# Solar Microgeneration: A new project for the integration of Solar Power into the Russian distribution grid

















Krasnodar/Berlin – A new training and demonstration photovoltaic (PV) facility in Krasnodar in southern Russia has been demonstrating the integration of solar power into the region's electricity distribution grid since July 2020. The project, called "Solar Microgeneration", is based on significant improvements in the framework conditions for photovoltaics in Russia.

It is the result of a German-Russian cooperation coordinated by KRAFTWERK Renewable Power Solutions GmbH from Berlin. Other partners on the German side are eclareon GmbH and the German Solar Association (BSW Solar). On the Russian side, next to EUROSOLAR Russia, it is the UDPO Energy Advanced Training Institute of PJSC "Kubanenergo" and the National Research University MPEI (Moscow Power Engineering Institute). The project is co-funded by the German Federal Ministry for Economic Affairs and Energy (BMWi).

"We are delighted to support distribution grid operators in their preparations for the microgeneration law and thus help accelerating the decentralized energy transition in Russia," says Dr Roman Brinzanik, Director New Markets at KRAFTWERK Renewable Power Solutions and co-initiator of the project.

"Participation in the project "Solar Microgeneration" is very important for the Institute for two reasons: First, the Institute of advanced training Kubanenergo got the opportunity to develop new areas of training, and secondly, participation in this project will make the process of technological connection of microgeneration facilities to make simple, affordable and safe process", rector Evgeniy Rud from UDPO points out.

Supported by:



on the basis of a decision by the German Bundestag "A series of seminars within the framework of the educational project "Solar Microgeneration" is an excellent opportunity to share 40 years of German experience in large-scale implementation of renewable energy sources and their integration into power grids to Russian specialists and young generation of power engineers, to show the no-alternative "Energy Transition" in order to protect the environment and preserve fossil energy sources, and to demonstrate the huge potential of "green" energy in the development of modern economy and creation of new high-tech jobs", says Prof. Dr. Alexander Kirjuchin from the National Research University MPEI (Moscow Power Engineering Institute).



The cooperation benefits from the so-called "microgeneration" law passed by the Russian parliament, the Duma, at the end of 2019. The new law makes it possible for the first time in Russia to set up grid-connected PV systems with a capacity of up to 15 kW for self-consumption. Surplus electricity can be fed into the grid and will be remunerated at the level of electricity prices traded on the electricity market.

The project, which emerged from the ongoing German-Russian cooperation "ENABLING PV", aims to develop solar energy-friendly grid connection and feed-in regulations in cooperation with Russian energy experts and distribution grid operators and to test them in practice. At the same time, it is to be ensured that all technical requirements of the Russian distribution grid operators regarding the implementation regulations for solar plants are met.

"The ENABLING PV network continues to grow and the cooperation on both sides is becoming a bit more intensive again with this successful project, as we are now also dealing with the distribution grid infrastructure and thus jointly laying an important foundation for the expansion of decentralized renewable energies in Russia," is how Christoph Urbschat, co-initiator of the project and Managing Director of the Berlin-based consulting firm eclareon, assesses the project. George Kekelidze, Chairman of the Board, NP RE Eurosolar Russia fully agrees to it: "We are reaching a new dimension of partnership cooperation between companies, experts and associations from Russia and Germany!"

As part of the project, KRAFTWERK Renewable Power Solutions donated a grid-connected 5 kWp PV system. KRAFTWERK planned the system together with UDPO Energy Advanced Training Institute of PJSC "Kubanenergo", then installed it with the Krasnodar company Clever Energy LLC

and handed it over to the institute for further operation. The PV system is intended for training the personnel of distribution grid operators and PV installers as well as for testing purposes. The PV modules were mounted on a ground structure as well as on a roof imitation to demonstrate different mounting systems. The PV installation also includes a smart meter, a monitoring system connected to the internet, and a weather station that enables the institute to determine the factors affecting the PV yield.



"The solar market in Russia has been dormant for a long time," says David Wedepohl, Managing Director International at BSW Solar. "The favorable price development for solar power coupled with the improved framework conditions could change that. We are happy to work to shape these in such a way that a growing solar market with many jobs can also emerge here. It is important to involve young people, because the restructuring of the energy system is a generational task," says Wedepohl.

Another training course for distribution grid operators will take place in Kaliningrad end of this year. In addition, first lectures on the topic will be held for students at the research university MPEI in Moscow before the end of the year. Information on the ongoing activities and the results of the project are available at <a href="https://www.enabling-pv.ru/projects/solar-microgeneration">https://www.enabling-pv.ru/projects/solar-microgeneration</a>.

About the project partners:

### KRAFTWERK Renewable Power Solutions GmbH

was founded in 2010 in Weingarten, Germany, and is internationally oriented with project offices in Frankfurt, Berlin, Santiago de Chile, Lima, Cairo, and Tunis. KRAFTWERK develops and implements customized solar power solutions for on-grid and off-grid applications. <a href="https://kraftwerk-rps.com">kraftwerk-rps.com</a>

# UDPO Energy Advanced Training Institute of PJSC "Kubanenergo"

is the training and research center of Kubanenergo (Rosseti Kuban), the leading grid operator in the Krasnodar region, and also trains numerous other grid operators in southern Russia on topics related to electricity grid operations. <a href="mailto:eipk.ru">eipk.ru</a>

# National Research University (Moscow Power Engineering Institute)

is a leader in academic research and teaching in the field of electrical engineering in Russia and has a competence center for photovoltaics with the Chair of Hydropower and Renewable Energies. <u>mpei.ru</u>

# eclareon GmbH

is an owner-managed consulting company based in Berlin that specializes in the energy and environmental technology sectors and is the initiator and coordinator of the "ENABLING PV in Russia" project. <a href="https://www.enabling-pv.ru">www.enabling-pv.ru</a> eclareon.com

# **German Solar Association**

has been representing the interests of the German solar and storage industry for over 40 years. solarwirtschaft.de/en

# **EUROSOLAR Russia**

is one of 13 country sections of the European Renewable Energy Association EUROSOLAR, a non-profit organization founded in 1988. <a href="https://www.eurosolarrussia.org">www.eurosolarrussia.org</a>