

# ROMANIAN ENERGY STORAGE BATTERY APPLICATIONS



What is a battery energy storage scheme in Romania? The aim of the scheme is to support investments in battery electricity storage facilities, allowing for a smooth integration of renewable energy coming from wind and solar sources in the Romanian power system. Under the scheme, the aid will take form of a direct grant to projects selected through a competitive bidding process.



Will Romania support the construction of electricity storage facilities? Following the positive assessment of the Romanian Recovery and Resilience Plan, the Commission has approved a ???103 million Romanian scheme to support the construction of electricity storage facilities.



Does Romania need a strategy for energy storage? Based on the EU context and planning a significant uptake of renewable energy sources in its electricity mix over the following decades, Romania must also develop a strategy for the deployment of energy storage technologies.



Can storage technologies improve energy security in Romania? Such enhanced legislation is needed for implementing the Romanian National Energy and Climate Plan (NECP), which lists ???developing storage capacities??? as an instrument to improve energy security but lacks detail on how storage technologies will be deployed until 2030.



Why does Romania need a new energy system? The Romanian energy system is currently highly dependent fossil fuels, centralised, and to a good extent technically obsolete, being in serious need of overhaul in order to sustain the upcoming energy transition.

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Does Romania have a storage policy? In response to EU Regulation 2019/943, which clarifies the role of storage and its ownership status, the Romanian authorities transposed in Law 155/2020 (amending Energy Law 123/2012) specific provisions related to new storage facilities and their management rules.



The representatives of the Romanian Energy Regulatory Authority ("ANRE") intend to include the energy storage in a future legislative package given that "electricity should be used close to the point of use and it would be better for Romania to increase the number of large consumers among industrial users than to export energy." 1 Emil



The European Commission (EC) has approved Romania's plan to launch a 103 million euros worth support scheme for the installation of battery energy storage system aimed to facilitate the expansion of renewable energy capacities. The Commission said that the initiative will be partially funded through Romania's National Recovery and Resilience Plan (NPRR) of ???



The role and importance of energy storage, and in particular battery storage technologies, are expected to increase significantly. In the medium term, stationary batteries are expected to reach about 10% of the battery market, but their role will further grow. storage and application of hydrogen to fuel cells. The directions pursued include

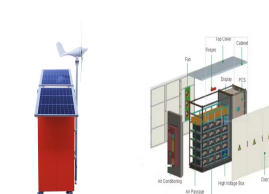


MONSSON connected to the National Grid - the largest Energy Battery Storage capacity in Romania, a 95% Romanian project, made with own funds The concept is modular and suitable for large scale applications. The Monsson energy storage facilities are developed special for harsh climate conditions, utilizing the latest technologies in

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DNO and IPP Electrica has secured ???3.4 million (US\$3.8 million) in EU grants for a battery energy storage system (BESS) project in Romania, boasting a capacity of approximately 70MWh. This funding comes from Romania's share of the EU's National Recovery and Resilience Plan (PNRR), which received a ???103 million budget approval from the EU last ???



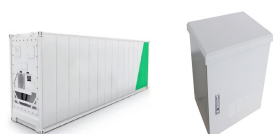
Monsson, a key player in renewable energy solutions, recently announced the commissioning of Romania's largest energy battery storage capacity on April 9th. This milestone marks a significant advancement in the country's renewable energy infrastructure. Integration into Hybrid Renewable Energy Project The energy battery storage facility is an integral component ???



Romanian Ministry of Energy has reopened a tender for battery storage for the grid integration of renewable energy, seeking "at least" 240MW and 480MWh of resources. The Ministry is aiming to get the 2-hour duration battery energy storage system (BESS) facilities up and running by mid-2026. A technical guide for selection criteria has been issued,



Battery Energy Storage Systems are key to integrate renewable energy sources in the power grid and in the user plant in a flexible, efficient, safe and reliable way. Our Application packages were designed by domain experts to focus on your specific challenges.



As of April 2024, the Monsson battery energy storage system in Constan??a County is the largest of its kind in Romania. With an installed capacity of 24 MWh ??? (6MW x 4h), the facility was built and inaugurated on April 2024 by Monsson.. Monsson is a company under the Monsson Group, that has been developing and owning renewable energy projects since ???

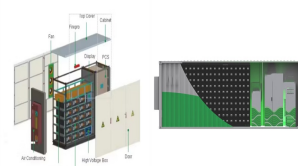
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Minister of Energy Sebastian Burduja signing 24 financing contracts for self-consumption solar and storage projects, worth nearly 14 million. Image: Ministry of Energy. A 204MW battery energy storage system (BESS) project in Romania can progress after the government said it did not need to go through an environmental impact assessment (EIA).



