

# Future Trends in Energy Storage in Armenia







#### **Overview**

How much electricity does Armenia produce a year?

Last year Armenia produced 8,907.9 GWh of electricity, up 16% from 2021. The vast majority came from thermal power plants in Yerevan and Hrazdan (43.5%) and the Metsamor Nuclear Power Plant (32%). Hydropower accounted for 21.8%, while solar stood at 2.7% and wind power at just 0.02%.

How much energy is consumed in Armenia in 2022?

Energy consumption has steadily increased over the past decade, reaching 2.9 Mtoe in 2022, and is projected to continue growing, reaching approximately 3.5 Mtoe by 2040 (USAID, 2019). Armenia's energy sector has been significantly shaped by its geographical and geopolitical circumstances.

Which sectors consume the most energy in Armenia?

Energy consumption is primarily concentrated in the household (34%) and transport (30%) sectors. In transportation, consumption is divided mainly between oil products (52%) and natural gas (46%), with cars in Armenia boasting one of the largest shares of vehicles running on compressed natural gas (CNG) worldwide.

How much wind power does Armenia have?

A 2003 study by the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) estimated Armenia's land areas with "good-to-excellent" wind resource potential to be around 1,000 km². With a conservative assumption of 5 MW per km², the authors noted that the area could support almost 5,000 MW of potential installed capacity.

Is geothermal energy viable in Armenia?

The geothermal energy potential of Armenia is significant, but is not considered economically viable, at least for now. The World Bank has estimated the total potential at around 150 MW. The Karkar site in Syunik, for



instance, has an estimated capacity of 28 MW with a construction cost of nearly \$100 million, far pricier than solar.

Why is Armenia not able to produce small turbines?

According to a study commissioned by the Konrad Adenauer Foundation, Armenia's roads, including fluctuations in elevation, make them problematic and unsuitable for transporting large turbines (generating 1.5 to 3 MW) and blades (up to 52 meters long). There are ongoing attempts to set up domestic production of small turbines.



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#### Armenia's energy sector: current developments and challenges

Currently, Armenia is in the initial stages of developing a pilot project on battery storage, with plans for a utility-scale project with an estimated installed storage capacity of 1,200 MWh to be ...

#### Energy storage investment hotspot, C& I Energy Storage System

The Article about energy storage investment hotspotArmenia Smart Energy Storage Cabinet Solution: Powering the Future with Innovation You're enjoying Armenia's stunning mountain ...





#### <u>Armenia Energy Storage Economic and Financial</u> Analysis ...

This report analyzes the economic and financial viability of battery storage solutions to ensure the reliable and smooth operation of Armenia's power system in the context of an increasing share ...

#### Armenia Residential Energy Storage Market (2025-2031)

The residential energy storage market in Armenia is driven by the country's efforts to integrate renewable energy sources into the grid.



Government incentives, coupled with rising electricity ...



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With increasing investments in renewable energy and grid modernization, the country's energy storage sector is experiencing unprecedented growth. This article explores the driving forces, ...



## Yerevan Energy Storage Industrial Park: Powering Armenia's Green Future

The Yerevan Energy Storage Industrial Park isn't just another concrete jungle. It's where Armenia's tech nerds, climate warriors, and business sharks collide over lithium batteries and ...



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