

# PROJECT FICHE



<b>Project title</b>	<b>Design and Manufacturing of Energy Storage Systems for Residential Photovoltaic Installations</b>
<b>Sector</b>	The residential environment for green energy production
<b>Location</b>	<i>Petrosani, Hunedoara County, Romania</i>
<b>Project purpose</b>	<i>Energy Storage Systems (ESS) represent a promising solution for storing renewable energy and enhancing energy efficiency in residential settings. LFP battery-based ESSs aim to be a locally designed and manufactured alternative within the EU, addressing all existing market shortcomings. It is important to note that the ESS to be manufactured will also incorporate a patented invention.</i>
<b>Beneficiaries of the project</b>	<i>This European alternative to energy storage solutions is designed to reduce reliance on imported equipment from outside Europe.</i>
<b>Project relevance and need</b>	<i>The rising electricity costs, the looming energy crisis, and the need for grid balancing have necessitated the development of energy storage solutions. Additionally, many users have installed photovoltaic systems without energy storage capabilities, meaning the excess energy produced when electrical demand is low cannot be utilised effectively. Daytime energy storage enables users and small-scale energy producers (prosumers) to use stored energy at night, maximising self-consumption and energy efficiency.</i>
<b>Implementing actor</b>	<i>Energy storage systems will be used by both local and European prosumers. In Romania, there is the advantage of the AFM (Environmental Fund Administration) Casa Verde Fotovoltaice funding programme, which implicitly supports the purchase of ESS solutions.</i>
<b>Activities</b>	<i>ESS units will be acquired both through the Casa Verde Fotovoltaice programme and by private investors who will rely on specialised installers for the installation and commissioning of photovoltaic systems, including those with storage. The demand for ESS is expected to grow significantly, as electricity costs continue to rise while the price per kWh of storage systems steadily decreases.</i>
<b>Linked activities</b>	<i>This project can be integrated with Romania's Casa Verde Fotovoltaice programme.</i>
<b>Expected result(s)</b>	<i>It aims to capture a 15% market share within the programme, covering a total of 9,000 units.</i>

<b>Expected contribution(s) and impact(s)</b>	<p>Assuming:  Each ESS unit contributes ~5.5 MWh/year of energy optimization (based on EU residential PV profiles and daytime-nighttime self-consumption)  Each kWh saved avoids 310 g CO<sub>2</sub>-eq (national residential factor, EIB methodology)  Calculated impact:  Estimated energy savings:  9 000 units × 5.5 MWh = 49 500 MWh/year  Emission reduction:  49 500 MWh × 310 g CO<sub>2</sub>/kWh =  15 345 000 kg CO<sub>2</sub>-eq/year = 15 345 t CO<sub>2</sub>-eq/year</p> <p>☑ Summary:  • Estimated energy savings: ~49 500 MWh/year  • Estimated GHG emission reduction: ~15 345 tCO<sub>2</sub> eq./year</p>
<b>Institutional framework</b>	Local entrepreneur
<b>Budget</b>	Total project cost: €1,600,000
<b>Sources of funding or financing</b>	Funding sources: European funds and own resources (EBS Electric Group)
<b>Implementation schedule</b>	Project completion: 2026
<b>Sustainability</b>	The installation of photovoltaic systems for prosumers must be supported by efficient storage systems capable of supplying electricity during the night.
<b>Replication</b>	This project can be financed through the Casa Verde Fotovoltaice programme by AFM, self-financing, or other external funding sources (e.g. bank loans, leasing, etc.).

# ABOUT

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