

# Where finance and green technologies meet

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## Approval of the Law on Environmental Liability is a big step towards promoting green business in Georgia

Environmental issues have rightfully dominated the world agenda for the past several years. While individual measures contribute towards reducing negative human impact on the environment, it is crucial to have key players in the public and private sectors working together to maximise results. All businesses should be directing their actions towards a common goal: reducing CO<sub>2</sub> emissions, strengthening climate change resilience, and supporting sustainable development.

In recent years, the Georgian government has been focusing its efforts on devising policies, laws and strategies to promote environmentally conscious practices in sectors that have been identified as having the most significant negative impact on the environment. The Ministry of Environmental Protection and Agriculture of Georgia (MEPA) has included the transportation, construction, and industrial sectors on its list of sectors impacting the environment.

To lessen the impact of these industries, the parliament recently approved the Law on Environmental Liability, which requires businesses to accumulate financial reserves for the purpose of covering any damage to the environment caused by their activities. The new law rests on the principle of “the polluter pays”, which means that businesses that have a negative impact on the environment must provide financial compensation to offset the damage they cause.

Fortunately, there are measures that businesses in any industry can take to help them avoid unnecessary costs, all the while improving their operations. In some cases, this might be as easy as replacing filters on machinery to reduce air pollution. In other cases, replacing outdated machinery with newer, more energy and resource efficient models could be a solution. As the recent case of a [road construction company](#) illustrates, investing in a new asphalt production plant has allowed the company to increase its production by 55%, decrease energy use and save EUR 10,000 in energy costs annually. Although the amount needed to

make an investment in modern technology can be high, the long-term benefits outweigh the initial costs, especially in light of the new environmental laws.

The good news is that technological upgrades of this kind are not only available for heavy production companies, but for every industry. For instance, a business operating in the agricultural sector can invest in drip irrigation systems that offer 90% efficiency compared to traditional irrigation methods. In addition, these systems help companies save water and enable them to use fewer fertilisers and pesticides, which are potentially harmful to the environment and contribute to soil erosion. The GEFF’s [Green Technology Selector](#) offers a wide range of technologies suitable for any business’s needs.

Furthermore, the Georgian government plans to strengthen environmental laws in the country by implementing city-wide standards that contribute to sustainable urban development and environmental protection.

## Five misconceptions about solar energy held by Georgian businesses



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Since its launch in 2019, GEFF in Georgia has been actively involved in raising awareness about green technologies for energy and resource efficiency and renewable energy. In its efforts to support the development of a greener economy in the country, the Facility and its [partner financial institutions](#) have held numerous training sessions and events for business representatives of all sectors, with the aim of broadening their understanding of the benefits of using high-performing technologies as well as realising the positive impact they can have on their business and the environment.

One of the areas of focus for the PFIs and the Facility has been the utilisation of solar potential in Georgia. There are businesses that have already invested in solar power stations, such as [Mego.ge](#), an online supermarket based in Kutaisi. There are also businesses that are actively seeking financial and technical information about solar power stations and planning to make an investment. However, the vast majority of companies are still reluctant to shift to cleaner sources of energy.

Of course, there are objective reasons for not making a change, such as a lack of financing or limited access to funds. However, through its operations and activities as well as feedback from its partner financial institutions, GEFF in Georgia has uncovered additional obstacles that are holding businesses back. Here are the five most common reasons businesses give for saying “no” to solar technology.

**1. Businesses think solar is too expensive.** This is the most common misconception. Adopting solar energy requires an initial investment. However, it is important to consider the size of the investment as well as the ultimate savings that can be achieved. In the case of Mego.ge mentioned above, an initial investment of US\$ 36,000 will enable the company to save more than US\$ 11,000 in operational expenses annually. Just think: if the company had not invested in a solar power station, it would have additional operational expenses amounting to US\$ 11,000 yearly, thus making it more expensive to run the business.

**2. Businesses want to wait for better technologies.** In these innovative times, newer technologies emerge almost every day. It is true that down the road there might be a brand new solar panel that will change the face of solar technology, and some businesses might want to wait for this breakthrough. However, if businesses used this reasoning for other technologies, they would never start producing, making calls, or delivering their goods. The core product function that enables the use of solar power already exists. Current solar panels already produce electricity, they do it very well, and they are capable of handling businesses' power needs. The only thing a business will gain by waiting for the next innovation is an ever-rising power bill.

