter	1130

Gse Successfully Accomplished The Transformer Park Renewal Project

Below table depicts new autotransformers (AT) and transformers (T) installed at GSE substations:

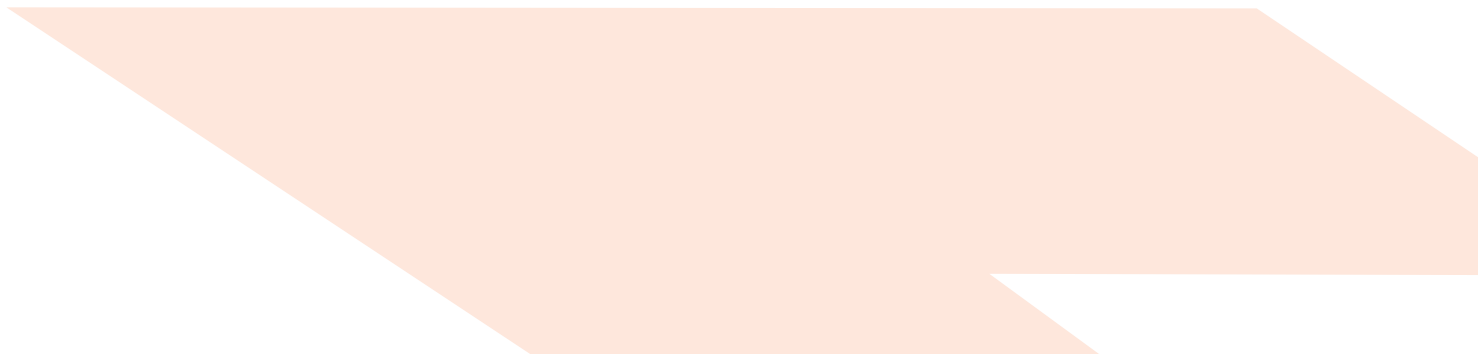
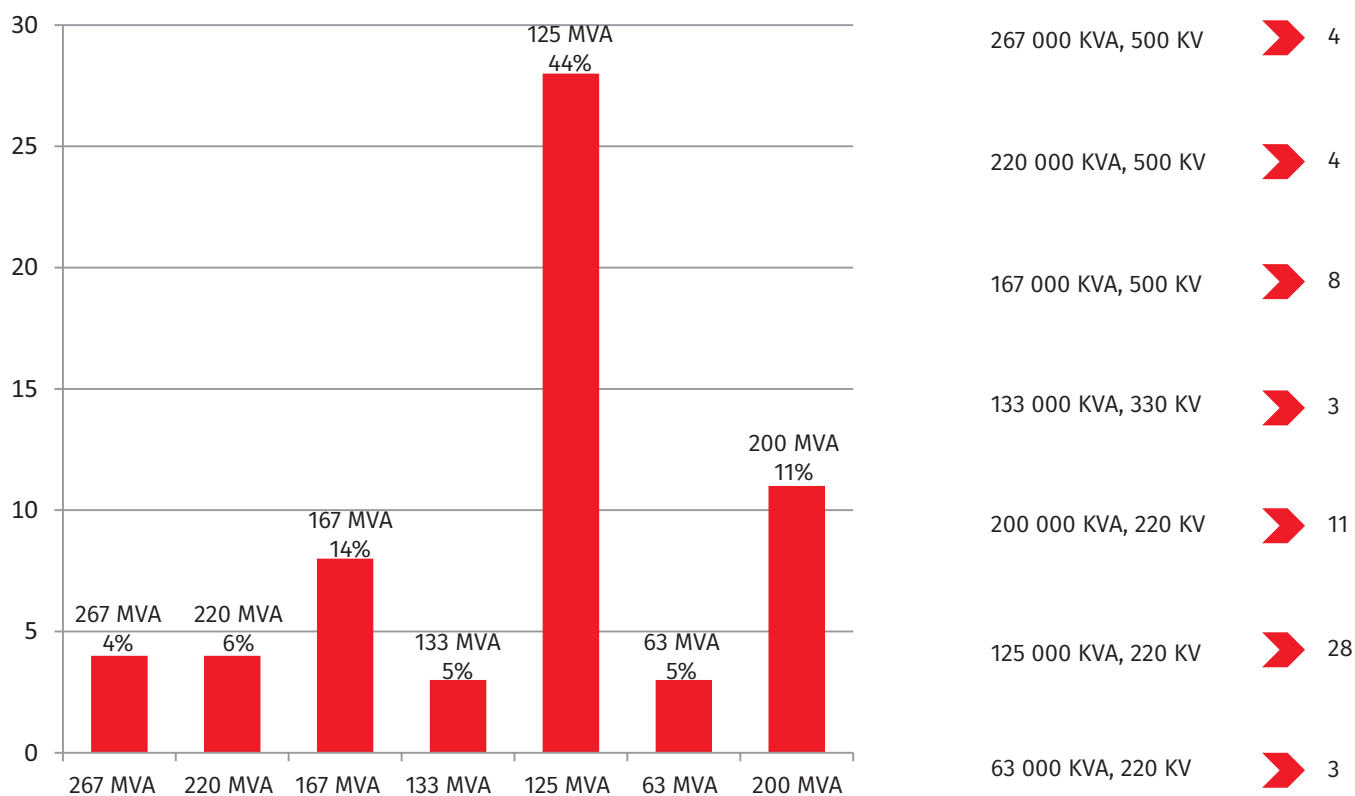
Substations	Capacity (Mva)	at, t
Zestaponi 500 (Phase A)	167	AT-3
Zestaponi 500 (Phase B)	167	AT-3
Gardabani 500	267	AT-4

Besides, some transformers were repaired:

SUBSTATIONS	CAPACITY (kv)	AT, T
Zestaponi-500	500	T-1
Didube-220	220	T-1
Didube-220	220	AT-1
Didube-220	220	AT -2
Navtlughi-220	110	T-1
Gori-220	220	AT -1
Tskaltubo-220	110	T-1
Menji-220	110	T-2
Menji-220	110	T-1
Menji-220	110	AT -2
Zestaponi-500	500	AT -3
Gori-220	220	AT -2
Gulgula-35	35	T-1

Also, the leakages have been eliminated in the following substations: Navtlughi-220, Tsinandali-110, Teleti-220, Kutaisi-220 and Marneuli-220.

No & % of GSE Autotransformers by Capacity



OHL construction-rehabilitation

Implemented important works:

- 500kv OHL Lia 1.2 cable and optical cable installation. OPWG installation
- Porcelain insulation replacement with glass insulation at 220kv OHL Kukia220 (ΠC-160 – 270 pieces)
- Compartments portal rubbering of 220kv OHL Alaverdi at SS Marneuli 500
- Compartments portal rubbering at 110kv OHL Mzis Sadguri at SS Gardabani 500
- Line portal rubbering of AT-3 at SS Batumi 220
- Compartment portal dismantle at SS Khashuri 220
- Compartment portal dismantle of AT-3-2 at SS Gardabani 500
- Foundation installation of 110kv OHL Mzis Sadguri at SS Gardabani 500 (27 pieces)
- Installation-deconstruction of el.gas equipment foundations of 110kv OHL Mzis Sadguri at SS Gardabani 500 (installed 3 pieces, dismantled 6 pieces)
- Tower rehabilitation of Kolkhida-1
- 220kv OHL Alaverdi connection in SS Marneuli 220 (17km)
- Compartment equipment foundation installation for AT-2 at SS Tskaltubo 220
- Doubling of rubbering systems I and II at SS Kutaisi 220

Implemented unplanned works

- 220kv OHL Navtlughi 2 Tower N88 rehabilitation
- 220kv OHL Navtlughi 2 Tower N57 rehabilitation
- 220 kv OHL Paliastoni 1 Tower N 261 reparation of damaged traverse
- Installation of compartment equipment foundation for AT-2 at SS Tskaltubo 220
- Installation of container foundation at SS Napareuli
- Installation of foundation for 330kv AT-3-2 at SS Gardabani 500
- Replacement of damaged cable on 110kv OHL Avchala 102
- Reparation of damaged Tower N146 on 110kv OHL Ipari
- Replacement of damaged insulation on 220kv OHL Derchi Towers N37,38,41
- Reparation of Tower N14 of Navtlughi OHL

#	Installed equipment	Units	500kv	220kv	110kv	35kv
<u>1</u>	Portal installation in SS (220 kV – 2 pieces)	Piece		2	5	
<u>2</u>	New tower installation	Piece		30		
<u>3</u>	Tower rectification	Piece		9		
<u>4</u>	Tower repair	Piece		63		
<u>5</u>	Fallen tower rehabilitation	Piece		1		
<u>6</u>	Old tower dismantles	Piece		7		
<u>7</u>	Tower traverse repair	Piece		8		
<u>8</u>	New foundation installation	Piece		120		
<u>9</u>	Existing foundation reparation	Piece		19		
<u>10</u>	Equipment foundation	Piece		45		
<u>11</u>	Cable	Km		134,36		
<u>12</u>	Lightning protection	Km		36,3		
<u>13</u>	Optic-fiber cable	Km		4,54		
<u>14</u>	Insulator installation	Piece		384		
<u>15</u>	Insulator dismantle	Piece		230		
<u>16</u>	Preparation of technical requirements for equipment-parts to be purchased	Piece		29		

CAPITAL INVESTMENT PROJECTS



Energy Network Improvement Programme (ENIP) comprises the Georgia Power Grid Enhancement Project and Open Programme Extension of Transmission Network II, financed by the European Bank for Reconstruction and Development (EBRD) and the German Reconstruction Credit Bank (KfW), respectively.

The name, ENIP has been selected and will be used for communication purposes.

The year 2021 as well as the first half of 2022 witnessed significant progress in terms of executing numerous construction agreements within the mentioned Energy Network Improvement Programme.

The project is co-financed by the Federal Republic of Germany through KfW and European Union within the framework of ENIP (Energy Network Improvement Programme). The total investment of ENIP is EUR 270 million, co-financed by KfW and EBRD, including EUR 9.9 million grant funding from the EU Neighbourhood Investment Facility (EU NIF) channeled through KfW. To support the Projects Implemented under Open Programme Extension of the Transmission Network II, a Supervision Consultancy Contract was signed with the German company - Fichtner GmbH and Co. in February 2018. Fichtner GmbH and Co. is the Supervision Consultant for all KfW-financed components of ENIP.

Georgia Power Grid Enhancement Project

Project by the EBRD financed envisages transmission infrastructure development in Imereti and Racha-Lechkhumi regions.

It is noteworthy that the second tranche (Euro 55 million) of the EBRD loan of EUR 90 million has been canceled based on the Amendment to the Loan Agreement of July 28, 2020 - EBRD Tranche 2 Cancellation Notice of March, 2022. Consequently, on April a Subsidiary Loan Agreement was signed between the Ministry of Finance of Georgia, Ministry of Economy and Sustainable Development of Georgia and Georgian State Electrosystem JSC. The first Tranche of the Loan (EUR 35 million) will be allocated for construction of 500 kV Lajanuri-Tskaltubo OHL (approx. 49 km), 220 kV Namakhvani-Tskaltubo and Namakhvani-Tvishi-Lajanuri OHLs (approx. 58 km) and 220 kV OHL New Lajanuri-Lajanuri HPP (approx. 5 km).

The tender process for selection of a construction company for the above lines was finalized in December 2021. The contract with the selected bidder – Larsen & Toubro Limited (India) was signed on June, 2022.

The objective of the project is integration of Racha-Lechkhumi prospective hydropower plants into the grid, enhancement of transmission network and improvement of reliability.

The project will be completed in 2025.

