



Where finance and green technologies meet

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Enguri hydroelectric power station in Georgia. Photo: Saksa / Shutterstock

Georgia's move towards a green economy

One of the most significant documents in Georgia's recent history is the "[Accession of Georgia to the Treaty Establishing the Energy Community](#)", which focuses on the political and economic development of Georgia. By signing this document, the country highlighted its ambition and political goal to transform energy security and advance the development of renewable energy. A new energy policy went into effect in 2015 with the aim of establishing short-, medium-, and long-term goals for energy development with a focus on the utilisation of the country's renewable energy resources.

Georgia has great potential to utilise its renewable energy resources. There are 26,000 rivers, 300 of which are crucial for energy production. A total of 15,000 megawatts (MW) of potential capacity is thought to exist. Furthermore, these rivers have the capacity to generate 1,500 MW of electricity from wind energy. Georgia also has geothermal water reserves with an annual capacity of 250 million cubic metres. Due to its geographic location, the country is subject to high levels of solar radiation. Most of the regions experience 250 to 280 sunny days and 6,000 to 6,780 hours of daylight annually.

However, there are some notable challenges, most of which relate to the lack of a comprehensive energy strategy as well as solid analyses. Proper monitoring and implementation are also crucial to ensure success in developing a greener economy.

To move Georgia toward sustainable development, a targeted mix of enabling policies, powerful incentives, and investments will be required. To do this, the country must properly address structural issues, examine the effects of economic activity losses, and take the necessary steps. It is necessary to create a multisectoral strategy for sustainable development as well as advancements in the development of coastal zones, the management of forests and other natural areas, and pollution prevention.

Good design leads to well-being in the workplace



Photo by [Kelly Huang](#) on [Unsplash](#)

In conducting their internal research, the American Society of Interior Designers (ASID) found that well-being in the workplace stems from good design. After moving to a new WELL- and LEED-certified office, the ASID made it a mission to find out how the design of the new workplace affected its workers.

Overall, the new space, which achieved “Platinum” ratings under both LEED for Commercial Interiors and the WELL Building Standard showed immense improvements (acoustics improved by 50%, lighting by 63%, and ventilation by 158%).

**ENVIRONMENTAL
CONDITION
SATISFACTION
SCORES BY
OCCUPANCY STATUS**

■ Pre-certification
■ Post-certification

**Indicates a statistically significant difference ($p < 0.05$) between the pre-certification space and the post-certification space.*

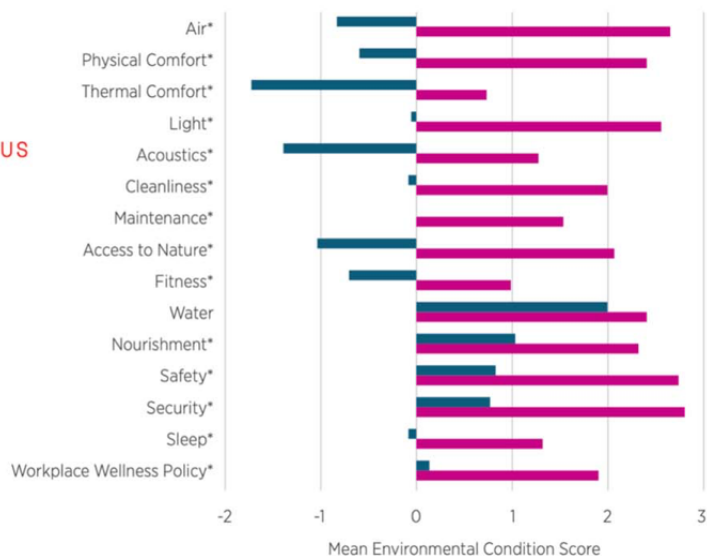


Photo: American Society of Interior Designers

The ASID implemented an air filtration design that purifies outdoor air and recirculated air; and a ventilation design that regulates the ventilation rate of outdoor air to keep carbon dioxide (CO₂) levels in the space low. Indoor air circulation is an important issue when it comes to the interior climate.

If the budget allows (and with the new office buildings being developed by larger construction companies, it should), developers should go for a more sophisticated ventilation system that ensures a good balance of air-in, air-out and heat recovery. In order to keep the energy use of ventilation systems low, developers might opt for an [electric motor](#), which is at least 20% more efficient than its standard counterpart.