**3. Businesses don't understand the benefits of using solar energy.** Obviously, the most significant benefit is reducing operational costs, as illustrated in the example above. But using solar energy offers much more than that. Generating own energy means protecting business against rate fluctuation. The portion of energy use that is generated by the solar station will no longer be subject to short- or long-term increases in electricity rates. In fact, the more prices rise, the greater the savings will be. Installing a solar power station that services business's needs will also increase the market value of the business. And last but not least, by using solar energy, business will reduce or completely eliminate its negative impact on the environment. Although it may be hard to envision in the short run, this benefit is the most important for the long-term well-being of the future generation. In addition, as a greener business, the company's reputation on the market will rise.



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**4. Businesses are reluctant to take out a loan to finance a solar power station.** In the uncertain environment we have been experiencing lately, not wanting to add further liabilities to the books is understandable. But businesses do need to grow and they need to improve their service and operations. While some purposes for a loan might seem frivolous or nonessential, investing in a technology that will help save money down the line is an opportunity not to be missed. Plus, a solar power station is one of those few investments that guarantees a payback no matter what: it will save the money the business will not be paying in utilities. These savings can be used to cover the monthly payments for the loan.

**5. Businesses don't know how solar technology works.** Businesses are often not educated enough about solar energy to make a decision on the spot, and they may be intimidated by all of the information available. There might be questions about the net metering system, the installation process, or even about the photons from the sun. While some of these topics are too involved to cover in this article, the basics of net metering and installation are simple and straightforward. Net metering is a way for an individual solar station to connect to an electricity distribution network, such as Tellico or EnergoPro. Once connected to the system, anyone will be able to provide the surplus energy generated by the power station to the distribution network. This allows to receive a credit for the excess towards next month's bill or receive monetary compensation. Further details can be found on the [Georgia National Energy and Water Supply Regulatory Commission \(GNERC\)](#).

As for the installation process, most reliable suppliers on the Georgian market provide a detailed description of the materials, labour and time needed to install a solar station. They will also advise on the installed capacity possible for the available space (whether on the roof or the ground). Consulting a professional in the field of solar technol-

ogies is always a good idea before making a final decision. Additionally, GEFF in Georgia experts can guide in these investments. At [georgia@ebrdgeff.com](mailto:georgia@ebrdgeff.com) anyone can schedule an online meeting or a call with an appropriate expert and receive information about solar energy and solar power stations.

## Climate risks in Georgia



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Popular skiing, hiking and beach resorts make Georgia an attractive destination for tourists. The diversity of the landscape and climate have contributed to tourism being the fastest-growing sector in the country. However, the strength that gives Georgia a competitive advantage also makes it more vulnerable to the risks posed by climate change. A number of natural disasters have already occurred in Georgia, collectively inflicting more than US\$ 500 million in damage. With climate change accelerating at a faster pace than expected, the frequency and severity of such disasters is expected to increase.

Projections for climate change in Georgia are already available:

- It is estimated that by the year 2050 temperatures will increase by 0.8°–1.4°C. The increase is expected to be 2.2°–3.8°C by 2100.
- Increased unpredictability and intensity of seasonal rains will increase the risk of natural disasters, such as landslides, mudslides, floods and droughts.
- Due to the increase in temperature, 637 of Georgia's glaciers will be fully gone.

These projections will have the following impacts on economic activities and human well-being:

**Agriculture:** Employing up to 50% of the population, agriculture continues to be one of the most important sectors of the Georgian economy. It is the main source of income for poor and rural communities and is the most vulnerable to changes in climate. Landslides, mudslides and heavy precipitation accelerate soil erosion and damage crops. Increases in temperature, while beneficial to higher altitude farms, will translate into decreased yields in the rest of Georgia. Furthermore, higher temperatures can also increase the spread of crop diseases.

**Tourism:** The past two winters, ski resorts have already suffered from shorter seasons and decreased snow cover. At the same time, the increased intensity of rainfall will make the seaside more vulnerable to mudslides and landslides, disrupting all communication. Changes in climate also affect bird migration patterns and could thus adversely impact birdwatching tourism, which is very popular in the region of Adjara.

