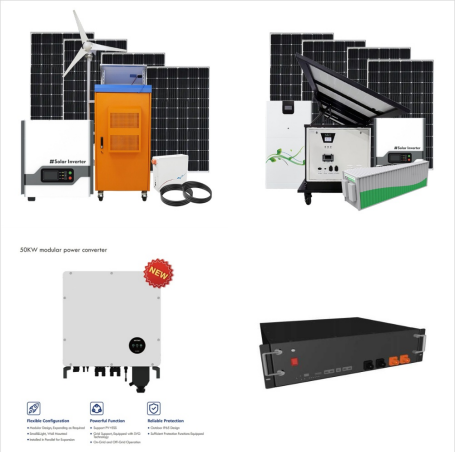
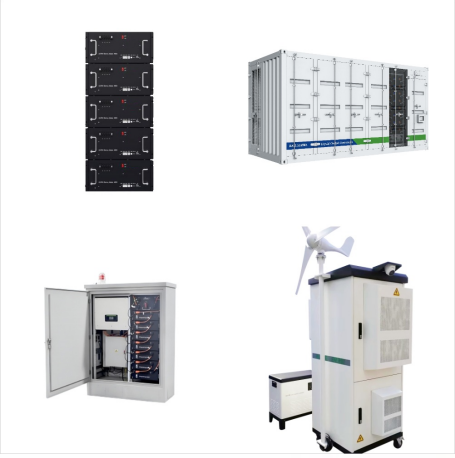
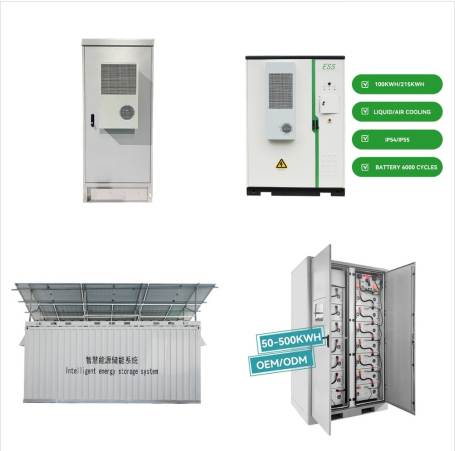


Moderate growth in U.S. energy consumption is the result of economic growth, population growth, and increased travel offsetting continued energy efficiency improvements. Demand-side energy intensity???the measure of energy consumed per household or per square foot of commercial floorspace???decreases as a result of changes in technology, policy

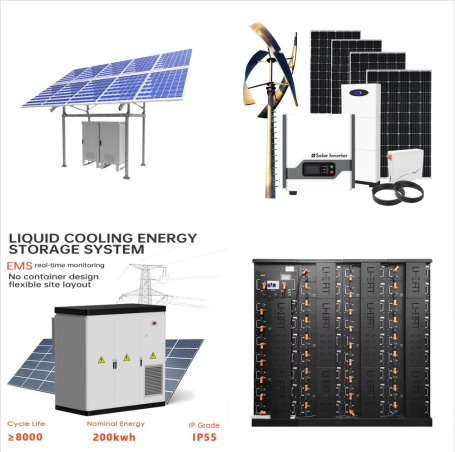


The United States announced important new funding in 2022 under the IRA, which is expected to advance deployment of renewables in the medium term, Accelerating wind and solar PV capacity additions are driving the growth in renewable energy supply, but activity needs to ramp up rapidly to align with the NZE Scenario

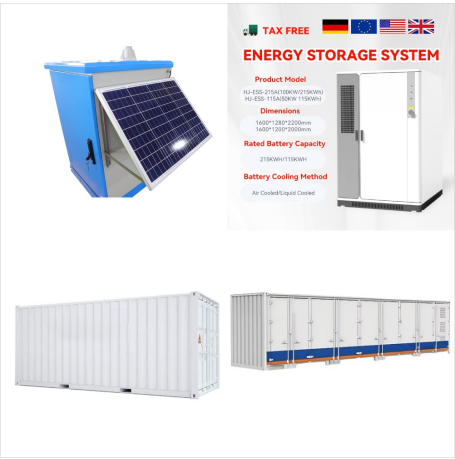


Following COP28's calls to triple renewable energy capacity by 2030, the increasing momentum to decarbonize could lead to the fastest growth in renewable energy in the next five years. But key challenges remain, notably, the lack of financing for emerging and developing economies leading to unequal distribution of clean energy across the world.

