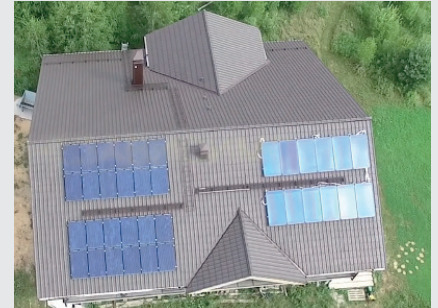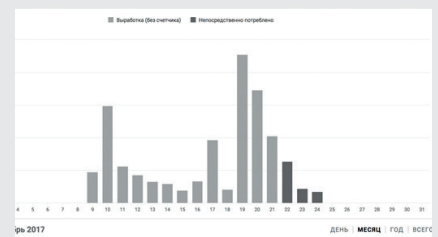**Fronius**

"CEDRUCCIO" COUNTRY HOUSE, RU

/ Self-sufficient country house with autonomous energy and heating supply
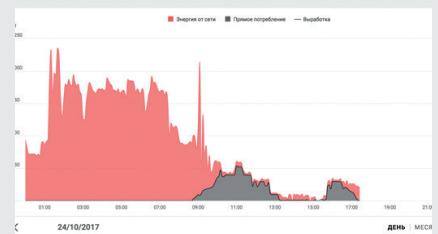

/ There are all sorts of beautiful places in Russia that are a long way away from the public grid. A house in such a place therefore needs a completely independent electricity supply. And even when there is a connection to the grid, the mains supply is not always sufficient. Fronius inverters with the MicroGrid function are the perfect solution for supplying electricity to remote areas.

/ The self-sufficient house "Cedruccio" in central Russia gets 80 percent of its energy from solar power and 20 percent from diesel generators or the unstable grid. The 6-kW PV module array located on the roof is connected to a Fronius Symo 5.0 with MicroGrid configuration, which is linked to a three-phase UltraSolar Pro lithium-ion energy storage system with a peak capacity of 36 kW and 14 kWh usable storage capacity.

/ As it became apparent that in summer a lot more energy is produced than is needed, a Fronius Smart Meter was added to the system in order to ensure zero feed-in to the public grid and to transform the excess solar energy into heat. The heat is stored in a HAASE 40,000 litre GFK hot water tank installed in the house, meaning solar energy not only supplies renewable power, but also hot water and heating.
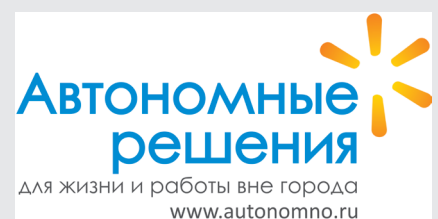

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INSTALLATION DATA	
Size of installation	6 kWp
Purpose, system type	Roof-mounted system
Inverter	1 Fronius Symo 5.0-3-M
Inverter charger	Schneider Electric XW+ 8548 x 3
Battery	Industrial LIFePO4 20 kWh with BMS
Commissioned	July 2015
Special feature	Microgrid
Future expansion	Additional 6 kWp with Fronius Symo and Fronius Ohmpilot

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