

# Where finance and green technologies meet

GEFF in Armenia Newsletter No. 6: Q2 2020

## GEFF KEY RESULTS as of June 30, 2020

- GEFF in Armenia has financed 181 projects worth EUR 15.85 million through four Partner Financial Institutions (PFIs), thus reducing primary energy usage by 74,300 MWh/year, saving 18,150 tonnes of CO<sub>2</sub> annually.
- 26.7 MW installed capacity of renewable energy projects make it possible to avoid 16,529 tonnes of CO<sub>2</sub> annually.
- 1,785 EE and RE technologies of 164 vendors from 21 cities around Armenia are made accessible through the Green Technology Selector at <https://ts.ebrdgeff.com/armenia>.

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## GEFF in Armenia

In the second quarter of 2020, the GEFF team in Armenia celebrated two milestones:

- **A portfolio milestone of USD 17 million** was achieved by four Partner Financial Institutions together, which is almost 90% of the total fund that has been allocated to the Facility in Armenia up until now.
- **The first investment for feed-in tariffs was disbursed to G. Solar LLC**, a company involved in industrial production of electricity through renewable technologies. The EBRD Green Technology Selector was used to select the technology for the investment. Located in Spitak, a city in the Lori region, the 800 kW capacity power plant saves 602 MWh of energy and 263 tonnes of CO<sub>2</sub> annually, and will pay for itself in just six years.

## GEFF expands capacity-building activities with its four PFIs in Armenia

Despite the ongoing impact of the pandemic on the economic situation, the green financing is on the rise across the world. In line with this logic, the GEFF local team contributes to contribute to the development of alternative, innovative financing options in Armenia in order to respond to the growing demand.

Using a series of **online webinars and consultations**, the GEFF experts supported the PFIs in developing a variety of green financing schemes thanks to the partnership with the local suppliers of EE/RE technologies.

Furthermore, GEFF experts conducted **solar PV vendor market research** in order to address the various technical and financial

risks related to the implementation of solar PV projects so as to **help increase the quality of such projects in the future**. The results of these efforts were **shared with PFIs and local vendors via online workshops/webinars**.

In addition, GEFF experts continue to support PFIs in **identifying potential investments** and assessing their technical eligibility for the facility.

The GEFF team is carefully examining the local market developments and working on activities that build strong base for market development and confident decision making by the stakeholder parties, i.e. PFIs, vendors, investors.

## GEFF continues its support to banks during the lockdown – the Deputy Project Manager's outlook in an interview to banks.am



In a recent interview, the GEFF in Armenia Deputy Project Manager, Andro Butkhuzi, answered questions about green finance developments in Armenia, Programme activities and recent achievements, as well as the current situation and the continuous support GEFF brings to the development of a green economy in Armenia.



### **How is the current coronavirus pandemic affecting GEFF's activities?**

The coronavirus pandemic is posing an unprecedented challenge for Armenia, whose economy and financial market are currently enduring a number of financial impacts. Nevertheless, almost all banking services are still available, even lending to certain types of businesses and economic sectors. The financial institutions have already started to adjust to the new working conditions and embrace technology to continue operations and communicate with clients. This crisis will certainly accelerate digitalisation in the financial sector.

Even though the banks are focusing on aspects other than sustainable energy financing amid the crisis, the GEFF's PFIs are continuing their green lending operations. Also, the GEFF team has continued to provide remote support during the lockdown through webinars and screening loan applications. Overall, the majority of our activities have not yet been affected, since the GEFF team has managed to deliver Programme activities without in-person meetings with bank staff, vendors and other businesses. Of course, the situation could change depending on further developments related to the spread of the coronavirus. We are therefore carefully monitoring market developments and remaining in close contact with all partner banks as well as other market players, such as vendors, selected potential clients and associations.

### **GEFF is an integral part of the EBRD. Could you please tell us more about the EBRD's response to the COVID-19 pandemic?**

The EBRD is rapidly stepping up support for its regions in the face of the coronavirus pandemic and now expects to dedicate the entirety of its activities to helping the 38 emerging economies where it invests to combat the economic impact of the crisis. As an initial response to the crisis, the EBRD has unveiled an emergency "Solidarity Package" of measures to help companies across its regions deal with the impact of the crisis. A key pillar of the Solidarity Package is a Resilience Framework providing finance to meet the short-term liquidity and working capital needs of existing clients.