1.1 Introduction. Storage batteries are devices that convert electricity into storable chemical energy and convert it back to electricity for later use. In power system applications, battery energy storage systems (BESSs) were mostly considered so far in islanded microgrids (e.g., [1]), where the lack of a connection to a public grid and the need to import fuel [2].



Romanian renewable energy developer Monsson has commissioned the largest energy battery storage system in Romania as part of the country's first hybrid photovoltaic-wind-battery project. Installed at the 50 MW Mireasa Wind Park, in Constanta county, the storage unit has a capacity of 24 MWh (6 MW x 4 hours) and represents the first stage of



The framework for categorizing BESS integrations in this section is illustrated in Fig. 6 and the applications of energy storage integration are summarized in Table 2, including standalone battery energy storage system (SBESS), integrated energy storage system (IESS), aggregated battery energy storage system (ABESS), and virtual energy storage



Romania expects its overall energy storage to amount to at least 2.5 GW in operating power at the end of 2025, and to expand to as much as 5 GW a year later, local media reported, citing Minister of Energy Sebastian Burduja [3].

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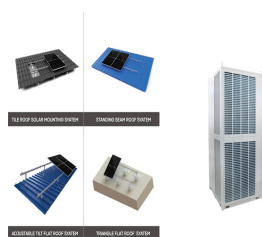
**IMPORTANT UPDATE !** We've changed the venue! On Thursday, September 26 2024, at Ramada by Wyndham Bucharest Parc, Energynomics organizes a meeting dedicated to battery energy storage solutions, where we will expose the trends and challenges facing the Romanian renewable energy industry and promote relevant discussions in order to chart a solid path for ???



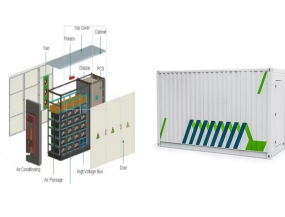
Julch [15] analyzed four storage technology groups, pumped-storage hydroelectricity, compressed air energy storage, battery technologies (Lithium-ion, Lead and Vanadium redox flow batteries) and power to gas. The author calculated the LCOS based on the performances and costs of each type of technology to determine the cheapest technology for



Finland and Greece are also using the funding pot to support energy storage projects. Romania is currently targetting 30.7% renewable generation in its electricity mix by 2030. The country hasn't had many utility-scale energy storage projects in recent years but a booming solar market is set to help the battery storage follow on.



The Romanian Photovoltaic Industry Association said that by 2026, the country is expected to add at least 3GW of renewable energy, of which about 2GW will be solar. Statistics from the International Renewable Energy Agency show that by the end of 2022, Romania's solar installed capacity will be 1,414MW.



MONSSON connected to the National Grid the largest Energy Battery Storage capacity in Romania Romania, Constanta, 09 April 2024 ??? Monsson has commissioned the largest energy battery storage capacity in Romania. The capacity is part of the first hybrid photovoltaic-wind-battery project, installed at the existing operational 50 MW project.

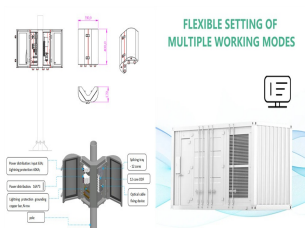
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Romania's Ministry of Energy has reopened its call to support projects of battery storage for renewable energy integration, seeking at least 240 MW and 480 MWh of resources. With this reopened bidding, the ministry aims to see the two-hour duration battery energy storage system (BESS) facilities up and running by mid-2026. The budget for



The Ministry of Energy of Romania has reopened a competitive solicitation for battery storage for the grid integration of renewable energy, seeking "at least" 240MW and 480MWh of resources. The Ministry made its announcement yesterday (8 February), aiming to get the 2-hour duration battery energy storage system (BESS) facilities up and



R??zvan Nicolescu, the EIT Governing Board member and former energy minister in Romania, declared: "I am very excited that such an important storage capacity is manufactured and installed in Europe by a Romanian company benefiting from EIT InnoEnergy support. The project is very important for the resilience and energy autonomy of Europe because the ???



Romania's energy ministry has re-launched a competitive tender for battery storage projects, seeking to have at least 240MW/480MWh of energy storage facilities up and running by mid-2026. A total of ???79.6 million is allocated for the battery energy storage project. ???199 million will be spent on related manufacturing capacity. Of this



The first innovative project, jointly carried out and self-funded by these two Romanian companies, is an energy storage system powered by solar energy at the Romanian Prodromu Skete, located on Mount Athos, Greece. Designed to allow the expansion of battery storage capacity in future stages, this micro-energy system will be extended in the

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Battery technologies play a crucial role in energy storage for a wide range of applications, including portable electronics, electric vehicles, and renewable energy systems.