GROWTH OF RENEWABLE ENERGY IN US



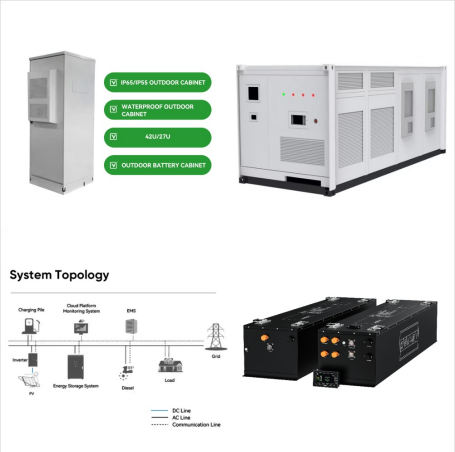
Understanding S-curve Growth Dynamics . According to the International Energy Agency, to limit global warming to 1.5 degrees C, renewables will need to reach 61% of global electricity by 2030 and 88% by 2050, with solar and wind making up the dominant share.. Reaching such high levels of renewables sounds daunting, but is less so when you consider ???



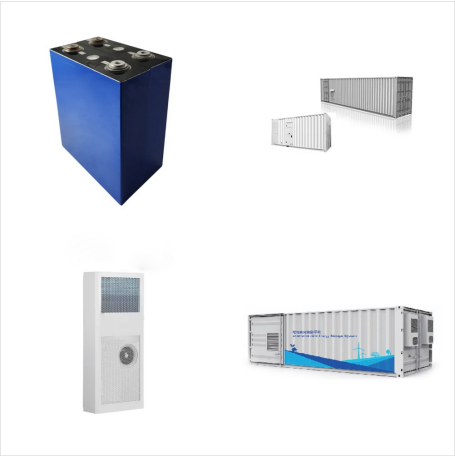
Energy consumption and carbon dioxide emissions indicators; Primary energy consumption per capita: 279 million Btu per person: Primary energy consumption per real dollar of GDP: 4.18 thousand Btu per chained (2017) dollar: Energy-related CO 2 emissions per capita: 14.3 metric tons (31,526 pounds) per person: Energy-related CO 2 emissions per

In many ways, 2023 was a record-breaking year for clean energy deployment in the United States, including the escalating installation rate of solar and energy storage, growing EV sales and the number of planned domestic manufacturing facilities.

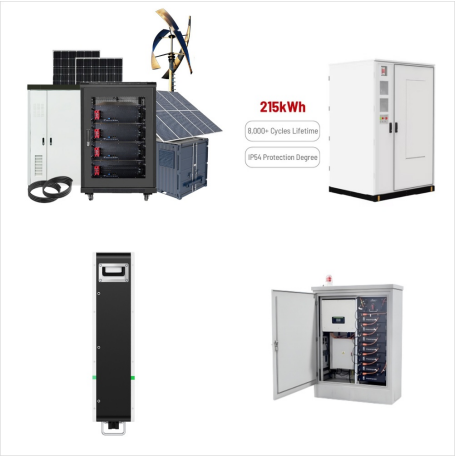
GROWTH OF RENEWABLE ENERGY IN US



The United States" renewable energy sector, already the second largest in the world, is poised for strong growth. Bolstered by growing demand for clean energy, falling costs, and robust incentives, renewable Growth in the renewable s sector is expected to continue in the co ming years. According to the EIA,

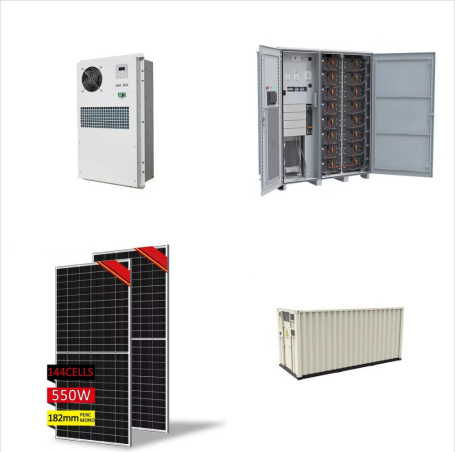


The world is on course to add more renewable capacity in the next five years than has been installed since the first commercial renewable energy power plant was built more than 100 years ago. In the main case forecast in this report, almost ???