OPEN PROGRAMME EXTENSION OF TRANSMISSION NETWORK II

Construction of 220/110 kV SS in Lajanuri, Ozurgeti and Extension of 500 kV and 400 kV switchyards in Akhaltsikhe

Within the reporting period of June 2021, a Contract Agreement was signed with Greek company Mytilineos S.A (Metka) with the amount of EUR 35,6 million. The project considers construction of a 220/110kV substation in Lajanuri (I Phase (AT)); Construction of a 220/110kV substation in Ozurgeti (Guria); Extension of 500kV and 400kV AC switchyards in Akhaltsikhe converter station.

The commencement date of the contract was set for October 2021, and the estimated completion date is April 2024.

Currently, detailed design preparation and approval process is in progress. And Completion of procedures for obtaining construction permits and commencement of construction activities are scheduled for the second half of 2022.

Construction of Tskaltubo-Akhaltsikhe 500kV and Akhaltsikhe-Tortum 400kV Overhead Transmission Lines

Construction of Tskaltubo-Akhaltsikhe 500kV and Akhaltsikhe-Tortum 400kV Overhead Transmission Lines is financed by KfW and its value is approximately EUR 62 million.

The project envisages construction of Tskaltubo-Akhaltsikhe 500kV approximately 103km-long OHL and Akhaltsikhe-Tortum 400kV approximately 34km-long OHL connecting Georgia-Turkey power systems. As a result, the Georgian interconnection will be reinforced with the Turkish power system, as well as with Europe. This project will create another important precondition for use of Georgia's rich hydropower resources.

After completion of the project the Country's power network capacity and reliability will be increased significantly, reserve network will be created for 500kV power line Enguri-Zestaponi-Akhaltsikhe and shutdowns and volume of undelivered electricity will be decreased, which on its part will facilitate cross-border trade.

The construction contract was signed with an Indian company KEC International Limited in February 2022. Currently, the detailed design preparation and preconstruction survey stage is ongoing. The project is planned to be completed by June 2025.

Construction of Double Circuit OHL Loop-in form 220 kV OHL Paliastomi to 220/110 kV SS Ozurgeti and New Double Circuit 110 kV OHL Ozurgeti- HPP Zoti

The construction of Overhead lines in the Guria region is one of the most important strategic projects for the Georgian transmission network development. It comprises the Construction of a 220 kV (3.3) Loop in Loop out Paliastomi-into Ozurgeti Substation and 110 kV (47 km) double Circuit (D/C) Overhead line from Ozurgeti Substation to Zoti HPP.

The project is related to the reinforcement of the transmission infrastructure in the Guria and Batumi regions for implementing small hydropower plants on the grid and increasing the network's reliability.

The Contract Agreement (KfW/DSI/OHL/L2) for the construction of Overhead lines in the Guria region was signed with Turkish international company Mitas Energy and Metal Construction Inc. in July 2021. The commencement date of the contract was set for August 2021.

Preparation works for detailed Design started at the end of 2021. Completion of the detailed design and procedures for obtaining construction permits is scheduled for the end of 2022.

Open Program Energy Sector

The following project activities shall be financed from the loan:

- Construction of a new 220/110kV Substation new Telavi;
- Construction of a 220/110/10 kV substation near Jinvali;
- Rehabilitation of SS Gurjaani;
- Construction of LILO from Ikalto OHL into new Telavi;
- Construction of 110kV S/C OHL to Stori HPP;
- Construction of double circuit 220kV/110kV OHL Gurjaani - New Telavi – Jinvali;
- Construction of double circuit 220kV/110kV New Telavi-Jinvali
- Constuction of 220 kV Kheledula-Lajanuri and Oni-Lajanuri

The construction/implementation phase of projects will start in 2023, and the main works will be completed by the end of Years 2025-2027.

Open Programme Extension Of Transmission Network

The year 2021 witnessed further accomplishments in the components of the Open Program Extension of Transmission Network, financed by the European Bank for Reconstruction and Development (EBRD), Kreditanstalt Fur Wiederaufbau (KfW) and EC Neighbourhood Investment Facility (EC NIF), and implemented under the supervision, monitoring and control of Energotrans, a subsidiary of GSE.

Jvari – Khorga Interconnection Project

The Project is financed by EBRD and entails construction of 220 kV double circuit transmission line (approximately 60 km) – from S/S Jvari to S/S Khorga and approximately 8 km long double circuit 500 kV overhead line as tie-in of the 500 kV transmission line Kavkasioni. The project aims to transfer electricity from the hydropower plants located in northwest part of the country in the direction of west Georgia, to Poti free industrial zone and to Turkey, and at the same time enable increasing of power supply to east Georgia.

The project has been completed in 2022.



June 3, 2022, Rajesh Kumar, General Manager of the construction company “Larsen and Toubro Limited” and Giorgi Gigineishvili, General Director of “Georgian State Electrosystem” JSC.

Signature ceremony of Separate Agreement within the starting of construction works in Racha and Imereti regions regarding enhancement of transmission network and improvement of reliability.



March 1, 2022, Sumant Srivastava, Vice-President of the construction company “KEC International Limited” and Giorgi Gigineishvili, General Director of “Georgian State Electrosystem” JSC.

Signature ceremony of Separate Agreement within the starting of construction works regarding the construction of Tskaltubo-Akhaltsikhe and Akhaltsikhe-Tortum Overhead Transmission Lines.

Transmission Grid Strengthening Project (TGSP)



Georgia is endeavoring to develop a regional power market by serving as a transmission hub and as a seasonal exporter of environmentally clean hydropower. For this purpose, major projects are financed by the World Bank and implemented at GSE.

The Transmission Grid Strengthening Project (TGSP) is one of the crucial energy infrastructure projects.

The loan amounts to US\$60 million and considers financing the following components:

1. Construction of Akhaltsikhe-Batumi 220kV double circuit Transmission Line (ABTL);
2. Supply of transmission line equipment for reconstruction and upgrade of existing 220kV transmission lines in the west part of Georgia;
3. Upgrade the existing SCADA and Energy Management System (SCADA/EMS);
4. Strategic Environmental and Social Assessment.

1. Akhaltsikhe-Batumi 220kV double circuit Transmission Line (ABTL):

The project comprises construction of a high voltage double-circuit 220kV transmission line from the Akhaltsikhe 500/400/220 kV substation with the high voltage direct current (HVDC) converter station (back-to-back configuration) for power exchange with Turkey, to Batumi 220kV substation, connecting also the new hydroelectric power plants (HPP) Shuakhevi (185MW together with Skhalta HPP) and Koromkheti (150MW) to the Georgian power system. Approximately 147km long transmission line is being constructed in two major segments (phases): in the first phase- the connection of Shuakhevi HPP to Batumi substation with approximate 52km length and in the second one - from Shuakhevi HPP to Akhaltsikhe substation with a length of approximately 94km.

This new 220kV line will improve reliability and quality of supply to the southwest area supplied by Batumi Substation where an important Black Sea port and touristic resort is located, establishing redundancy by two connections, one to Akhaltsikhe substation and one to the north to Menji and Khorga substations.

Moreover, the export of energy to Turkey from the HPPs Shuakhevi/Skhalta and Koromkheti via the Akhaltsikhe HVDC converter station and later also via the planned HVDC converter station at Batumi will be made possible.

Physical construction works on Phase I started in May 2016 on Batumi-Shuakhevi section. The line has been connected to Shuakhevi HPP and evacuation of energy started in 2020.

Implementation of Akhaltsikhe-Shuakhevi section, approximately 2/3 of the phase, is already constructed. Completion of the remaining works (mostly, Adigeni-Shuakhevi 39km section) is planned for 2023 by the Turkish construction company Bozlar Yapi.

2. Wholesale Power Exchange Platform:

2. Upgrade the existing SCADA and Energy Management System (SCADA/EMS)

The SCADA/EMS had been implemented in 2007-2009. Since that time the Georgian electricity system developed rapidly. The implementation of modern substation automation systems in all transmission system substations improved the remote controllability of the substations from the national control center (NCC), but also enlarged the volume of data that must be transmitted and processed.

The development of trading of electric energy in the Georgian market and cross-border requires a rapidly increasing data exchange with other systems, e.g., the national control centers and with the market management system, based on new modern standards. Therefore, an upgrade of the existing SCADA/EMS became unavoidable.

Under the Transmission Grid Strengthening Project, component Wholesale Power Exchange Platform, the World Bank agreed to contribute to the financing of the upgrade costs. Consequently, as a result of intensive negotiations, the contract was signed with Siemens Aktiengesellschaft Oesterreich (Austria) which successfully performed the assignment.

3. Electricity Sector Strategic Environmental And Social Assessment (SESA)

The strategic ESIA will consider important components of the natural environment (air, water, land, biodiversity and ecosystems), social aspects (human health and safety, access to natural resources and to public services, vulnerability, gender, equity, etc.) and cultural values, as well as transboundary and global environmental aspects. It also will take into account specific host-country conditions: the findings of environmental studies,

National Environmental Action Plans, national legislation, institutional capacity of the project implementing entity and of the State inspection agencies as they relate to managing environmental and social impacts, and obligations of the country under relevant international environmental treaties and agreements. The contract was awarded to JV of Stucky Ltd., Stucky Caucasus Ltd., SEEC Ltd. (Switzerland / Georgia / Serbia) on December 30, 2016. After Stucky provided its deliverable, with the recommendation of the World Bank, a new Consulting Company, DH Infrastructure (USA), has been selected (Contract signed in January 2020), in order to update provided SESA report as per current needs and specifically to focus on identification of additional power generation expansion scenario and its evaluation using the set of agreed screening criteria, including those environmental and social. The reporting disclosure and public consultations are planned for the second half of 2022.

Energy Supply Reliability And Financial Recovery Project

Another major World Bank-financed project is the Energy Supply Reliability and Financial Recovery Project (ESRFRP), implementation of which is supported by EUR 62 million loan from the Bank. The ESRFRP consists of the following parts:

Part 1: Strengthening Of The Power Transmission Network, Including Through Following:

- (a) construction of 500 kV Overhead Transmission Line Jvari-Tskaltubo and 500/220 kV substation Tskaltubo;
- (b) support of the Project Implementing Entity (GSE) in terms of technical supervision and project management

The Project plays an important role in enhancing the stability and strengthening of the transmission grid of western Georgia. It will provide a back-up to the strategic 500kV “Imereti” OHL, while enabling secure transmission of power from the region. The Project encompasses construction of an approximately 80km long 500kV transmission line “Jvari-Tskaltubo” and expansion of the existing 220kV „Tskaltubo“ substation with a new 500kV part, as well as an arrangement of an interconnection between the two substations.

The 500kV Jvari-Tskaltubo OHL construction project (Lot 1) is carried out by a Turkish company “Bozlar Yapi”, the winner of an international competitive bidding process. The contract was signed in September 2020 and since 2021 the Contractor has been actively engaged in development of the Detailed Design of the transmission line. Completion of works for Lot 1 is expected by the beginning of 2024.

The 500kV Tskaltubo substation project is being executed by another Turkish company - BEST, for which has also been contracted in September 2020. Currently, active construction works are underway on the substation site and the facilities are expected to be finalized in the first quarter of 2023.

The supervision of the construction projects of 500 kV Jvari-Tskaltubo power transmission line and 500/220 kV Tskaltubo substation, under the power transmission strengthening component of the ESRFRP is being carried out by the Supervision Consultant represented by Joint Venture of Decon International GmbH (Germany), Consulectra Unternehmensberatung GmbH (Germany) and AFRY Schweiz AG (Switzerland), with its Sub-consultant, Forma 2 (Georgia). The Supervision Consultant has been involved in the project from the earliest stage, since June 2020 and is currently actively engaged in the review and approval of design documentation produced by the contractors, while also overseeing the construction works on site.

