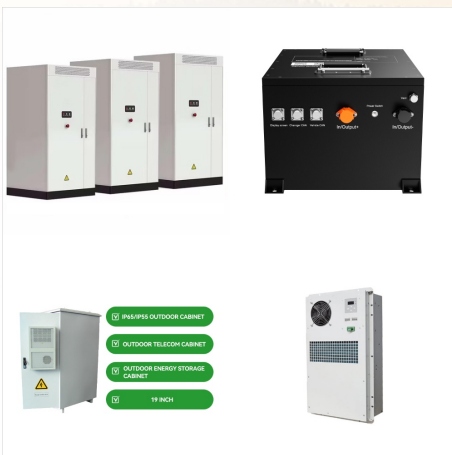




Renewable TFEC trend Renewable energy
consumption in 2021 - 212 Net capacity change
(GW) Net capacity change in 2023 (MW)
RENEWABLE ENERGY CONSUMPTION (TFEC)
ELECTRICITY CAPACITY - 3 412 Hydro and
marine USA North America World 4,286 4,455
4,392 4,260 4,375 4,495 21% 0% 20% 40% 60%
80% 100% 0 500 1 000 1 500 2 000 2 500 3 ???



These figures reflect energy consumption ??? that
is the sum of all energy uses including electricity,
transport and heating. Many people assume energy
and electricity to mean the same, but electricity is
just one component of total energy consumption.
Renewable energy here is the sum of hydropower,
wind, solar, geothermal, modern biomass



Transportation accounted for about 28% of total
energy use, followed by the industrial sector (23%),
households (7%) and commercial establishments
(less than 5%). Per capita energy use in the U.S.
had been trending lower since the turn of the 21st
century but ticked up in 2018. On average, each
American in 2000 used about 349.8 million Btu.

AMERICA S ENERGY USAGE IS FROM RENEWABLE ENERGY



Currently, nearly 40% of all carbon dioxide pollution comes from power plants burning fossil fuels to create the energy we use every day. That means we need to revolutionize how we generate and use electricity, by making renewable energy sources like wind and solar more abundant, more affordable, and more accessible to everyone.



Latin America and the Caribbean, on the other hand, had the largest share of modern renewables (29 percent) thanks to the extensive use of modern bioenergy and hydropower. In Asia, modern renewable energy shares remained below FIGURE 3.1 ??? Renewable energy consumption by technology, and share in total energy consumption, 1990???2017 0% 2%

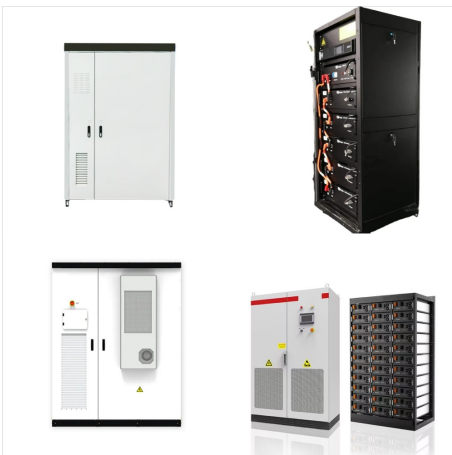


In 2018, those "fossil fuels" fed about 80% of the nation's energy demand, down slightly from 84% a decade earlier. Although coal use has declined in recent years, natural gas ???

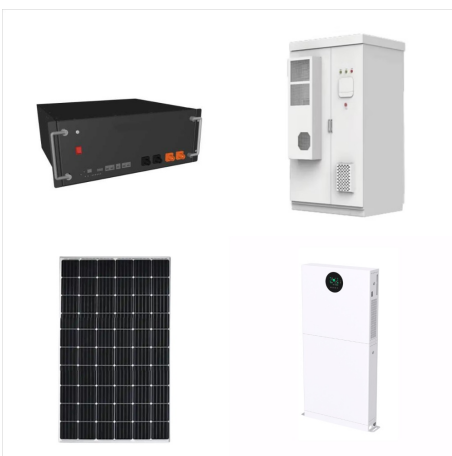
AMERICA S ENERGY USAGE IS FROM RENEWABLE ENERGY



Renewable generation sources include conventional hydropower, wind, solar, geothermal, and biomass. In the United States, most renewable electricity generation comes from hydropower, solar, and wind. Generation from renewable energy sources has grown rapidly as renewable capacity, mostly solar and wind, has been added to the grid.