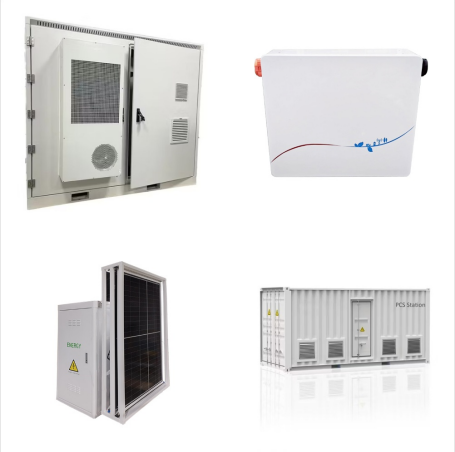


U.S. DEPARTMENT OF ENERGY SOLAR ENERGY TECHNOLOGIES OFFICE | 2024 PEER REVIEW 4 A Historic Level of U.S. Deployment, totaling 177 GW dc /138 GW ac ??? The United States installed 26 GW ac (33 GW dc) of PV in 2023???up 46% y/y. 13.2 1.5 3.9 Note: EIA reports values in W ac which is standard for utilities. The solar industry has traditionally

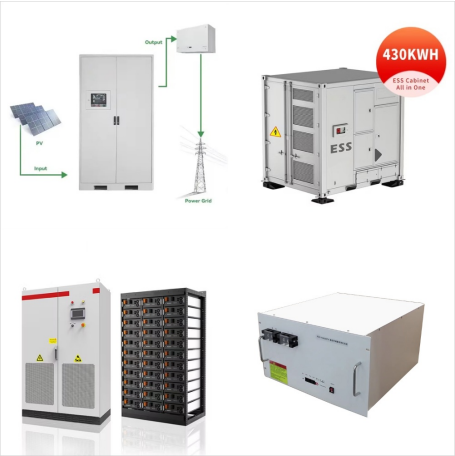
GROWTH OF RENEWABLE ENERGY IN US



Renewable energy statistics 2024 provides datasets on power-generation capacity for 2014-2023, actual power generation for 2014-2022 and renewable energy balances for over 150 countries and areas for 2021-2022. The investment data is presented in millions of United States dollars (USD million) at 2021 prices.

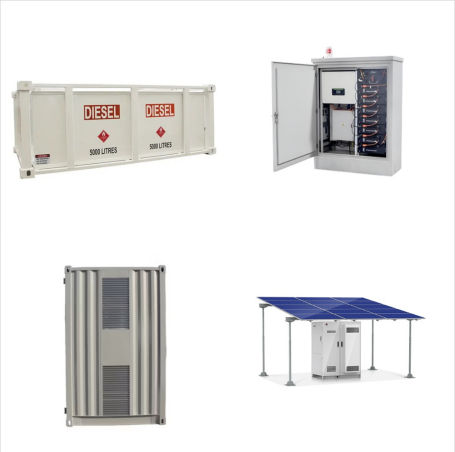


There are five energy-use sectors, and the amounts???in quadrillion Btu (or quads)???of their primary energy consumption in 2023 were: 1; electric power 32.11 quads; transportation 27.94 quads; industrial 22.56 quads; residential 6.33 quads; commercial 4.65 quads; In 2023, the electric power sector accounted for about 96% of total U.S. utility-scale ???



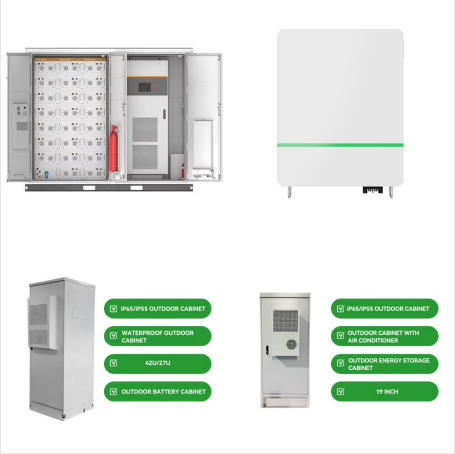
Overall, led by the massive growth of renewable electricity, the share of renewables in final energy consumption is forecast to increase to nearly 20% by 2030, up from 13% in 2023. Meanwhile, renewable fuels ??? the subject of a special chapter in the report ??? are lagging behind, underscoring the need for dedicated policy support to