The EBRD now stands ready to provide support worth EUR 21 billion over the 2020-21 period. In delivering its support, the EBRD will work closely with other IFIs, including at the country level, to ensure efficient and coordinated responses for economies and clients in their time of need. In parallel with its increased financial support, the EBRD will put an even greater focus than usual on policy support in order to respond to the short- and longer-term consequences of COVID-19.

The full interview is available at the EBRD GEFF's local [website](#).

## PV projects in focus

### How does one go about selecting a supplier for the installation of PV plants?



Thanks to increasing government support (e.g. feed-in tariffs and net metering for solar electricity), over the past few years, the [market for PV plants has tripled in Armenia](#). This type of construction is new for the country and technical norms and standards have not yet been fully implemented. Although the high number of investments has led to very positive results for the investors as well as for the country's power generation, this development is not without some significant shortcomings with regard to the construction of the plants. Below is a **summary of typical errors and possible solutions**:

- **Low-quality wiring, including the selection of components and materials.** Failures arising from the “amateur” quality of electrical installation affect the plant's performance and also pose a threat to health and safety.
    - ➔ It is advisable to choose PV suppliers with certified personnel and who are licensed for construction in the energy sector.
  - **Low quality of mechanical installation, including structure materials, foundations and structural calculations.** The seeming simplicity of the choice of structure materials due to the lack of professionally performed structural calculations leads not only to shortening the life of the station, but also poses a serious danger to human health.
    - ➔ It is recommended to choose PV suppliers who have on-staff engineering specialists with expertise in the field of structural calculations and who are ready to provide the customer with calculations and material selection.
  - **Grounding and protective devices.** Neglect of grounding and protection devices that are “invisible” in everyday life leads not only to a decrease in plant performance, but also to damage to the customer's electrical appliances and, most importantly, constitutes a serious threat to human health and safety.
    - ➔ It is important to carefully study the submitted commercial proposals for the availability of protective devices. Suppliers who submit a quotation without having studied the situation of the grounding at the client's site should be avoided.
  - **Shading and spacing between rows of panels.** Shading to one degree or another is present at almost all PV stations, for example, from neighbouring rows of panels, trees, buildings, etc. Seemingly insignificant fading, due to the short spacing between the rows, can reduce annual production by 30% or more.
    - ➔ It is recommended to give preference to suppliers who conduct a detailed assessment of the real shading factors at the client's site and include them in the simulation of the plant's production.
- Last but not least, a conscientious PV supplier should provide the customer with a commercial offer, including a **forecast of annual electricity production based on a detailed simulation of the plant**.



## EBRD in Armenia

### EBRD launches online learning resource for small businesses

The EBRD is launching a [free-to-use online learning](#) and advice programme to support micro, small and medium-sized enterprises (MSMEs) confronted with the economic impact of [the coronavirus pandemic](#). The EBRD's "Know How to...in a Crisis" programme, hosted on the Bank's platform, [The Know How Academy](#), is a central learning hub where entrepreneurs can access practical assistance, including training materials and crisis management advice from industry experts, and can join peer discussion forums.

The hub will also offer specific local information on the financial support available from governments and banks in 30 of the economies where the EBRD invests.

Launched by the EBRD as part of its enhanced support for firms during the current crisis, the programme will focus on five key business pillars:

- Crisis Management: **Your customers and suppliers**
- Crisis Management: **Financial management essentials**
- Crisis Management: **Financing your firm**
- Crisis Management: **Your staff your key asset**
- Crisis Management: **Management and leadership challenges**

The initiative is funded by the [European Union](#) and the [EBRDs Small Business Impact Fund](#). The PFI current sub-borrowers can be informed of the opportunity to take advantage of the knowledge and increase their competitiveness by making use of the platform.

Learn [more](#).

### GEFF partner bank recognised with an EBRD TFP Award

The EBRD Trade Facilitation Programme (TFP) announced the winners of its prestigious annual TFP Awards. The banks in 27 countries that have been the most successful in delivering EBRD financing were honoured and recognised as the Most Active Issuing Banks in the regions.

In 2020, the Programme has stepped up its support, providing amplified financing for trade with a record EUR 1.5 billion in the first five months of the year.

Businesses that offer green technologies can benefit from TFP and GEFF programmes combined, where funds can be used to finance



the import of high-performing, energy and resource efficient equipment from foreign manufacturers and suppliers.

