



Georgian State Electrosystem



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COUNTRY OVERVIEW

- EU candidate country since 2024
- Energy Community Contracting Party since 2017
- Population: 3.8 million

ECONOMIC INDICATORS

- GDP (2024): USD 34.2 billion
- Foreign Direct Investment (FDI): ~USD 1.57 billion



ENERGY & REGULATORY FRAMEWORK

- Energy legislation aligned with the European Energy Acquis
- (currently compliant with the 3rd Energy Package)
- Ongoing transposition of the EU Clean Energy Package

INVESTMENT & TAX ENVIRONMENT

- 3 basic laws on investment protection and promotion
- Several Free Industrial Zones with tax incentives
- Ease of company registration and doing business
- Profit tax: 15%
- Reinvested profit tax: 0%
- Income tax: 20%
- VAT: 18%

Ease of Doing Business in Georgia



Region	Europe & Central Asia
Income Category	Upper middle income
Population	3,731,000
City Covered	Tbilisi

DB RANK



DB SCORE



Rankings on Doing Business topics - Georgia

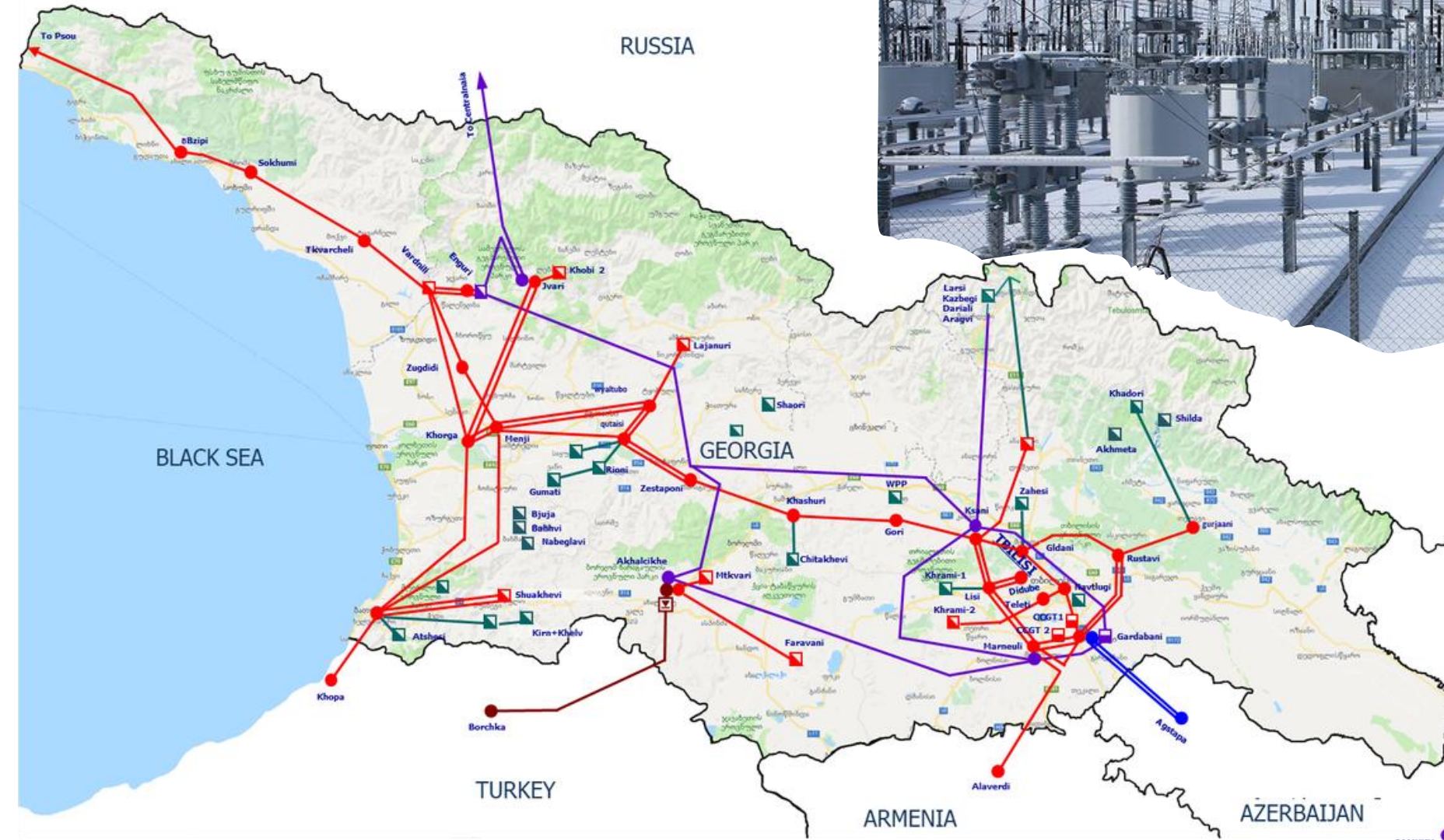


Topic Scores



WHO WE ARE

- Company Profile: GSE ensures nationwide electricity transmission and dispatch for authorized users and distribution companies, powered by ~1,700 professionals.