Part 2: Strengthening Of The Power Transmission Network, Including Through Following:

- (a) Support for Financial Recovery through:
 - (i) development of a mechanism to hedge the foreign exchange (FX) risk;
 - (ii) upgrade of GSE Data Transport Network deployment with MPLS and DWDM Technology;
 - (iii) acquisition of servers for balancing market operations;

(iv) carrying out specialized technical and economic studies for purposes of financing, operation, planning, and management of the energy sector; and

(b) Preparatory Work to Access Capital Markets Provision of advice including for the purpose of supporting PIE to obtain a credit rating by an internationally recognized rating agency.

(c) Support in the execution of the transaction to access the capital markets.

Provision of advice, including through the hiring of a financial and legal advisor, to carry out the transaction for the PIE to secure a syndicated loan, issue bonds, or complete an initial public offering (IPO)

Black Sea Underwater Transmission Line Construction Project

Georgia aims to develop cross-border electricity trade by strengthening transmission infrastructure. In this regard, the project of construction of an underwater transmission line in the Black Sea between Georgia and Romania is noteworthy.

The connection of the western and eastern shores of the Black Sea to the underwater transmission line could potentially be considered as a project of common interest and could be co-financed by relevant European funds as well as interested countries in the Balkans / South Caucasus region. The project should be included in the ENTSO-E transmission network long-term development plan.

In order to study the full feasibility of the project, on April 26, JSC GSE announced a request for expression of interest (consulting services - selection of firms).

In April 2022 the Italian company CESI has been selected to carry the study. The research will be conducted in 6 thematic stages, with the involvement of energy companies from Georgia, Romania, Azerbaijan and Armenia, and should be completed in 18 months.





STRATEGIC PLANNING 2022-2032

The emerged cross-border electricity trade opportunities, high electricity demand growth and need for evacuation of the energy generated by the planned power plants, call for investments in the transmission infrastructure for ensuring adequate development of the network.

GSE, acting in its capacity as a Transmission System Operator (TSO) committed under the law, elaborated a Ten-Year Transmission Grid Development Plan, approved by Minister of Economy and Sustainable on August 9, 2022 by #1-1/343 order for the period up to 2032 to meet new emerging demands and achieve even higher reliability standards. The responsible persons for preparation of the Ten-Year Transmission Grid Development Plan are: Mr. Giorgi Vakhtangadze, Head of Electrical Regimes and Development Service and Mr. Giorgi Aghdgomelashvili, Head of Transmission Network Planning and Development Section.

Listed Below Are The Projects Planned To Be Completed Listed Below Are The Projects Planned To Be Completed By Gse During 2021-2031:

Jvari-Khorga Project:

- Double circuit 220 kV OHL Odishi-1,2 (Jvari- Khorga).
- Batumi-Akhaltsikhe Project:
- Construction of double-circuit 220 kV OHL Shuakhevi-Akhaltsikhe;
- Installation of 220/110/35 kV 125 MVA autotransformer in Shuakhevi.

Ksani-Stepantsminda-Mozdok Project:

- Construction of 500/110 kV SS Stepantsminda, installed capacity 250 MVA;
- Construction of 500 kV OHL from SS Stepantsminda to the border of Russia.

Marneuli-Airum Project:

- Construction of 500 kV OHL Marneuli – Ayrumi (to Armenian power supply system);
- Reconstruction of 500 kV OHL Mukhrani section between N42-N109 towers.

Rehabilitation of 220 KV OHL Kolkhida-1:

- Rehabilitation of 220 kV OHL Kolkhida-1.



Jvari-Tskaltubo-Akhaltsikhe Project:

- Construction of 500 kV SS Tskaltubo (501 MVA, 250 MVAR regulated reactor);
- Extension of 500 kV SS Akhaltsikhe;
- Construction of 500 kV OHL Jvari – Tskaltubo;
- Construction of Double circuit design of 500 kV OHL Tskaltubo-Akhaltsikhe.

Svaneti Project:

- Construction of 500/110 kV SS Khudoni, 250 MVA;
- Loop in/Loop out of 500 kV OHL Kavkasioni in/from SS Khudoni, length 0.5 km;
- Construction of 500/220 kV SS Nenskra, 2x501 MVA;
- Loop in/Loop out of 500 kV OHL Kavkasioni in/from SS 'Nenskra;
- Construction of 2-circuit 220 kV OHL Nenskra HPP-SS Nenskra;
- Construction of 2-circuit 220 kV OHL Nenskra-Mestia;
- Construction of 500 kV OHL Nenskra-Jvari;
- Extension of 500 kV SS Jvari for connection of 500 kV OHL Jvari-Nenskra and arrangement of bays.

Racha and Namakhvani Project:

- Construction of new 220/110 kV 250 MVA substation Lajanuri;
- Extension of 220 kV SS Tskaltubo;
- Construction of 220 kV OHL SS Lajanuri-Lajanuri HPP;
- Construction of 500 kV OHL Lajanuri-Tskaltubo;
- Construction of double-circuit (splitted conductor into two parts in each phase) 220 kV OHL Namakhvani-Tskaltubo;
- Construction of double-circuit 220 kV OHL Lower Namakhvani-Upper Namakhvani-Lajanuri;
- Construction of 2-circuit 220 kV OHL Oni-Lajanuri;
- Construction of 2-circuit 220 kV OHL Kheledula-Lajanuri;
- Extension of 220/110 kV SS Lajanuri with 500 kV switchyard, 801 MVA.

Guria Project:

- Construction of 220/110 kV 250 MVA SS Ozurgeti with the perspective of capacity increase;
- Loop in/loop out of 220 kV OHL Paliastomi-1 to/from 220/110 kV SS Ozurgeti;
- Construction of double-circuit 110 kV OHL Ozurgeti – Zoti HPP.

Akhaltshikhe-Tortum Project:

- Extension of 500 kV SS Akhaltshikhe and arrangement of bay (400 kV OHL Akhaltshikhe-Tortum);
- Construction of 400 kV OHL Akhaltshikhe-Tortum, Georgia-Turkey border;
- Construction of third 350 MW, 500/400 kV back-to-back link at SS Akhaltshikhe.

Imereti Rehabilitation Project:

- Rehabilitation of 500 KV OHL Imereti. Rehabilitation of 500 KV OHL Imereti.

Substations Renovation Project:

- 110 kV switchyard and purchase/installation of 2x63 MVA 220/110 kV autotransformers in SS Akhaltshikhe-500;
- Arrangement of 220/110 kV 2 bays in SS Zestafoni;
- Renovation of 15 substations;
- 110/35 kV switchyard and purchase/installation of 220/110/35 kV autotransformers in SS Oni-220.

Kakheti Infrastructure Renovation Project:

- Construction of single circuit 110 kV OHL Stori HPP-NewTelavi;
- Construction of 220/110/10 kV new substation in Telavi;
- 110 kV OHL Ikhalto loop in SS New Telavi;
- Reconstruction and rehabilitation of 35 kV Tusheti infrastructure;
- Construction of double-circuit 220 kV OHL Gurjaani-New Telavi;
- Construction of double-circuit 220 kV OHL New Telavi-Akmeta;
- Rehabilitation of 220/110 kV SS Gurjaani;
- Construction of double-circuit 220 kV OHL Akhmeta - New Zhinvali;
- Construction of 220/110 kV new substation in Jinvali.

Reactive power source (capacitor banks) Project:

- Purchase/installation of 600 MVAR reactive power compensation equipment in 220 kV substations of East Georgia.

Security of supply of Tbilisi region Project:

- Construction of second circuit of 220 kV OHL Aragvi and arrangement bays;
- 220/110 kV SS Norio, with 2x125 MVA installed capacity;


- Loop in/loop out of 220 kV OHL Varketili to/from SS Norio-220;
- Replacement of 500/220 kV 501 MVA autotransformer with 500/220 kV 801 MVA one in SS Ksani-500;
- Construction of second circuit of 220 kV OHL Kukia.

Reinforcement of Kartli 220 kV network project:

- Construction of second circuit of 220 kV OHL Liakhvi;
- Rehabilitation of 220 kV OHL Navtlugi 1,2;
- Construction of second circuit of 220 kV OHL Urbnisi;
- Construction of second circuit of 220 kV OHL Surami.

Construction of second circuit of 330 kV OHL Gardabani-Agstafa Project:

- Construction of second circuit of 330 kV OHL Gardabani-Agstafa;
- Purchase/installation of 330/220 kV, 400 MVA autotransformer and relevant bays in SS Gardabani.



"The real potential of electricity lies not in providing social amenities but in stimulating long-term economic development"

Christopher Flavin

"The day when we shall know exactly what electricity is will chronicle an event probably greater, more important than any other recorded in the history of the human race. The time will come when the comfort, the very existence, perhaps, of man will depend upon that wonderful agent"

Nikola Tesla

"Electricity can transform people's lives, not just economically but also socially"

Piyush Goyal

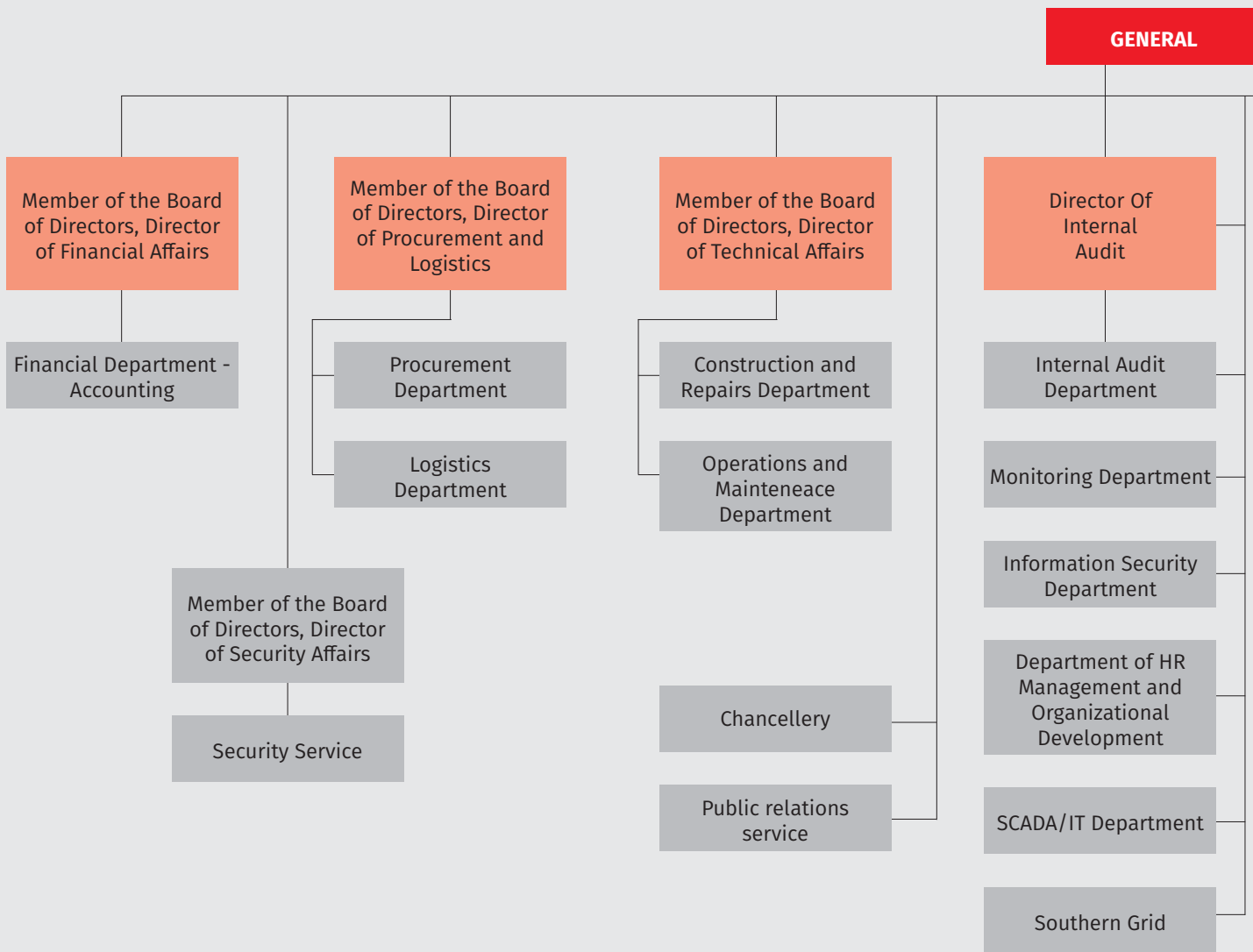
"You cannot mandate productivity; you must provide the tools to let people become their best"