A clean energy revolution is taking place across America, underscored by the steady expansion of the U.S. renewable energy sector.. The clean energy industry generates hundreds of billions in economic activity, and is expected to continue to grow rapidly in the coming years.



There are five main types of renewable energy. Biomass energy???Biomass energy is produced from nonfossilized plant materials. There are three main types of biomass energy: Biofuels???Biofuels include ethanol, biodiesel. renewable diesel, and other biofuels. Biofuels are mostly used as transportation fuels in the United States, and ethanol accounts for the largest ???

AMERICA S ENERGY USAGE IS FROM RENEWABLE ENERGY



Approximately one-seventh of the world's primary energy is now sourced from renewable technologies. Note that this is based on renewable energy's share in the energy mix. Energy consumption represents the sum of electricity, transport, and heating. We look at the electricity mix later in this article.



Although coal was once commonly used in the industrial, transportation, residential, and commercial sectors, today coal is mostly used in the United States to generate electricity. About 90% of U.S. coal consumption is in the electric power sector, and nearly all the rest is in the industrial sector.. Renewable energy is more broadly consumed by every sector ???



Building on a series of congressionally mandated reports on data center energy use and efficiencies, DOE's Lawrence Berkeley National Laboratory (LBNL) is assessing current and near-future data center energy consumption and water use. The report is scheduled to be released at the end of 2024.

AMERICA S ENERGY USAGE IS FROM RENEWABLE ENERGY



In addition, a ground-breaking study by the US Department of Energy's National Renewable Energy Laboratory (NREL) explored the feasibility of generating 80 percent of the country's electricity from renewable sources by 2050. They found that renewable energy could help reduce the electricity sector's emissions by approximately 81 percent .



Energy Information Administration - EIA - Official Energy Statistics from the U.S. Government. Skip to sub-navigation 09/25/2024 Renewable energy production and consumption by source ; 09/25/2024 Net generation for conventional hydroelectric ; 09/25/2024



Wind, currently the most prevalent source of renewable electricity in the United States, grew 14% in 2020 from 2019. Utility-scale solar generation (from projects greater than 1 megawatt) increased 26%, and small-scale solar, ???

AMERICA S ENERGY USAGE IS FROM RENEWABLE ENERGY



In under a minute, the visualization shows how the United States changed from using almost entirely biomass ??? such as wood for stoves or feed for horses ??? in the early 19th century to today's diverse energy system, dominated by petroleum and natural gas but with still-significant contributions from coal and nuclear, while renewable energy



The energy system is an important source of employment for Americans, providing jobs for about 5.2 million people. 28 These jobs support power generation and transmission, fuel extraction and processing, and renewable energy and energy-efficiency installations and sales. U.S. energy exports also contribute to the economy.



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

AMERICA S ENERGY USAGE IS FROM RENEWABLE ENERGY



Wind energy was the source of about 10% of total U.S. utility-scale electricity generation and accounted for 48% of the electricity generation from renewable sources in 2023. Wind turbines convert wind energy into electricity. Hydropower (conventional) plants produced about 6% of total U.S. utility-scale electricity generation and accounted for about 27% of utility ???



U.S. transition to clean energy is happening faster than you think, reporter says Huge swaths of the country are pivoting from fossil fuels, toward wind, solar and other renewables. New York Times



The U.S. Department of Energy (DOE) launched the \$50 million Renew America's Nonprofits Program ??? referred to in President Biden's Bipartisan Infrastructure Law as the Energy Efficiency Materials Pilot Program ??? to reduce carbon emissions, improve health and safety, and lower utilities costs at buildings owned and operated by 501(c)(3) nonprofits.

AMERICA S ENERGY USAGE IS FROM RENEWABLE ENERGY



Renewable energy use is projected to grow by an average of 3.1% annually from 2022 to 2050, compared to a 0.2% growth in total energy use. 8 At these rates, renewables would provide 29% of U.S. energy use in 2050. 8; In 2023, for the fourth time since 1949, the U.S. exported more oil (10.15 M bbl/d) than it imported (8.51 M bbl/d). 3



Petroleum remains the biggest energy source in the United States but has passed its 2005 peak. In 2019, renewable power consumption overtook coal for the first time in 130 years. Non-fossil fuels, including nuclear, now represent 20% of US energy consumption.