- ENTSO-E Cooperation: Bilateral agreement with the European Network of Transmission System Operators to drive long-term grid integration.
- CIGRE-Georgia (since 2018): Empowering Georgian engineers to solve the energy sector's most urgent challenges alongside global research committees and international experts.



REGIONAL INTERCONNECTIONS

- Cross-Border Exchange: Actively drives bilateral electricity exchange and strategic alliances to secure regional transmission stability.
- Direct Interconnections: Russia • Turkey • Armenia • Azerbaijan



EXISTING TRANSMISSION GRID

500 kV OHL – 949 km
 400 kV OHL – 32 km
 330 kV OHL – 37 km
 220 kV OHL – 1919 km
 500/220 kV AT – 3960 MVA
 330/220 kV AT – 800 MVA
 220/110 kV AT – 6634 MVA
 500 kV React. – 1150 MVAR
 500/400 kV HVDC – 875 MVA/700 MW

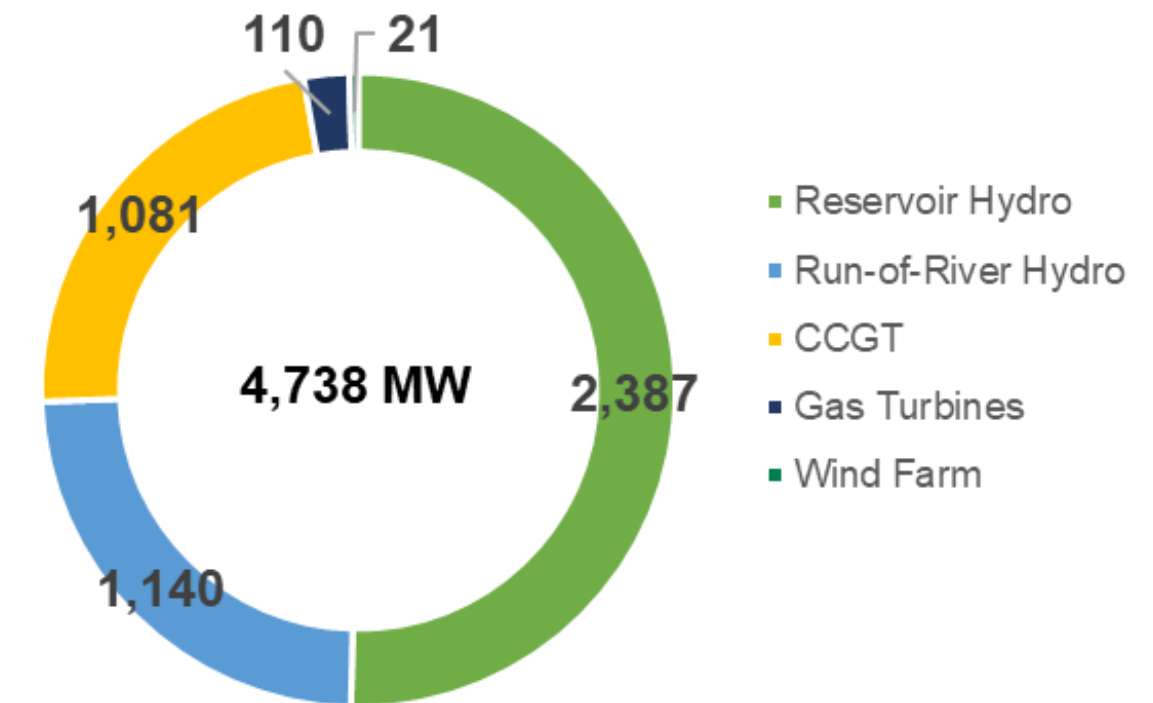
Georgia's Electricity Generation Facts

- 2024 Total Domestic Generation: 14,234 GWh
- Hydro generation was the largest contributor in 2024, representing 79% of total domestic generation.
- Average annual generation growth over the past 10 years: 3.4%