Steve Jobs

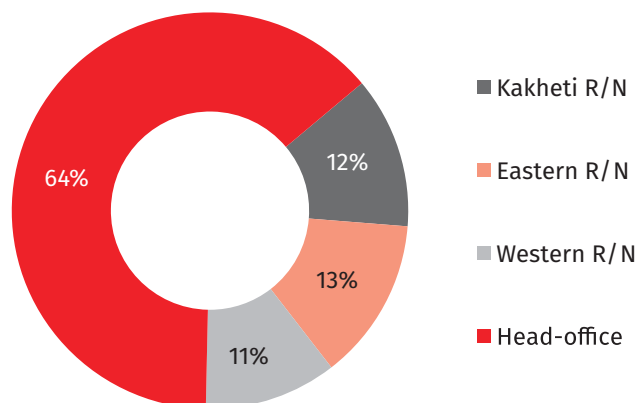
"The strength of the team is each individual member. The strength of each member is the team"

Phil Jackson

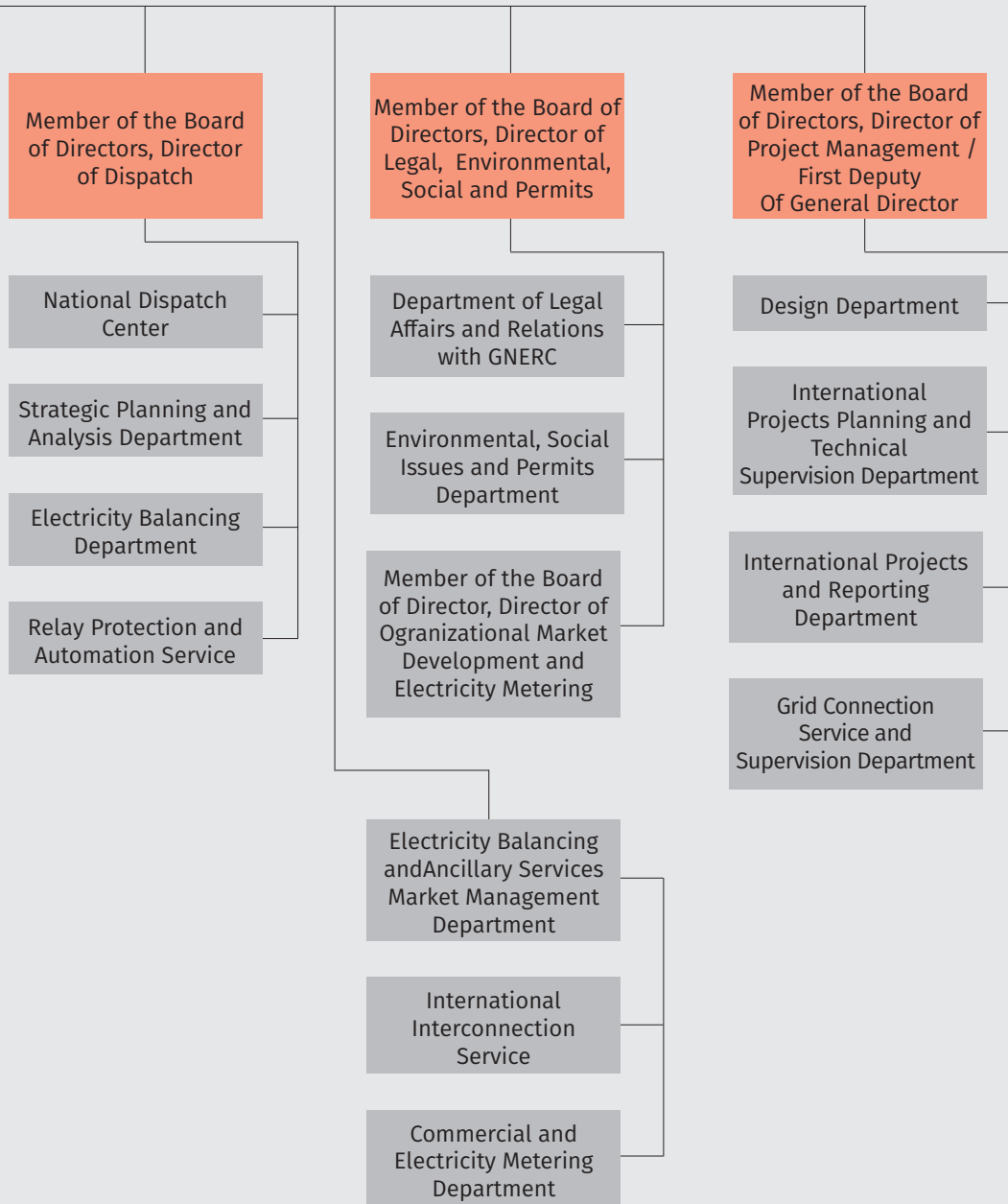
HR & ORGANIZATIONAL DEVELOPMENTS 2021



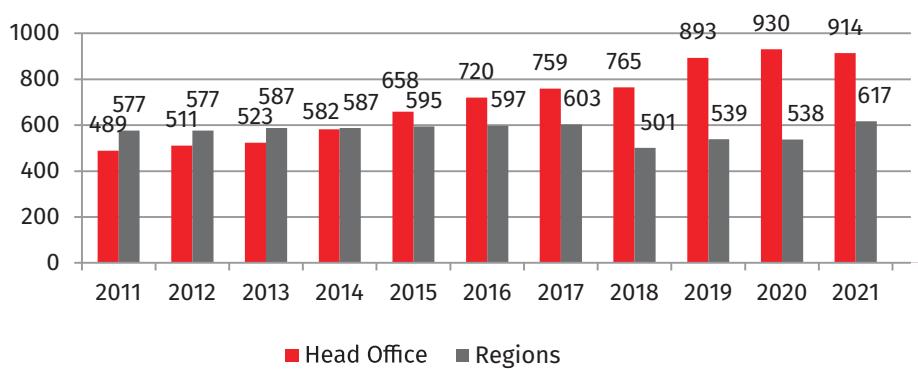
Number of Employees 2021



DIRECTOR



Number of Employees 2011-2021



The organizational culture of JSC Georgian State Electrosystem develops uninterruptedly and keeps compliance with the strategy of the company. In accordance with the annual strategic objectives, organizational values, new regulations, and norms, various activities are carried out, new programs are introduced, and innovative approaches and systems are developed to ensure adequacy with new modern standards.

Quality Management

Quality Management System has been established in GSE in 2014. The company is certified by the international audit company 'DQS Holding GmbH' and the Quality Management Compliance Certificate is awarded to GSE according to the requirements of ISO 9001:2015. Georgian State Electrosystem has earned ISO 9001 quality management certificate for the third time. In 2017, in order to recertify, the auditors of the German company DQS GmbH checked the compliance of the activities of the Georgian State Electrosystem with the requirements of the new version of the ISO 9001: 2015 standard and awarded a three-year certificate based on the conclusion.

In 2021, the company successfully underwent recertification. The validity of the new certificate is October 13, 2023.

GSE is highly sensitive to risks. Due to the activities and the existing environmental conditions, one of the reasons for the success of the electricity transmission and dispatch licensing company is the effective management of risks, both internally and externally. Various causes of risk may affect the core business process, financial performance, occupational health and safety, and the company in general.

According to the ISO 9001:2015 standard, providing employees with a safe working environment is highly important. Hence, operational risks are permanently identified, measured, analyzed and monitored including several high risks. Mitigation measures for these risks have been developed and they are constantly monitored.

Personal Development

- 4026 training hours were provided in 2021
- 97 employees attended online training courses and programs

Seminars and training courses are led by highly qualified experts and business trainers. The process of personnel development in the company still maintains the systematic nature of excellence, ensures compliance of personnel qualifications, motivation and expectations with the company's strategy; Contributes to the creation of an employee-oriented organizational environment.

The personnel development process in the company still maintains the systematic and continuous nature of perfection, ensures the maximum use of employees' abilities, the development of the organization, readiness for new challenges and changes, and most importantly, the compliance of personnel qualifications, motivation, and expectations with the company's strategy. Contributes to the creation of an employee-oriented organizational environment, reinforcing the importance of human capital to the company's core function and purpose.

GSE responds to the current challenges with dignity and plans future achievements with new forces, significant experience, and capabilities.



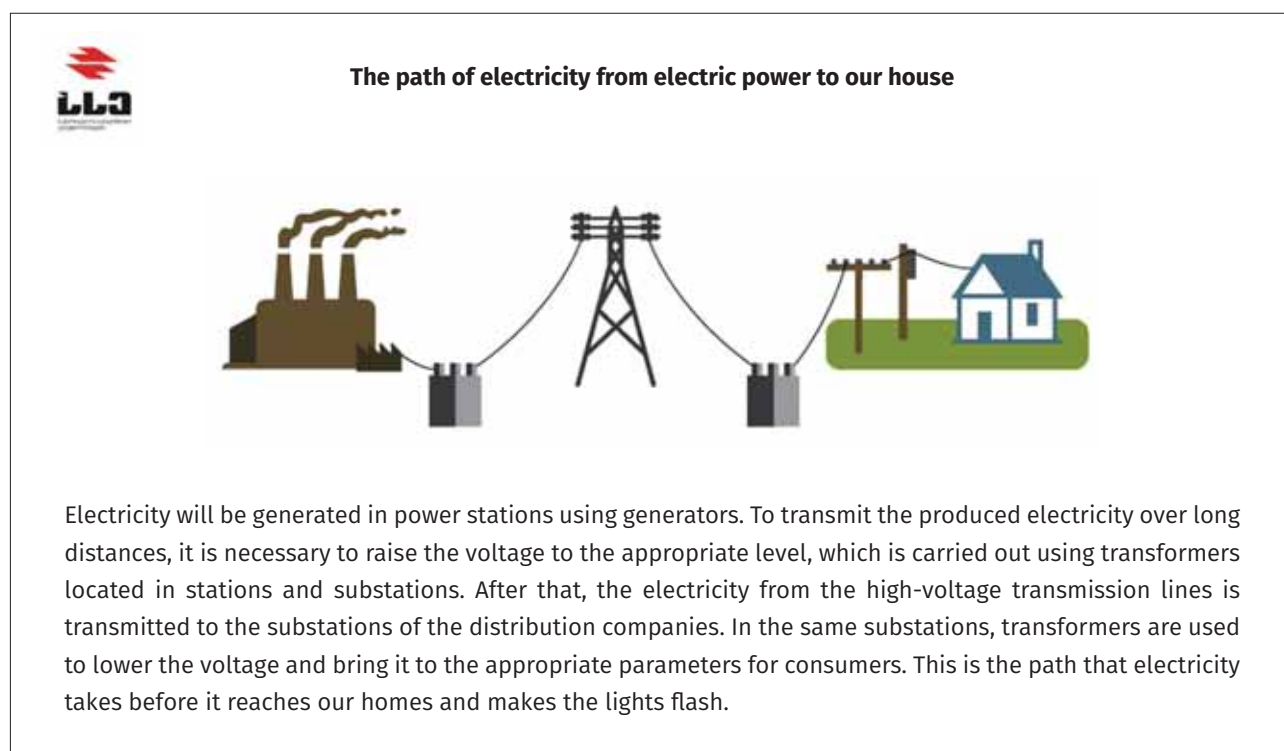
RAISING PUBLIC AWARENESS

The pandemic period turned out to be quite difficult for the whole world, for our country, and for our company too. The epidemiological situation has dramatically changed the organizational agenda, and the department of public relations of the “Georgian State Electrosystem” has also faced new challenges. Against the background of the global pandemic, it became necessary to search for non-specific ways to increase the company’s awareness or establish internal communication with employees, which, considering the practices of the modern world, meant a different, new form of communication.