GROWTH OF RENEWABLE ENERGY IN US



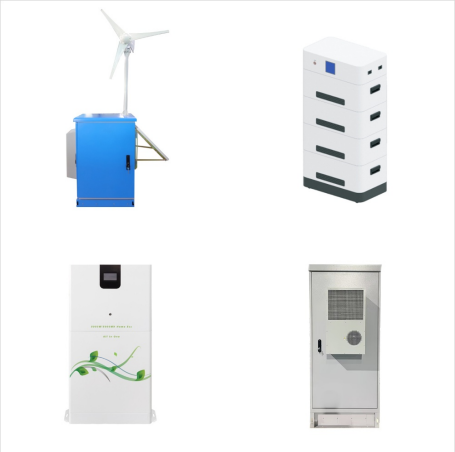
82% of U.S. energy comes from fossil fuels, 8.7% from nuclear, and 8.8% from renewable sources. In 2023, renewables surpassed coal in energy generation. 1 Wind and solar are the fastest growing renewable sources, but contribute less than 3% of total energy used in the U.S. 1 Levelized Cost of Energy (LCOE) is measured as lifetime costs divided by energy production.

Renewable energy use increased 3% in 2020 as demand for all other fuels declined. The primary driver was an almost 7% growth in electricity generation from renewable sources. Long-term contracts, priority access to the grid, and continuous installation of new plants underpinned renewables growth despite lower electricity demand, supply chain

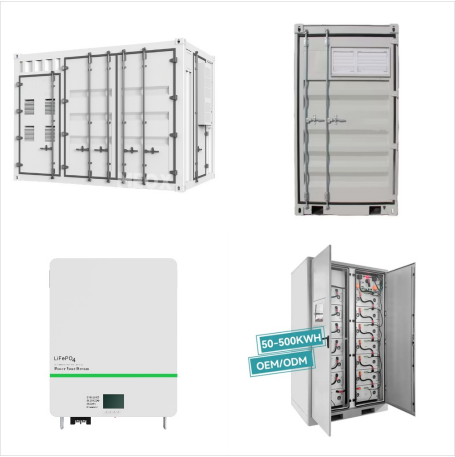


Marlene is Deloitte's US Renewable Energy leader and a principal in Deloitte Transactions and Business Analytics LLP. She consults on matters related to valuation, tax, M& A, financing, business strategy, and financial modeling for the power, utilities and renewable energy sectors. "Congress considers promise, risks of AI growth in

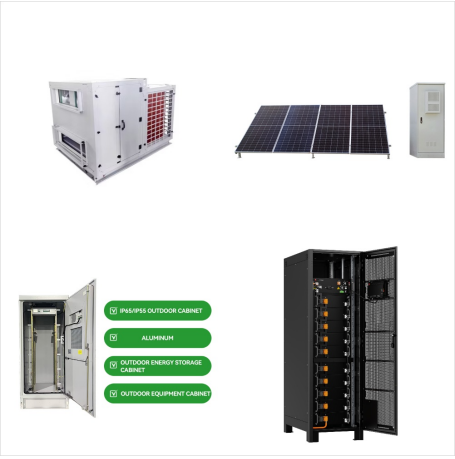
GROWTH OF RENEWABLE ENERGY IN US



Key updates from the Summer 2024 Quarterly Solar Industry Update presentation, released August 20, 2024:. Global Solar Deployment. About 560 gigawatts direct current (GW dc) of photovoltaic (PV) installations are projected for 2024, up about a third from 2023.; The five leading solar markets in 2023 kept pace or increased PV installation capacity in the first half of ???