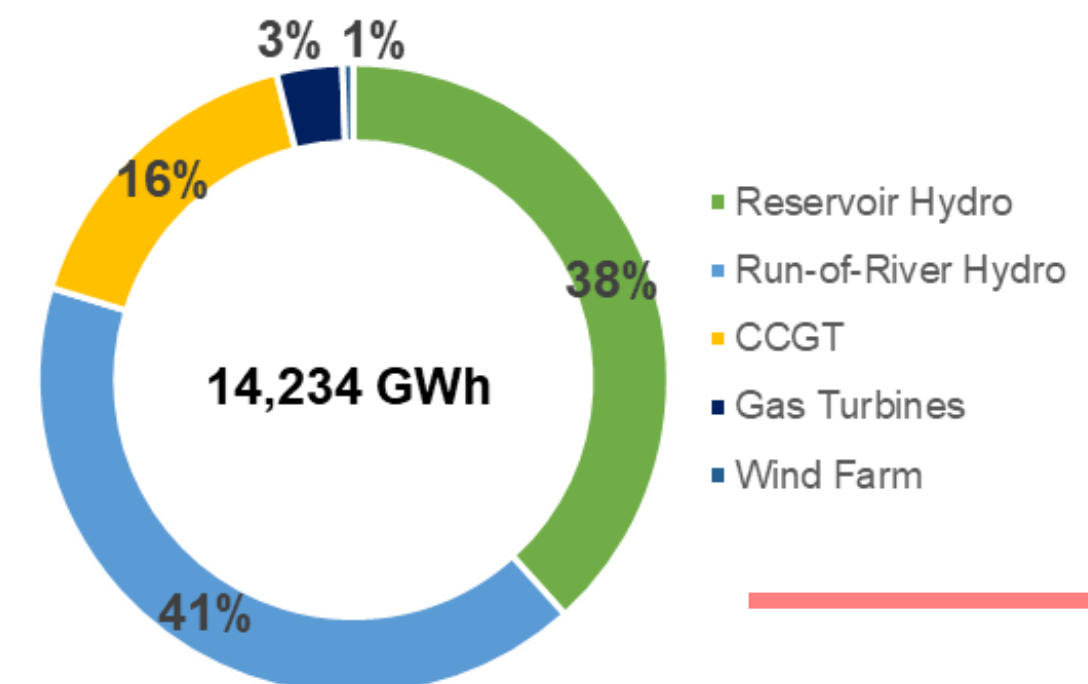
Georgia's Electricity Demand Facts

- 2025 Expected Total Demand: 15,194 GWh
- 2025 Summer Peak Load: 2,535 MW (Record High, July 31 at 17:00 pm)
- 2024 Total Demand: 14,414 GWh
- 2024 Peak Load: 2,287 MW
- Average annual demand growth over the past 10 years: 3.4%