One of the main priorities of The department of public relations of GSE is to increase the awareness of the company in society and popularize the energy sector. For this purpose, some activities have been carried out in recent years: cognitive-educational tours were held for high school students of Tbilisi and regions, photo and video contests were held, etc. Similar activities were aimed at increasing the awareness of the company and encouraging young people to be interested in the field of energy.

The department of public relations of GSE decided to make maximum use of online platforms to increase the awareness of the company. In 2021, videos were made about the company’s activities, the operation of the National Dispatch Center, and the updated equipment in the substations. YouTube, Facebook, and LinkedIn were defined as distributional platforms.

The department of public relations of GSE has launched three new, informative Facebook pages. The rubric “Infrastructure of GSE” provides Internet users with information on the company’s infrastructure, substations, and power transmission lines that provide uninterrupted, stable, and safe energy supply to our country. The rubric “What we know about electric energy” combines general energy topics and energy stories of Georgia and the world, and the rubric “Famous people on energy” includes the statements of famous people on energy.





Substation “Gardabani-500”



- Substation “Gardabani-500” is located in Gardabani municipality. In 1963, when it was commissioned, the substation was 220 kV and its installed capacity was 266 MW. In 2010, with the financial support of the German Bank for Reconstruction (KfW) and the United States Agency for International Development (USAID), the project of complete rehabilitation of substations and expansion with a 500 kV wing was implemented, and a new control shield building was built, computer control and digital protection systems were installed, which as a result, the installed capacity of the substation was 1530 MW.
- Substation “Gardabani-500” is an important node. Electricity trade between neighboring countries is carried out through it.

GSE FROM A DIFFERENT PERSPECTIVE

To reveal and popularize the creative skills of the employees, the rubric “GSE from a different perspective” of the corporate newspaper of “Georgian State Electroystem” was created, where we present the employees of GSE in a non-work environment and tell you about their interests, hobbies, and dreams.

In the rubric “GSE from another perspective” we tell you about those people, who were pushed to creative self-expression by an unexpected and incompatible with the usual lifestyle pandemic restrictions and prohibitions often become the basis for generating new ideas.



“If you can’t change anything, describe it” - says the German director Rainer Werner Fassbinder, and perhaps this is the first way to get to know the world - to observe, grasp, understand and transfer what you see with your eyes to the level that people can perceive in their way and combine with their own emotions.

In the rubric, we presented to you the employees of GSE, who started drawing, knitting, and remembered the art of anime against the background of general restrictions, who, in parallel with their main specialty, make handicrafts, embroider, engage in beekeeping, write poems, sing, etc. Employees who have been inspired by the pandemic to be creative and dare to bring their work to the light of day.

ENVIRONMENTAL PROTECTION & SOCIAL SAFEGUARDS

Along with developing of the power sector and thus supporting the national economy through building our infrastructure, we also fully acknowledge our solemn responsibility towards Georgia's rich environmental and natural resources, as well as to the private communities and the population in the ongoing and upcoming project areas.

Accordingly, our focus has always been choosing such locations and routes to avoid or mitigate any adverse impacts to the environment and resettlement of the population. We aim to protect biodiversity, manage wastes effectively and rise environmental awareness. Thus, all of GSE's projects are open to the vast public and enable stakeholders to engage with the decision-making process, express their views and influence mitigation and technical solutions. GSE arranges public meetings with Municipalities and Communities where stakeholders and the public together with the company can discuss existing or possible risks regarding company's operations to avoid and reduce impacts as much as practically possible. A similar procedure was followed for Alaverdi project planning and ESIA report was approved in 2021. Likewise, the contract on the waste management plan and the relevant measures are carried out on an annual basis.

At the same time, in view of the pandemic situation, the trainings were delivered to ES team with internal resources of the Department on environmental and social issues, as well as best practices of international financial institutions were shared.

In order to create effective governance tools, the representatives of Environment and Social Affairs Department analyzed the risks, opportunities and measures related to the implementation of the project.

During the projects implementation revealed that in many cases one of the challenging issues was the timely transfer of the construction site to the contractor. The reason for the delay was, in the main case, the time required for the registration of the land plots. To resolve the problem, the department employed two authorized users of the public registry, which made it more flexible and reduced the registration process in time, as well as access to the ATOM program, which made it possible to find certain types of authorization documents in the relevant archives. In addition to the above, logistics have been simplified and resources have been saved.

In parallel, we applied to the National Agency of State Property of the Ministry of Economy and Sustainable Development and obtained the right to register on the state name. Later it became possible to delegate the registration of the easement right in favor of the GSE on a state-registered land plot. These measures reduced random registrations in the project area.

In order to accelerate the registration of the right to private property, the preparation and implementation of the Resettlement Action Plan was divided into two stages. The first stage – early land registration in the project zone, which saved time from the submission of a detailed project to construction. The following are data on the registration of private property rights under various projects during the reporting period.

One of the most difficult tasks for the department was to manage and control the data accumulated over the years during project implementation. In order to solve this problem, a terms of reference was prepared with the support of the World Bank, on the basis of which the development of special IT technology was developed, which is currently in testing mode.

We will continue our eminent endeavors to stay in the front business positions in terms of the environment protection and social safeguards as well.





CONSOLIDATED FINANCIAL STATEMENTS

'000 GEL	Note	2021	2020
Revenue	4	297,224	181,865
Lost electricity cost	4	(45,777)	(36,991)
		251,447	144,874
Other income		10,587	14,656
Wages and salaries		(33,161)	(27,979)
Depreciation and amortization		(64,526)	(47,362)
Reversal of impairment /(impairment loss) on property and equipment	8	-	167,995
Provision expense for litigations, claims and disputes	18(c)	(6,439)	(19,856)
Impairment loss on trade receivables	17(b)(ii)	(9,445)	-
Other operating expenses	5	(24,240)	(25,021)
Results from operating activities		124,223	207,307
Finance income	6	13,076	15,687
Finance costs	6	97,495	(260,513)
Net finance costs		110,571	(244,826)
Profit/(loss) before income tax		234,794	(37,519)
Income tax expense	7	-	(10,350)
Profit/(loss) for the year		234,794	(47,869)
Other comprehensive income/(loss)			
<i>Items that are or may be reclassified to profit or loss</i>		-	-
Foreign currency translation differences for foreign operations		(133)	21
Total comprehensive income/(loss) for the year		234,661	(47,848)

GEORGIAN STATE ELECTROSYSTEM JSC
THE CONSOLIDATED FINANCIAL STATEMENTS FOR 2021

'000 GEL	Note	31 December 2021	31 December 2020
ASSETS			
Non-current assets			
Property and equipment	8	1,158,385	1,169,679
Intangible assets		20,173	18,110
Investments in associate	19	4,877	4,874
Prepayments for non-current assets		46,350	25,842
Right-of-use-assets	9	165,434	-
Other non-current assets	8(c)	28,407	19,453
Total non-current assets		1,423,626	1,237,958
Current assets			
Inventories		11,483	8,718
Trade and other receivables	10	32,216	29,333
Prepayments		1,628	30,934
Cash and cash equivalents	11	21,383	79,685
Total current assets		66,710	148,670
Total assets		1,490,336	1,386,628
EQUITY AND LIABILITIES			
Equity			
Share capital	12(a)	663,104	662,584
Unregistered capital	12(b)	2,098	2,098
Foreign currency translation reserve	12(d)	318	451
Additional paid-in capital	12(e)	21,180	11,680
Accumulated deficit		(535,062)	(769,856)
Total equity		151,638	(93,043)
Non-current liabilities			
Loans and borrowings	14	871,635	1,049,595
Provisions for litigations, claims and disputes	18	18,216	19,856
Lease liabilities	9	142,323	-
Grants related to assets	15	95,644	97,250
Total non-current liabilities		1,127,818	1,166,701
Current liabilities			
Loans and borrowings	14	130,422	172,842
Trade and other payables	16	47,276	135,699
Lease liabilities	9	29,762	-
Grants related to assets	15	3,420	4,429
Total current liabilities		210,880	312,970
Total liabilities		1,338,698	1,479,671
Total equity and liabilities		1,490,336	1,386,628

'000 GEL	Share capital	Unregistered capital	Foreign currency translation reserve	Accum. deficit	Addit. paid-in capital	Total
Balance at 1 January 2020	645,065	11,259	430	(671,894)	11,680	(3,459)
Total comprehensive loss						
Loss for the year	-	-	-	(47,869)	-	(47,869)
Other comprehensive income						
Foreign currency translation differences for foreign operations	-	-	21	-	-	21
Total comprehensive loss for the year	-	-	21	(47,869)	-	(47,848)
Owner contributions – non-cash	16,913	-	-	-	-	16,913
Dividends declared	-	-	-	(58,647)	-	(58,647)
Reduction in unregistered capital	606	(9,161)	-	8,555	-	-
Total contributions by and distributions to owners (see note 13(a))	17,518	(9,161)	-	(50,093)	-	(41,736)
Balance at 31 December 2020	662,584	2,098	451	(769,856)	11,680	(93,043)
Balance at 1 January 2021	662,584	2,098	451	(769,856)	11,680	(93,043)
Total comprehensive loss						
Profit for the year	-	-	-	234,794	-	234,794
Other comprehensive loss						
Foreign currency translation differences for foreign operations	-	-	(133)	-	-	(133)
Total comprehensive Income for the year	-	-	(133)	-	-	(133)
Contributions by and distributions to owners						
Additional paid in capital (13 (e))	-	-	-	-	9,500	9,500
Owner contributions – non-cash	694	-	-	-	-	694
Owner distributions – non-cash	(174)	-	-	-	-	(174)
Total contributions by and distributions to owners (see note 13(a))	520	-	-	-	9,500	10,020
Balance at 31 December 2021	663,104	2,098	318	(535,062)	21,180	151,638