**Human health:** Higher temperatures also threaten human health. Increases in temperature and

intense heat waves aggravate cardiovascular and respiratory diseases. They also contribute to heat exhaustion and increased incidences of heat stroke.

**Energy:** Hydropower is Georgia's main source of electricity. Droughts negatively impact hydropower generation, causing energy shortages throughout the country. Furthermore, runoffs from glacier-fed rivers (the Enguri and Rioni) are projected to decrease by 13% by 2100\*, further reducing energy

generation. In the long run, climate change may increase Georgia's dependence on energy imports, thereby decreasing its energy independence.

The severity of climate change might not be observable within a short period of time, but in the long run its effects could result in irreversible damage that will threaten the livelihoods of the country's people, businesses and the economy.

\* USAID Factsheet. Climate risk profile - Georgia.

## Energy Week Black Sea 2021

2021 saw the second year of one of the largest renewables conferences in the region: "Energy Week Black Sea 2021". This year it brought together government authorities and businesses from Georgia, Romania, Bulgaria, Ukraine and Turkey, as well as foreign private investors, to discuss renewable energy sources (RES) policies for the energy transition, progress and opportunities in solar energy, green hydrogen, on- and offshore wind power, and more.

During the two-day conference, participants discussed the reforms and regulatory frameworks of each country, ongoing RES projects and developments, how countries attract global investors, various financing schemes and energy security issues.

The Black Sea region has always been well known for its role in the gas industry; however, it is now making considerable strides to emerge as a potential renewables hub. The pressing issues of climate change and the risks it poses have made energy transition a necessity rather than a luxury. All country representatives agreed that creating attractive RES investment opportunities is an important step in this transition. For example, the Romanian government aims to introduce a national hydrogen strategy, and hydrogen development already features in its National Energy and Climate Plan. Ukraine is also supporting the EU in the fight against climate change by setting up an ambitious plan to reduce its emissions by 65% by 2030.

Despite not being a member state, Georgia is actively aligning itself with the EU's policies and principles. Having enacted new laws on energy efficiency and working towards establishing a new energy market, Georgia hopes to become an important link in the region's economic transition



chain. With potential of more than 2,000 MW in hydropower, the country is now looking to tap into its potential for solar and wind energy generation. By 2030, Georgia hopes to be generating around 500 MW in solar and 1,330 MW in wind energy. Fortunately, businesses are sometimes ahead of legislation and regulations, and there are several large-scale projects under development involving both of these renewable energy sources.

GEFF in Georgia joined the investment conference as an important link in developing the RES potential of the country. The Facility in Georgia has already financed several solar projects in various sectors of industry, including retail, agriculture and production. Contributing to the adoption of innovative technologies, GEFF has also expanded its selection of eligible solar technologies in the country by adding new green vendors and suppliers to its [Green Technology Selector](#). Working with local partner financial institutions, GEFF in Georgia will further expand its financing and support in the field of renewable energy, as well as energy and resource efficiency.

## Featured technology:

### Drip irrigation line

Offering a 90% efficiency rate compared to a traditional irrigation system, drip irrigation is an important tool to improve crop yields, save resources, reduce costs, and keep the mineral composition of the soil at an optimal level.

Compare various irrigation lines in the [Green Technology Selector](#) and choose the one that best suits your needs.

## Success stories



### Mego.ge

Mego.ge LLC is an online supermarket established in 2019 and based in Kutaisi, Georgia. It sells products typically found in any supermarket: groceries, beverages, baked goods, etc. Thanks to its delivery service, all products sold on the website and through the app can be delivered to the customer's door anywhere in Kutaisi. After a recent increase in electricity rates, Mego.ge, like many other SMEs and corporates, started looking into ways to minimise costs. One of the most efficient ways was to decrease electricity expenses by taking advantage of solar energy.

<b>Investor</b>	Mego.ge LLC
<b>Location</b>	Kutaisi, Georgia
<b>Investment</b>	Solar power station (solar panels, inverter and installation)
<b>Investment size</b>	US\$ 36,700
<b>Energy savings</b>	111 MWh per year
<b>CO<sub>2</sub> savings</b>	58 tonnes per year
<b>Impact</b>	Better service and growth potential for the business
<b>Donor</b>	GCF, BMF

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