Existing Capacity Mix

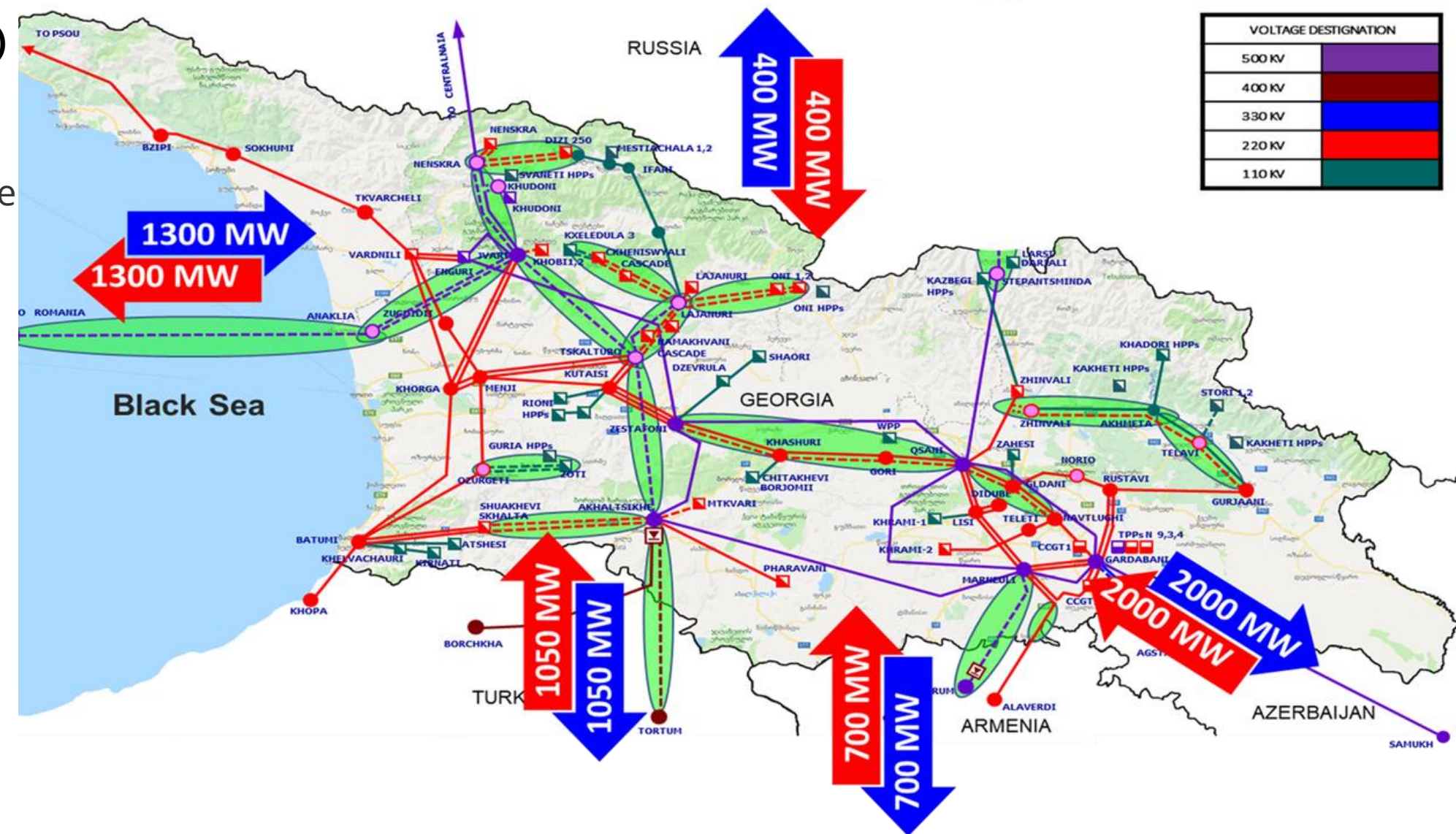


2024 Generation Mix



Battery Energy Storage System (BESS) - Enabling Green Energy (by 2027)