GEORGIAN STATE ELECTROSYSTEM JSC
THE CONSOLIDATED FINANCIAL STATEMENTS FOR 2021

'000 GEL	Note	2021	2020
Cash flows from operating activities			
Profit/(loss) for the year before income tax		234,794	(37,519)
<i>Adjustments for:</i>			
Depreciation and amortisation		64,526	47,362
Reversal of impairment loss on property and equipment	8	-	(167,995)
Profit/(loss) from disposal and write-off of property and equipment		3,132	(1,553)
Impairment loss on trade receivables	17(b)(ii)	9,445	-
Net finance cost	6	(107,151)	249,507
Income from Amortization of Grants	6,15	(3,420)	(4,681)
Provisions for litigations, claims and disputes	18	6,439	19,856
Other income from write-off of restructured liabilities		-	(8,442)
		<u>207,765</u>	<u>96,535</u>
<i>Changes in:</i>			
Inventories		(2,765)	123
Trade and other receivables		(12,418)	1,815
Trade and other payables		5,962	(8,467)
Prepayments		29,306	(8,080)
Repayment of provisions	18	(8,080)	-
Cash from operating activities		<u>219,770</u>	<u>81,926</u>
Interest paid	9,14	(64,675)	(12,108)
Income taxes paid	7	(10,350)	-
Net cash from operating activities		<u>144,745</u>	<u>69,818</u>
Cash flows from investing activities			
Interest received	6	9,656	9,743
Acquisition of property and equipment and intangible assets		(100,416)	(54,759)
Net cash used in investing activities		<u>(92,019)</u>	<u>(45,016)</u>
Cash flows from financing activities			
Proceeds from borrowings	14	56,205	27,603
Repayment of lease liabilities	9	(262)	-
Proceeds from grants	15	-	4,825
Repayment of borrowings	14	(116,819)	(50,031)
Repayment of restructured liabilities		-	(30,625)
Dividends paid	7	(58,650)	-
Capital contribution	12(e)	9,500	-
Net cash (used) financing activities		<u>(110,026)</u>	<u>(48,228)</u>
Net decrease in cash and cash equivalents			
		<u>(57,300)</u>	<u>(23,426)</u>
Cash and cash equivalents at 1 January	11	79,685	101,157
Effect of exchange rate fluctuations on cash and cash equivalents		(1,002)	1,954
Cash and cash equivalents at 31 December	11	<u>21,383</u>	<u>79,685</u>

1. Basis of preparation

(a) Statement of compliance

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (“IFRSs”).

2. Functional and presentation currency

The national currency of Georgia is the Georgian Lari (“GEL”), which is the Group’s functional currency and the currency in which these consolidated financial statements are presented. The functional currency of each of the Group entities is the currency of the primary economic environment in which the entity operates.

All financial information presented in GEL has been rounded to the nearest thousands, except when otherwise indicated.

3. Use of estimates and judgments

The preparation of consolidated financial statements in conformity with IFRSs requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from those estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimates are revised and in any future periods affected.

Measurement of fair values

A number of the Group’s accounting policies and disclosures require the determination of fair values for financial assets and liabilities. Fair values have been determined for measurement and for disclosure purposes. Fair values are categorized into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

- *Level 1*: quoted prices (unadjusted) in active markets for identical assets or liabilities.
- *Level 2*: inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).
- *Level 3*: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

If the inputs used to measure the fair value of an asset or a liability might be categorised in different levels of the fair value hierarchy, then the fair value measurement is categorised in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement.

Further information about the assumptions made in measuring fair values is included in note 17 - fair values and risk management.

4. Revenue

'000 GEL	2021	2020
Revenue from contracts with customers		
Revenue from transmission of electricity	254,773	133,489
Revenue from dispatching of electricity	19,742	39,510
Revenue from exporting electricity	8,682	2,777
Revenue from transit	11,824	1,100
Other revenue	2,203	4,989
Total revenues	297,224	181,865

Revenue from export includes both revenue from transmission and dispatching of electricity. Revenue is calculated based on the transmission and dispatch tariffs established by GNERC.

During 2021, there have been several changes in tariffs for transmission and dispatching of electricity. Tariffs for transmission of electricity during the year was as follows: for the period of 1-20 January 2021, tariff was set at GEL 0.01381 per kWh; for the period from 20 January till 30 June 2021- GEL 0.02018 per kWh. As for dispatching of electricity, tariff used from 1 January 2021 up to 30 June 2021 was determined to be GEL 0.00388 per kWh.

From 1 July 2021, according to the #28/1 resolution of GNERC, dated 24 June 2021, the Company became sole transmission system operator (TSO), responsible for operating, maintenance and sound operation of the entire high voltage transmission grid. Separate tariffs for transmission and dispatching of electricity have been annulled, dispatching license issued to the Company was cancelled and a new Transmission System Licensee's tariff of GEL 0.02664 per kWh for the period from 1 July 2021 till 1 January 2024 was set.

On 4 May 2018, the Ministry of Economy and Sustainable Development of Georgia issued an order, according to which the Group is obliged to reimburse the cost of lost electricity during transmission process to Electricity Market Operator ESCO. The costs reimbursed of GEL 45,777 thousand (2020: GEL 36,991 thousand) are shown as electricity losses in the consolidated statement of profit or loss and other comprehensive income.

(a) Disaggregation of revenue from contracts with customers

In the following table, revenue from contracts with customers is disaggregated by the primary geographical markets, the major revenue streams and timing of revenue recognition.

'000 GEL	2021	2020
Primary geographical markets		
Domestic	285,400	180,765
Foreign	11,824	1,100
Total revenues	297,224	181,865

(b) Contract balances

The following table provides information about receivables, contract assets and contract liabilities from contract with customers.

'000 GEL	31 December 2021	31 December 2020
Receivables, which are included in 'trade and other receivables'	31,643	27,211

Due to the nature of the business operations, there are no contract balances from the contracts with customers.

(c) Performance obligations and revenue recognition policies

The Group recognises revenue when it transfers control over a good or service to a customer. Revenue is recognised over time, see also note 23 (b).

5. Other operating expenses

'000 GEL	2021	2020
Taxes, other than on income	5,890	6,691
Audit and other professional service fees	3,236	1,742
Security expenses	2,946	3,140
Transportation costs	1,823	1,464
Insurance expenses	1,791	1,889
Business trip expenses	1,445	1,200
Short-term leases	933	608
Maintenance and repair expenses	652	604
Fines on non-repayment of loans	-	1,790
Penalties	-	643
Other	5,524	5,250
	24,240	25,021

Audit and other professional service fees include audit fees of GEL 140 thousand for the year ended 31 December 2021 (2020: GEL 130 thousand).

6. Finance income and finance costs

'000 GEL	2021	2020
Recognised in profit or loss		
Interest income on bank balances	9,656	9,743
Income from grant amortization	3,420	4,681
Gain on modification of financial instruments	-	1,263
Finance income	13,076	15,687
Interest expense on loans and borrowings	(22,483)	(22,955)
Interest expense on lease liabilities	(12,138)	-
Loss on modification of financial instruments	(1,351)	-
Unwinding of discount on restructured liabilities	-	(7,838)
Net foreign exchange gain/(loss)	133,467	(229,720)
Finance costs, net	97,495	(260,513)
Net finance costs recognised in profit or loss	110,537	(244,826)

In 2021, the Group capitalised interest on loans and borrowings of GEL 4,419 thousand to property and equipment (2020: GEL 7,365 thousand), see also note 8(b).

7. Income tax expense

(a) Amounts recognised in profit or loss

'000 GEL	2021	2020
Current year		10,350
Current tax expense		10,350

(b) Reconciliation of effective tax rate:

	2021		2020	
	'000 GEL	%	'000 GEL	%
Dividends declared	-	-	58,649	
Tax using the Group's domestic tax rate	-	-	10,350	17.6%

	2021		2020	
	'000 GEL	%	'000 GEL	%
Income tax expense for the year	-	-	10,350	17.6%

8. Property and equipment

'000 GEL	Land and buildings	Power transmission lines	Equipment, vehicles and other	Constr. in progress and uninstalled equipment	Total
<i>Cost or deemed cost</i>					
Balance at 1 January 2020	137,284	462,408	879,762	248,365	1,727,819
Additions	16,012	899	99	41,612	58,622
Disposals/write-off	-	-	(705)	(8,036)	(8,741)
Transfers	1,166	86,719	9,421	(97,306)	-
Balance at 31 December 2020	154,462	550,026	888,577	184,635	1,777,700
Balance at 1 January 2021	154,462	550,026	888,577	184,635	1,777,700
Additions	933	681	1,587	61,721	64,922
Disposals/write-off	-	(29)	(3,922)	(20,285)	(24,236)
Transfers	17,283	22,125	12,748	(52,156)	-
Balance at 31 December 2021	172,678	572,803	898,990	173,915	1,818,386
<i>Depreciation and impairment losses</i>					
Balance at 1 January 2020	(48,561)	(246,025)	(418,018)	(18,210)	(730,814)
Depreciation for the year	(3,545)	(13,394)	(28,770)	-	(45,709)
Disposals	-	-	72	435	507
Impairment loss	9,328	47,669	98,680	12,318	167,995
Balance at 31 December 2020	(42,778)	(211,750)	(348,036)	(5,457)	(608,021)
Balance at 1 January 2021	(42,778)	(211,750)	(348,036)	(5,457)	(608,021)
Depreciation for the year	(4,709)	(14,546)	(33,888)	-	(53,143)
Disposals	-	5	1,158	-	1,163
Balance at 31 December 2021	(47,487)	(226,291)	(380,766)	(5,457)	(660,001)
<i>Carrying amounts</i>					
At 1 January 2020	88,723	216,383	461,744	230,155	997,005
At 31 December 2020	111,684	338,276	540,541	179,178	1,169,679
At 31 December 2021	125,191	346,512	518,224	168,458	1,158,385

During 2021, immediate parent contributed to the Company's capital land plots and machinery with a fair value of GEL 694 thousand (2020: GEL 16,912 thousand), while the Company distributed land plots with a fair value of GEL 174 thousand (2020: nil).

(a) Security

At 31 December 2021, items of property and equipment (land plots with power-transmission lines and related technical equipment) with a carrying amount of GEL 37,648 thousand (31 December 2020: GEL 41,450 thousand) were pledged as a security against loans and borrowings from and restructured liabilities to the Ministry of Finance of Georgia, (see also notes 15 and 16).

(b) Construction in progress and uninstalled equipment

Construction in progress and uninstalled equipment amounting to GEL 168,458 thousand as at 31 December 2021 (31 December 2020: GEL 179,178 thousand), includes GEL 33,286 thousand (2020: GEL 27,442 thousand) of spare parts and stand-by equipment held to support the operations of property and equipment and GEL 141,016 thousand (31 December 2020: GEL 151,736 thousand) is related to construction in progress.

(c) Other non-current assets

Other non-current assets comprise spare parts, standby and servicing equipment that meet definition of property and equipment and are needed for proper day-to-day operations of the Group, see also note 23 (k).

9. Leases

Information about leases for which the Group is a lessee is presented below:

'000 GEL	<u>Power transmission lines</u>
<i>Right of use assets</i>	
Balance as 1 January 2021	-
Additions	172,347
Balance as at 31 December 2021	172,347
<i>Depreciation</i>	
Balance as 1 January 2021	-
Depreciation charge	(6,913)
Balance as at 31 December 2021	(6,913)
Carrying amount as at 1 January 2021	-
Carrying amount as at 31 December 2021	165,434
<i>Lease liabilities</i>	
Lease liability as at 1 January 2021	-
Additions	172,347
Interest charge	12,138
Payments of lease liability	(12,400)
Balance as at 31 December 2021	172,085

From 1 July 2021 according to the #28/1 resolution of GNERC, dated 24 June 2021, the Company became the only licensee on transmission of electricity (see Note 5). As a result of this change, starting from 1 July 2021, the Company entered into a lease agreement with JSC United Energy System Sakrusenergo to lease power transmission lines. As a result of this agreement the Company has recognised right of use asset for the above-mentioned lines. The lease term was determined to be the remaining useful life of leased assets, which vary within 10 to 25 years range. Interest rate applied in discounting future lease payments was determined to be 15%.