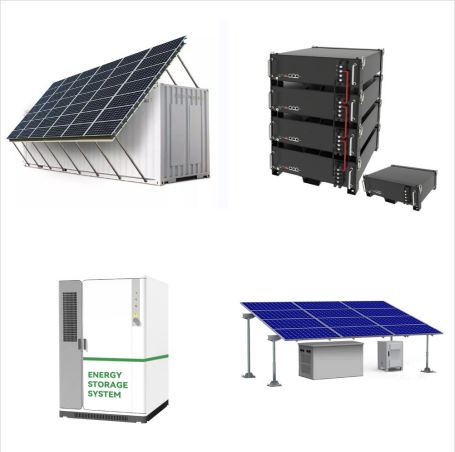


Renewable energy already supports thousands of jobs in the United States. In 2016, the wind energy industry directly employed over 100,000 full-time-equivalent employees in a variety of capacities, In addition to the jobs directly created in the renewable energy industry, growth in clean energy can create positive economic "ripple" effects.

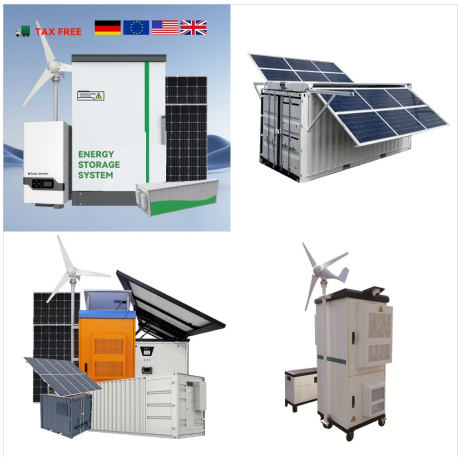


In 2022, annual U.S. renewable energy generation surpassed coal for the first time in history. By 2025, domestic solar energy generation is expected to increase by 75%, and wind by 11%. The United States is a resource-rich country with enough renewable energy resources to generate more than 100 times the amount of electricity Americans use each

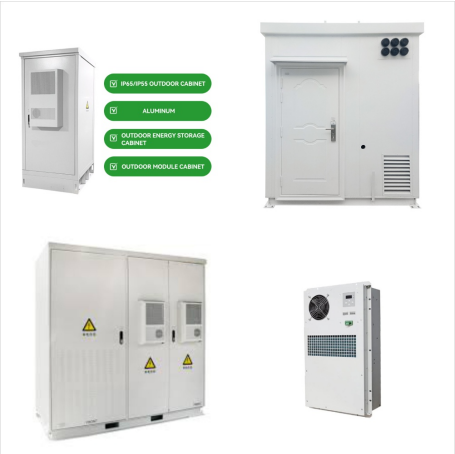
GROWTH OF RENEWABLE ENERGY IN US



Renewable energy jobs grew across every US energy sector in 2021, a new report finds. In electricity generation, solar was the fastest growing technology, adding 17,212 jobs and growing 5.4% in 2021. Onshore and offshore wind saw "sustained modest growth" in new renewable energy jobs??? with 3,347 created ??? and 2.9% growth.

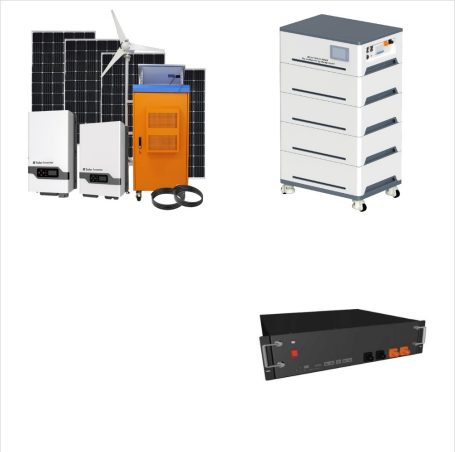


The largest growth took place in China, which commissioned as much solar PV in 2023 as the entire world did in 2022, while China's wind power additions rose by 66% year-on-year. The increases in renewable energy capacity in ???