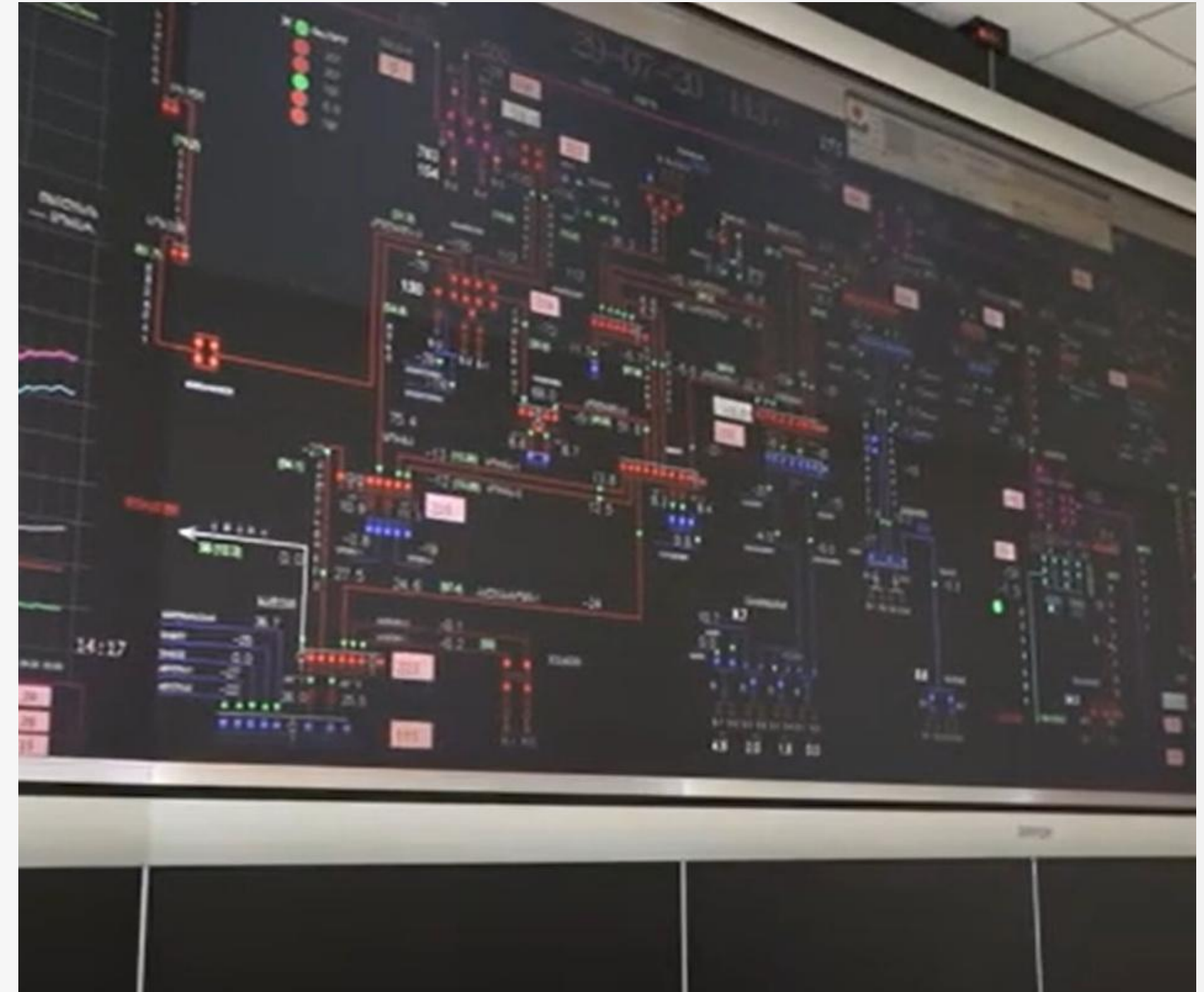
- Project Scope: Integration of a 200 MW / 200 MWh Battery Energy Storage System (BESS) at the Ksani-500 substation to ensure grid stability.
- Grid Capability Impact: Drastically increases Georgia's capacity to integrate variable renewable energy:
 - Solar Power Capacity: Increases from 500 MW (without BESS) to 1,250 MW (with BESS).
 - Wind Power Capacity: Increases from 750 MW (without BESS) to 950 MW (with BESS).



Black Sea Submarine Cable (BSSC) - Georgia-EU Energy Bridge

- Power Interconnection: A 1,100 km HVDC submarine cable directly connecting the South Caucasus electricity grid with the European internal energy market.
- Digital Interconnection: Integration of a high-capacity fiber-optic infrastructure running alongside the cable to significantly boost international data transmission and digital routing.

- SCADA/EMS System: Equipped with AGC (Automatic Generation Control), OTS (Operator Training Simulator), and TNA (Technical Network Analysis) applications.
- Secure IEC-104 and IEC-61850 protocols with encryption and authentication controls.
- OPGW Fiber-Optic Network: 2,000 km long proprietary OPGW backbone.
- Telephony Systems: Physical and virtual ATS (PBX) telephone network.
- Data Management: Unified Event Data Collection system.
- Digital Substations: 24 digital substations, including a 700 MW HWDC converter.
- Remedial Action System (RAS): For grid protection.
- Wide Area Monitoring System (WAMS): For real-time control.
- Work and Asset Monitoring (WAM): System for monitoring works and assets.
- Battery Energy Storage System (BESS): For grid stabilization and reserves.



Cybersecurity Measures

SCADA/ICS protection against APT threats, IT/OT network segmentation, SOC monitoring, and Zero Trust architecture implementation.

Data Protection

Telemetry encryption, multi-factor authentication, comprehensive logging, and rapid incident response protocols.

Security Awareness

Regular cybersecurity training programs, phishing simulations, and insider threat prevention initiatives for all staff.

ISO 27001 Certification

Preparation for ISO 27001 certification with risk management framework and audit readiness procedures.



- **Perimeter Protection**

Multi-layered defense with fences, barriers, anti-ram systems, armed guards, and rapid response teams.