10. Trade and other receivables

'000 GEL	<u>2021</u>	<u>2020</u>
<i>Current receivables</i>		
Trade receivables	58,140	44,263
Impairment allowance on trade receivables	(26,497)	(17,052)
Trade receivables, net of impairment allowance	31,643	27,211
Taxes receivable	-	693
Other receivables	2,790	3,429
Impairment allowance on other receivables	(2,217)	(2,000)
	32,216	29,333

The Group's exposure to credit and currency risks and impairment losses related to trade and other receivables are disclosed in note 17.

11. Cash and cash equivalents

'000 GEL	<u>2021</u>	<u>2020</u>
Bank balances	21,383	79,685

'000 GEL	2021	2020
Cash and cash equivalents in the consolidated statements of financial position and cash flows	21,383	79,685

None of the cash and cash equivalents balances are impaired or past due.

The Group's exposure to interest rate risk and a sensitivity analysis for financial assets and liabilities are disclosed in note 17.

12. Equity

(a) Share capital

<i>Number of shares unless otherwise stated</i>	Ordinary shares	
	2021	2020
Par value	GEL 1	GEL 1
In issue at 1 January	662,583,016	645,064,179
Issued during the year	694,964	17,518,837
Redeemed during the year	(173,600)	-
On issue at 31 December, fully paid	663,104,380	662,583,016

Ordinary shares

The holders of ordinary shares are entitled to receive dividends as declared from time to time, and are entitled to one vote per share at meetings of the Company.

During 2021, the general meeting of shareholders of the Company approved the issuance of 694 thousand ordinary shares (2020: 17,518 thousand ordinary shares) and redeemed 174 thousand ordinary shares at a price of GEL 1 per share. Issued and redeemed shares were settled via non-cash contributions/distributions.

(b) Unregistered capital

The unregistered capital comprises contributions of assets made by shareholders, which are in the ownership of the Company but have not been registered in the Company's charter and any difference between the registered amount of share capital and the fair value of the assets contributed by the shareholders.

(c) Dividends

In accordance with Georgian legislation the Company's distributable reserves are limited to the balance of retained earnings as recorded in the Company's statutory financial statements prepared in accordance with International Financial Reporting Standards.

In 2021, the Company repaid dividends of GEL 58,650 thousand, which were declared in 2020. As at 31 December 2020, the related liability was recorded within trade and other payables, see also note 16.

(d) Translation reserve

The translation reserve comprises all foreign currency differences arising from the translation of the financial statements of foreign operations.

(e) Additional paid-in capital

Additional paid-in capital is related to funds received (GEL 9,500 thousand) from the Government of Georgia and the modification gain of the loan from the Ministry of Finance of Georgia to

Energotrans LLC (GEL 11,680 thousand).

On 13 September 2019, new repayment schedule was agreed between Energotrans LLC and the Ministry of Finance of Georgia, according to which loan maturity was extended till 2029. Original maturity was 30 December 2020. The difference between the net present value of modified and original cash outflows discounted at original effective interest rate was accounted for as additional paid in capital.

13. Capital management

The Group has no formal policy for capital management but management seeks to maintain a sufficient capital base for meeting the Group's operational and strategic needs. This is achieved with efficient cash management, constant monitoring of the Group's revenues and profit, and long-term investment plans mainly financed by the Group's operating cash flows as well as loans and borrowings.

There were no changes in the Group's approach to capital management during the year.

Neither the Company nor any of its subsidiaries are subject to externally imposed capital requirements.

14. Loans and borrowings

This note provides information about the contractual terms of the Group's interest-bearing loans and borrowings, which are measured at amortised cost. For more information about the Group's exposure to interest rate, foreign currency and liquidity risk, see note 17.

'000 GEL	2021	2020
<i>Non-current liabilities</i>		
Unsecured loans from financial institutions	857,661	1,034,896
Secured loan from a related party	13,974	14,699
	871,635	1,049,595
<i>Current liabilities</i>		
Current portion of unsecured loans from financial institutions	130,422	172,842
	130,422	172,842

(a) Terms and debt repayment schedule

Terms and conditions of outstanding loans were as follows:

'000 GEL	31 December 2021				
	Currency	Nominal interest rate	Year of maturity	Face value	Carrying amount
<i>Unsecured loans from financial institutions:</i>					
Ministry of Finance of Georgia - KfW	EUR	KfW ref rate+4%	2028	227,665	220,217
Ministry of Finance of Georgia - EBRD	EUR	Euribor+1%	2027	91,739	91,364
Ministry of Finance of Georgia – ADB	SDR	1%-1.5%	2044	124,639	124,639
Ministry of Finance of Georgia - KfW	EUR	2.2%	2025	58,274	58,274
		Reference rate for the loan currency + variable interest			
Ministry of Finance of Georgia - WB	USD	Rate	2038	180,619	180,619
Ministry of Finance of Georgia-KfW new	EUR	0.25-0.05%	2032	19,279	19,279
Ministry of Finance of Georgia - KfW	EUR	1%-1.5%	2025-2037	22,327	22,327
		Reference rate			
Ministry of Finance of Georgia - IBRD	EUR	+fixed spread	2044	26,837	26,837

Ministry of Finance of Georgia – KfW	EUR	EURIBOR+0.35%	2034	44	44
Ministry of Finance of Georgia - EIB	EUR	EURIBOR+0.75%	2033	192,914	192,914
Ministry of Finance of Georgia - EBRD	EUR	Euribor+1%	2028	51,569	51,569
Secured loan from a related party:					
Ministry of Finance of Georgia	EUR	7.5%	2029	24,990	13,974
Total interest-bearing liabilities				1,020,896	1,002,057

31 December 2020

'000 GEL	<u>Currency</u>	<u>Nominal interest rate</u>	<u>Year of maturity</u>	<u>Face value</u>	<u>Carrying amount</u>
Unsecured loans from financial institutions:					
Ministry of Finance of Georgia - KfW	EUR	1%-1.5%	2025-2037	29,162	29,162
Ministry of Finance of Georgia - EBRD	EUR	Euribor+1%	2025-2028	62,504	62,504
Ministry of Finance of Georgia – ADB	SDR	1%-1.5%	2044	146,327	146,327
Ministry of Finance of Georgia - KfW	EUR	2.20%	2025	80,009	80,009
		Reference rate for the loan currency +variable interest rate			
Ministry of Finance of Georgia - WB	USD		2038	163,603	163,603
Ministry of Finance of Georgia - KfW new	EUR	0.25%-0.05%	2032	5,413	5,413
Ministry of Finance of Georgia - KfW	EUR	EURIBOR+0.35%	2034	49	49
		Reference rate +fixed spread			
Ministry of Finance of Georgia - IBRD	EUR		2044	21,716	21,716
		KfW reference rate			
Ministry of Finance of Georgia – KfW	EUR	+4%	2028	333,364	322,589
Ministry of Finance of Georgia - EIB	EUR	Euribor + 0.75%	2033	252,370	252,370
Ministry of Finance of Georgia - EBRD	EUR	Euribor + 1%	2027	124,350	123,996
Secured loan from a related party:					
Ministry of Finance of Georgia	EUR	7.50%	2029	28,693	14,699
Total interest-bearing liabilities				1,247,560	1,222,437

At 31 December 2021, items of property and equipment (land plots with attached power-transmission lines and related technical equipment) with a carrying amount of GEL 37,648 thousand

(2020: GEL 41,450 thousand) were pledged as a security against loans and borrowings from and restructured liabilities towards the Ministry of Finance of Georgia.

Unsecured loans from financial institutions are loans received from the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB) and Kreditanstalt für Wiederaufbau (KfW). Loans from EBRD, EIB and KfW were disbursed to the Government of Georgia in relation to the 'Black Sea Transmission Network' project for the construction of new energy transmission lines. The Government of Georgia, in turn, transferred the amounts received under the facilities, together with the repayment obligation to the Group. The lenders have not legally released the Government of Georgia from the primary responsibility for the repayment of the loans, accordingly the Government of Georgia acted as a principal in these transactions and the loans payable by the Group are towards the Ministry of Finance of Georgia.

Breach of financial covenant

In relation to the loan received from EBRD, the Group should maintain total net debt to EBITDA ratio at not more than 4.5. In 2021, the was in breach of the covenant. The covenant has been waived for 2021 and respective waiver was furnished in December, 2021.

(b) Reconciliation of movements of liabilities to cash flows arising from financing activities

'000 GEL	<u>Loans and borrowings</u>
Balance at 1 January 2021	1,222,437
Proceeds from loans and borrowings	56,205

Repayment of borrowings	(116,819)
Total changes from financing cash flows	(60,614)
The effect of changes in foreign exchange rates	(135,482)
Interest expense	22,483
Capitalized borrowing costs	4,419
Interest paid	(52,537)
Loss on modification of financial instruments	1,351
Total other changes	(24,284)
Balance at 31 December 2021	1,002,057

Modifications of financial liabilities for the year ended 31 December 2021 has been assessed as non-substantial.

'000 GEL	Loans and borrowings	Restructured liability*	Total
Balance at 1 January 2020	1,002,088	45,751	1,047,839
Proceeds from borrowings	27,603	-	27,603
Repayment of borrowings	(50,031)	-	(50,031)
Additions to restructured liabilities	-	264	264
Repayment of restructured liabilities	-	(30,889)	(30,889)
Total changes from financing cash flows	(22,428)	(30,625)	(53,053)
The effect of changes in foreign exchange rates	225,828	-	225,828
Interest expense	22,955	-	22,955
Offset against prepayments	-	(13,219)	(13,219)
Capitalized borrowing cost	7,365	-	7,365
Unwinding of discount	-	7,838	7,838
Derecognition of restructured liabilities	-	(8,442)	(8,442)
Transfer to trade payables with guaranteed deposit	-	(1,303)	(1,303)
Interest paid	(12,108)	-	(12,108)
Gain on modification of financial instruments	(1,263)	-	(1,263)
Total other changes	16,949	(15,126)	1,823
Balance at 31 December 2020	1,222,437	-	1,222,437

* As at 31 December 2020, the Company has covered all liabilities associated with the Rehabilitation Plan and left the plan. All restructured liabilities were repaid in 2020.

15. Grants related to assets

'000 GEL	2021	2020
Balance at 1 January	101,679	105,571
Credited to other income in profit or loss	(3,420)	(4,681)
Derecognition of grants	(3,727)	-
Received during the year	4,534	789
Balance at 31 December	99,064	101,679
Non-current	95,644	97,250
Current	3,420	4,429
	99,064	101,679

During 2021, the management identified that part of property and equipment, which was purchased using grant funds needed to be written off. The main reason was that the project for which grant funds have been used was proven to be economically unfavourable per feasibility study. Consequently, related assets and grant liability have been derecognised.

Grants received during the year represent amounts directly paid by financial institutions to the customer for acquisition of property and equipment.

16. Trade and other payables

'000 GEL	31 December 2021	31 December 2020
----------	------------------	------------------

'000 GEL	<u>31 December 2021</u>	<u>31 December 2020</u>
Payables for construction works performed	16,941	38,990
Dividends payable (note 13(c))	-	58,650
Other payables	29,734	21,112
Taxes payable	601	9,131
Advances received	-	7,816
Balance at 31 December	<u>47,276</u>	<u>135,699</u>

The Group's exposure to currency and liquidity risk related to trade and other payables is disclosed in note 17.

17. Fair values and risk management

(a) Accounting classification and fair values

The estimates of fair value are intended to approximate the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. However, given the uncertainties and the use of subjective judgment, the fair value should not be interpreted as being realizable in an immediate sale of the assets or transfer of liabilities.