ArmSwissBank in Armenia was named the winner in this award category.

Learn [more](#).

## Energy sector in Armenia

### The Masrik-1 solar PV power plant project has entered an active phase



As the start of the solar revolution in Armenia, the Masrik-1 solar photovoltaic power plant project has entered an active phase thanks to the Armenian government's decision of June 18, 2020, 1016-A. The international tender for the construction of the solar photovoltaic station, the first one in Armenia on an industrial scale, was announced in the first half of 2017. To this end, the EBRD and IFC have amended the Government Support Agreement for the Project Credit Fund (the changes mainly concern definitions of concepts). For example, the responsibility of the developer vis-à-vis possible environmental violations has been clarified. As for the construction of Masrik-1, the winner of the competition was Fotowatio Renewable Ventures BV (Netherlands) – FSL Solar S.L. (Spain), a consortium of companies with which the Armenian government signed a Government Support Agreement in 2018 pertaining to the organisation and implementation of the project. Masrik-1 is a 55 MW alternating current 62.013 MW peak

power photovoltaic station, installed on 128.3 hectares. The length of the fence of the station will be 5,870 m, with a 9.2 km-long 110 kV high-voltage overhead line to be built from the plant's substation to the Kaputak and Akunk air support anchors. Based on the government's decision of March 29, 2019, 32,6591 hectares of land were allocated from the site of the Mets Masrik plant for the construction of the station.

As such Masrik-1 is the gold trophy of the industry showcasing a strong investment case in the chain of many solar PV projects to come, as Armenia has untapped solar energy potential and the investments in solar PV are a business opportunity both for PFIs, vendors and investors. In this regard, the partnership with EBRD makes the implementation of such projects secure and reliable in the long-term for all the stakeholder parties.

Read [more](#).

## Cases from GEFF

### Armenian supermarket harnesses solar power for sustainable growth

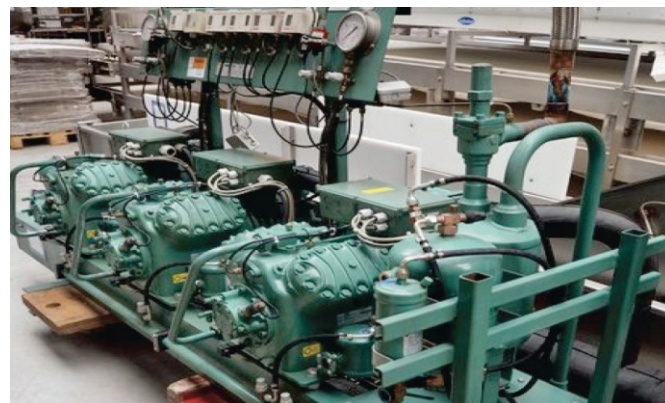


Geghetskui Anahit LLC established the largest supermarket and food court in the Gegharkunik region in 2014.

Located on a major touristic highway that connects the east and west, the business benefits from many visitors and a high number of sunny days each year. With an investment opportunity enabled by financial partners, the owner decided to take full advantage of solar technologies in order to make the business more independent and sustainable in the long run.

<b>Location:</b>	Gegharkunik
<b>Investment:</b>	Loaders
<b>Investment size:</b>	US\$ 124,000
<b>Financial results:</b>	Payback in 6 years
<b>Energy savings:</b>	239 MWh per year
<b>CO<sub>2</sub> savings:</b>	66 tonnes per year
<b>Impact:</b>	Reduction of energy costs
<b>Donor:</b>	GCF, CIF

### Green refrigeration helps save both energy and water



Established in 2002, Tamara Fruit CJSC is one of Armenia's largest companies, producing a wide range of conventional juices, compotes, nectars, jams, etc. It is also the first enterprise in Armenia to produce deep-frozen fruit and vegetables, as well as organic food.

After 17 years of using an ammonia-based refrigeration system, the company's management decided to replace it with a modern Freon gas-based model.

<b>Location:</b>	Aragatsotn
<b>Investment:</b>	Centralised refrigerating system
<b>Investment size:</b>	US\$ 39,300
<b>Financial results:</b>	Payback in 6 years
<b>Energy savings:</b>	84 MWh per year
<b>CO<sub>2</sub> savings:</b>	37 tonnes per year
<b>Impact:</b>	Increased resource and cost efficiency
<b>Donor:</b>	GCF, CIF

Read more [Success Stories](#)