- **CCTV & AI Monitoring**

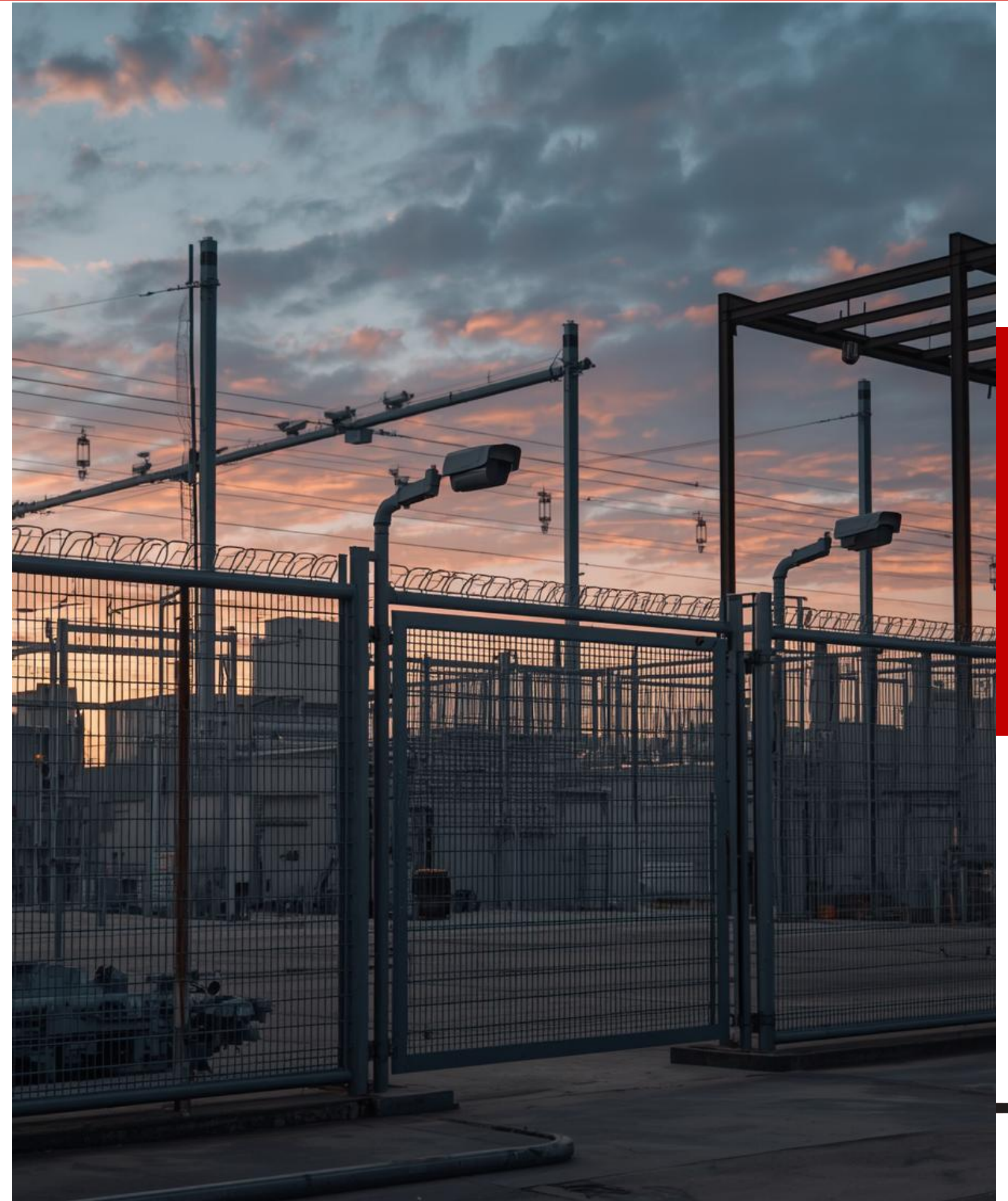
Advanced surveillance with AI detection, thermal imaging, intrusion analytics, and drone defense.

- **Access Control Systems**

Badge and biometric authentication, zone-based permissions, and multi-factor verification protocols.

- **Employee Safety**

PPE requirements, occupational safety standards, emergency procedures, and regular safety training.



We Welcome Your Questions
For official inquiries, follow-up data, or partnership proposals, please contact our team:
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