The Group has determined the fair values using valuation techniques. The objective of the valuation techniques is to arrive at a fair value determination that reflects the price that would be received to sell the asset or paid to transfer the liability in an orderly transaction between market participants at the measurement date. The valuation technique used is the discounted cash flow model. Fair values are calculated based on the present value of future principal and interest cash flows, discounted at the market rate of interest at the reporting date.

Management believes that the fair values of the Group's financial assets and liabilities approximate their carrying amounts.

(b) Financial risk management

The Group has exposure to the following risks from its use of financial instruments:

- credit risk – note 17 (b)(ii);
- liquidity risk – note 17 (b)(iii);
- market risk – note 17 (b)(iv).

This note presents information about the Group's exposure to each of the above risks, the Group's objectives, policies and processes for measuring and managing risk, and the Group's management of capital. Further quantitative disclosures are included throughout these consolidated financial statements.

(i) Risk management framework

The Management Board has overall responsibility for the establishment and oversight of the Group's risk management framework.

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities. The Group, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

The Management Board is assisted in its oversight role by Internal Audit.

(ii) Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations and arises principally from the Group's receivables from customers and bank balances.

The carrying amount of financial assets represents the maximum credit risk exposure.

18. Contingencies and provisions**(a) Insurance**

The insurance industry in Georgia is in a developing state and many forms of insurance protection common in other parts of the world are not yet generally available. The Group does not have full coverage for its plant facilities, business interruption, or third party liability in respect of property or environmental damage arising from accidents on Group property or relating to Group operations. Until the Group obtains adequate insurance coverage, there is a risk that the loss or destruction of certain assets could have a material adverse effect on the Group's operations and financial position.

(b) Taxation contingencies

The taxation system in Georgia is relatively new and is characterised by frequent changes in legislation, official pronouncements and court decisions, which are sometimes unclear, contradictory and subject to varying interpretation. In the event of a breach of tax legislation, no liabilities for additional taxes, fines or penalties may be imposed by the tax authorities after three years have passed since the end of the year in which the breach occurred.

These circumstances may create tax risks in Georgia that are more significant than in other countries. Management believes that it has provided adequately for tax liabilities based on its interpretations of applicable Georgian tax legislation, official pronouncements and court decisions. However, the interpretations of the relevant authorities could differ and the effect on these consolidated financial statements, if the authorities were successful in enforcing their interpretations, could be significant.

(c) Provisions for litigations, claims and disputes

'000 GEL	2021	2020
Balance at the beginning of the year	19,856	-
Charge for the year	6,440	19,856
Payment/deduction during the year	(8,080)	-
Balance at 31 December	18,216	19,856

During 2021, following negotiations in dispute board, the Group signed a settlement agreement with one of the counterparties and agreed to pay GEL 8,080 thousand.

During 2021, additional accruals of GEL 4,009 thousand were made to provide for abnormal costs incurred by providers of construction services associated with undue performance of contractual obligations by the Company.

The remaining portion of provision charges of GEL 2,431 is related to litigations, in which the Group is involved as a defendant. Amounts recognized as provisions represent the Group management's best estimate of expenditures that may be required to settle the claims.

19. Subsidiaries and associates

Subsidiary	Country of incorporation	2021 Ownership/voting	2020 Ownership/voting
Karcall Energy JSC	Turkey	99%	100%

In 2019, the Company together with Electricity System Commercial Operator ("ESCO") has established a new entity Georgian Energy Exchange LLC where it owns 50%. As at, 31 December 2021 and 2020, it is recognised as an associate.

POWER SUPPLY OF GEORGIA

Ten Year Network Development Plan Of Georgia 2022-2032



Power Generation, Consumption, Export and Import Dynamics

Years	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	Min.kwh	Min.kwh	Min.kwh	Min.kwh	Min.kwh	Min.kwh	Min.kwh	Min.kwh	Min.kwh	Min.kwh	Min.kwh	Min.kwh
Power Generation	10 046,3	10 106,1	9 697,6	10 059,3	10 371,1	10 832,5	11 531,6	11 531,1	12 747,5	11 864,7	11 159,8	12 645
Consumption	8 744,1	9 646,5	9 784,1	10 093,0	10 619,4	10 871,8	11 493,6	12 342,6	13 589,3	13 247,8	12 616,1	14 260,3
Export	1 524,3	930,6	528,2	450,4	545,1	659,9	559,01	685,7	588,3	243,4	153,8	391
Import	222,1	471,0	614,6	484,1	793,3	699,2	478,94	1497,2	1430	1626,5	1610,1	2006,2



Partner with ENTSO-E under the "Cooperation Beyond Membership" Programme



TURKEY



RUSSIA

NORTH PORTAL

EZMA HPP

110 KV - Java

110 KV - Dardail

ONI
Onis Cascade

STEPAN-TSMINDA

Larst-1 HPP
Kazbegi HPP
Darfall HPP

Tergi HPPs

Aragvi-1,2 HPP

Barisakho HPP

Udzisauri HPP

Khadori-1,2,3 HPPs

Samkuris Takis Cascade

Stori-1,2 HPPs

Lopota HPP

Shida-1,2 HPPs

Ito-Alazanis Cascade

Kakheti HPPs

Kartli 2

Khashuri

khvili HPP

Vardzia

Akhalkalaki HPP

Ninotsminda

ASHOTSKI

110 KV - Ninotsminda

ARMENIA

TBILISI

GORI

Dzogni HPP

Metekhi HPP

Khrami-1 HPP

Khrami-7 HPP

Khrami-2 HPP

Nakhidura HPP

ALAVERDI

220 KV - Alaverdi

AIRUMI

110 KV - Lalvari

LALVARI

ARMENIA

KSANI

Zahesi HPP

Digomi HPP

LISI

TELETI

Marneuli

SADAKHLO

AIRUMI

ARMENIA

GLDANI

Zahesi HPP

Digomi HPP

LISI

TELETI

Marneuli

SADAKHLO

AIRUMI

ARMENIA

ARMENIA

ARMENIA

ARMENIA

ARMENIA

ARMENIA

ARMENIA

ARMENIA

ARMENIA

PAIDIO HPP

Satsikhenisi HPP

Tetrikhvi HPP

NORIO

Ortachala HPP

Tbilisi HPP

NAVTLUGI

TELETI

Marneuli

SADAKHLO

AIRUMI

ARMENIA

ARMENIA

ARMENIA

ARMENIA

ARMENIA

ARMENIA

AKHMETA

Akhmeta HPP

Stori-1,2 HPPs

Lopota HPP

Shida-1,2 HPPs

Ito-Alazanis Cascade

Kakheti HPPs

AGSTAPA

500 KV - Multitrans Vail

330 KV - Gardabani-1,2

SAMUKHI

ARMENIA

ARMENIA

ARMENIA

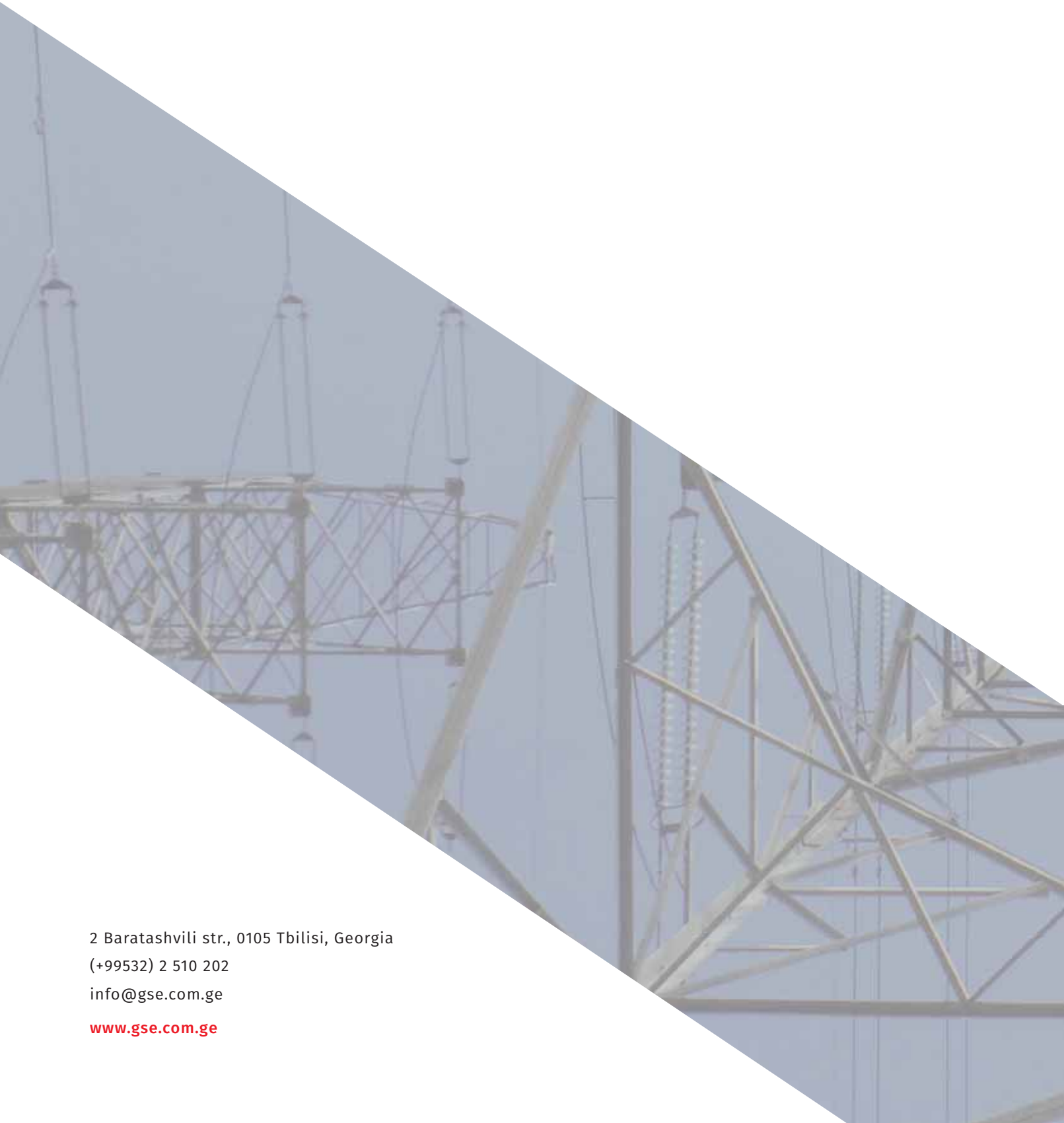
ARMENIA

ARMENIA

ARMENIA

LEGEND

- 500kV Substation
- ◐ Planned 500kV Substation
- 220kV Substation
- ◐ Planned 220kV Substation
- 110kV Substation
- ◐ Planned 110kV Substation
- ▬ Hydro Power Plant
- ▬ Planned Hydro Power Plant
- ▬ Wind Power Plant
- ▬ Planned Wind Power Plant
- ▬ Thermal Power Plant of Combined Cycle GT
- ▬ Planned Thermal Power Plant of Combined Cycle GT
- ▬ HVDC Back-to-Back Station
- 500kV HV Line
- - - Planned or Non-Functioning 500kV HV Line
- 220kV HV Line
- - - Planned or Non-Functioning 220kV HV Line
- 110kV HV Line
- - - Planned 110kV HV Line
- 400kV HV Line
- - - Planned 400kV HV Line
- 330kV HV Line
- - - Planned 330kV HV Line



2 Baratashvili str., 0105 Tbilisi, Georgia

(+99532) 2 510 202

info@gse.com.ge

www.gse.com.ge