



Solar Panels and Wind Farms: A Trip Down Renewable Energy Lane

These days, renewable energy sources like solar panels and wind farms are crucial to a sustainable future. But have you ever wondered how they got their start? Let's explore the remarkable history of both of these clean energy technologies and the pioneers who made them possible.

The First Energy Generating Windmill

The origins of harnessing wind energy can be traced back thousands of years. Early civilizations used simple windmills to grind grain and pump water. However, the first windmill designed specifically to generate electricity was created by **Charles F. Brush** in **1887** in Cleveland, Ohio. This early wind turbine stood 60 feet tall and featured a 56-foot, 144-blade rotor made from cedar wood. It generated 12 kilowatts of power, which Brush used to charge batteries and provide electricity for his mansion.

The First Solar Panel

The development of solar technology also has deep historical roots. The first practical solar cell was invented in **1954** by **Daryl Chapin, Calvin Fuller, and Gerald Pearson** at Bell Laboratories. The trio created a silicon-based solar cell capable of converting sunlight into usable electricity with about 6-percent efficiency. This groundbreaking invention marked the beginning of the modern solar industry and demonstrated the potential for harnessing the sun's energy. For more details, see the full history of solar panels [here](#).

The Rise of Modern Wind Farms

As early as 200 BC, wind-powered water pumps were being used in China and windmills were used to grind grain in the Middle East. Modern wind turbines and wind farms began cropping up in the 1980s, as technological advancements made them more efficient and feasible. Early wind power development focused on smaller turbines, but over time, larger-scale farms emerged to harness more energy. Today, wind-generated power plays a crucial role in reducing carbon emissions and fighting climate change. As with early pioneers like Charles F. Brush, the continued innovation in wind technology remains key to future energy solutions. For more details, see the full history of wind energy [here](#).

The Rise of Modern Solar Farms

Following the rise of wind farms, solar farms have become a vital component of the renewable energy landscape. As advancements in photovoltaic technology drove down the cost of solar panels, large-scale solar installations began emerging in the early 2000s. Solar farms, which consist of vast arrays of interconnected solar panels, are strategically positioned in regions with high sunlight exposure to maximize energy production. Unlike rooftop solar panels designed for individual homes, these expansive farms contribute directly to the power grid, providing clean and sustainable electricity to entire communities. With growing investments and improvements in storage solutions, solar farms now play a crucial role in meeting global energy demands while reducing carbon emissions. Their success underscores a remarkable shift toward a cleaner, greener future powered by the sun.

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¹ The electric supply price to compare is for residential customers. Electric supply price to compare for other rate classes (in cents per kWh) that are currently applicable include: Watt-Hour Non-Electric Space Heating 6.574 cents/kWh; Demand Non-Electric Space Heating 6.624 cents/kWh; Nonresidential Electric Space Heating 6.450 cents/kWh; Dusk to Dawn Lighting 3.723 cents/kWh; General Lighting 6.107 cents/kWh.

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¹ The electric supply price to compare listed above is for residential customers. Other rate class rates as of the month above (in cents per kWh): Small General Service (Secondary) 8.718 Small General Service (Primary) 8.569; Small General Service (High Voltage) 8.481.