The dramatic improvement in thermal comfort is also worth mentioning. ASID reported that compared to their previous office, the temperature was increased from 23.2 to 23.8 Celsius. It may not seem like much, but a difference of 0.6 degrees can have a significant impact on the environment as whole. First and foremost, installing a heating/cooling system means that the indoor temperature can be controlled. There is no need to open the windows when it gets too hot, thus causing heating energy loss, or close them when it gets too cold, leaving the indoor workspace without ventilation.

The next thing to consider is lighting. In an ideal world, lighting should replicate the natural daylight cycle, which is warmer in the morning and cooler in the afternoons and evenings. Today's [LED lighting](#) systems can change colour as the day progresses. Offices no longer have to be associated with uncomfortable fluorescent lighting. Incidentally, a quarter of the employees at the ASID claimed that better lighting during the day at their new workplace improved their sleep quality at night.

In the research conducted by the ASID, the positive response was overwhelming:

- Collaboration improved, with 71% of employees agreeing with the statement “My workplace helps facilitate communication between employees”;
- Absenteeism dropped dramatically, from a score of -0.025 (indicating employees were working 2.5% less than expected) to a score of 0.16 (employees were working 16% more than expected);
- “Presenteeism,” a self-assessment of productivity, increased 16%.

The impact of the design is intangible and has to do more with the experiences that people have in the space. Thoughtful design can support organisational priorities such as employee health, productivity, and financial return. A well-designed and equipped workplace might even contribute positively to employee retention, which is crucial in today's economy where professionals are hard to find.

Volume of construction permits in Georgia increases by 15.6%



Photo: bm.ge

The National Statistics Office of Georgia, GeoStat, recently released [information](#) regarding the number of permits issued and facilities put into operation from January to June 2022.

According to the official data, during this period, **a total of 5,086 permits were issued in Georgia** (15.6% increase compared to same period in the previous year) for the construction of buildings covering an area of 3,187.8 thousand square meters (+7.9%).

77.3% of the permits are spread out over **four regions of the country**. In particular, 52.1% of the permits issued were for construction to be carried out in Tbilisi, 10.7% in the Mtskheta-Mtianeti region, 7.9% in the Kvemo Kartli region, and 6.6% in the Imereti region.

The abovementioned permits were issued for the construction of **multifunctional residential buildings, shopping facilities, hotels, industrial enterprises, agricultural facilities**, and other buildings. It should be noted that multifunctional residential buildings make up the largest share of permits issued.

Additionally, 1,168 buildings were constructed (3.5% increase compared to the same period in the previous year) covering an area of 1,246.5 thousand square meters (+52.3%) and were approved for occupancy.

More than half of the construction completed was in three regions of the country. In

particular, 39.4% in Tbilisi, 12.7% in the Kakheti region, and 10.1% in the Mtskheta-Mtianeti region.

The construction industry continues to grow in Georgia. With a large number of permits being issued, newer and larger buildings are expected to appear in both the capital city and other regions of the country. Even though permits and the planned construction projects may not yet be subject to new energy-efficiency standards and regulations, construction companies will have to begin thinking about implementing energy-efficient technologies in their work.

GEFF has one of the largest databases of high-performing, EE technologies that offer an array of solutions suitable for developers as well as construction companies. [The GTS \(Green Technology Selector\)](#) presents a selection of technologies from local and international vendors that are in compliance with the European energy-efficiency standards. All technologies under US\$ 300,000 (or equivalent in other currencies) can be financed under the GEFF credit line.

Featured technology:

Heating systems

Heating is not only necessary to keep the interior of a building warm, but also to eliminate excess moisture. Winter is associated with steep utility bills, but there is no need for them to be as high as anticipated. Investing in a quality heating system can save costs in the short-term and long-term alike.

See which energy efficient technology suppliers are available on the Georgian market in the [Green Technology Selector](#)

Success story



Nishnuli LTD is a company based in Kutaisi, 230 km west of Tbilisi.

Its main business activity is the production of asphalt, a process requiring crushed stone as one of the raw materials. The outdated machines used by the company made the rising energy costs a chief concern.

Looking for ways to decrease the cost per unit of production, the company's management decided to optimise the process and invest in new energy-efficient machinery.

View more success stories on our [website](#).

Investor

Nishnuli

Location

Kutaisi, Georgia

Investment

Stone crushing line

Investment size

US\$ 198,000

Energy savings

306 MWh per year

CO₂ savings

83 tonnes per year

Payback period

9.5 years

Impact

Decreasing the carbon footprint and optimising an energy-intensive business

Donor

GCF, BMF

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