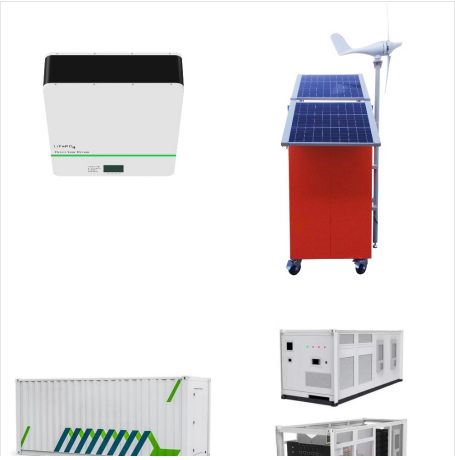


Today, RE Futures" vision of 80% renewable energy for the United States is closer than ever, with ambitious federal emissions-reduction targets and ever-decreasing clean energy costs. U.S. wind, solar, and geothermal generation increased at an annual compound growth rate of 15%. If we are able to overcome future challenges and this rate

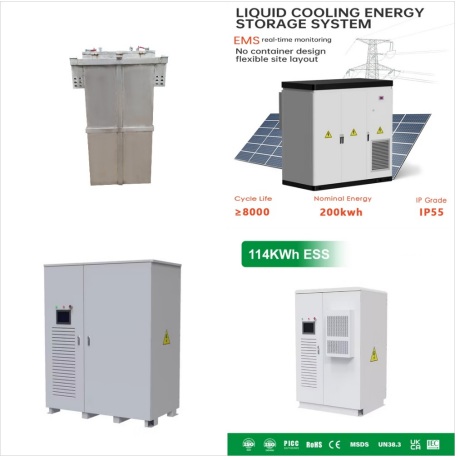
GROWTH OF RENEWABLE ENERGY IN US



In our Annual Energy Outlook 2022 (AEO2022) Reference case, which reflects current laws and regulations, we project that the share of U.S. power generation from renewables will increase from 21% in 2021 to 44% in 2050. This increase in renewable energy mainly consists of new wind and solar power. The contribution of hydropower remains largely unchanged ???

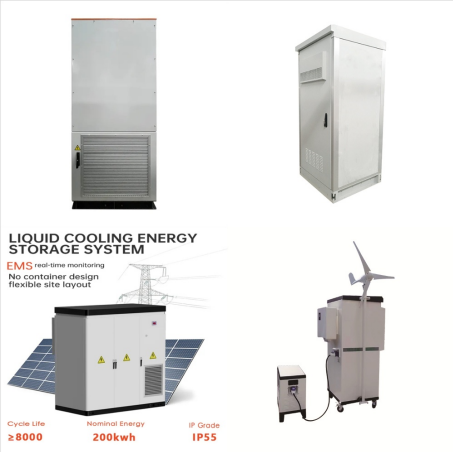


Renewable energy use also set new highs: 8.8% of total US energy demand and 23% of electricity demand. The US is the second-largest energy storage market in the world and commissioned an estimated 7.5GW of battery storage capacity in 2023, a new US record. China overtook the US to become the largest storage market in 2023.

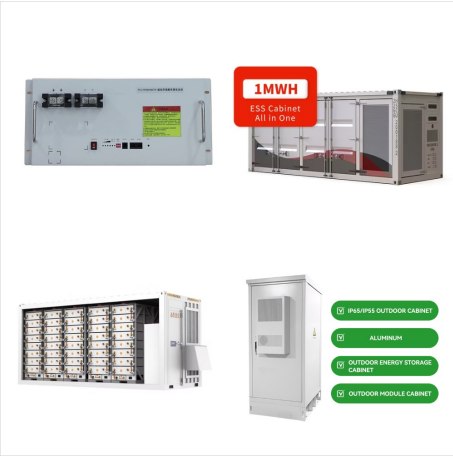


In our latest Short-Term Energy Outlook, we forecast that wind and solar energy will lead growth in U.S. power generation for the next two years.As a result of new solar projects coming on line this year, we forecast that U.S. solar power generation will grow 75% from 163 billion kilowatthours (kWh) in 2023 to 286 billion kWh in 2025.

GROWTH OF RENEWABLE ENERGY IN US



The Renewables on the Rise 2023 dashboard compiles information from The U.S. Energy Information Administration to detail progress over the past decade in each state in wind, solar, electric vehicles (EVs), EV charging, energy efficiency and battery storage. The data show that California, Texas and Florida experienced the most solar power and battery storage ???



The United States uses a lot of energy ??? trailing it generated more than 93 billion kilowatt-hours, an almost 46-fold increase. Solar's growth is occurring on both the large scale solar accounted for only 1% of the nation's total energy production in 2018. The biggest renewable energy source remained hydropower (2.8% of total