

Energy efficiency and renewable energy

The Office of Energy Efficiency and Renewable Energy (EERE) is an office within the United States Department of Energy. Formed from other energy agencies after the 1973 energy crisis, EERE is led by the Assistant Secretary of Energy Efficiency and Renewable Energy (Assistant Secretary), who is appointed by the president of the United States and confirmed by the U.S. ...

The U.S. Department of Energy (DOE) plays a leading role in developing new technologies and procedures that reduce the environmental impacts of renewable energy. DOE's Office of Energy Efficiency and Renewable Energy (EERE) supports responsible clean energy development by funding research that protects wildlife from not only the impacts of ...

Technologies showing synergies between energy efficiency and renewable energy 21 Renewable electricity generation and electrification of end-use services go hand in hand 22 Renewables could feasibly account for two-thirds of the world's energy supply in 2050 22 Long-term perspective and policy required to avoid trade-offs between ...

Noting that the International Energy Agency and the International Renewable Energy Agency forecast that, to limit warming to 1.5°C, the world requires three times more renewable energy capacity by 2030, or at least 11,000 GW, and must double the global average annual rate of energy efficiency improvements from around 2% to over 4% every year ...

Funding allocated through the Bipartisan Infrastructure Law enables the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) to support sustainable transportation and freight shipping infrastructure, including vehicle charging capabilities, urban and community design, and roads and bridges.. Further, the EERE Vehicle Technologies ...

The Building Technologies Office (BTO) develops, demonstrates, and accelerates the adoption of cost-effective technologies, techniques, tools and services that enable high-performing, energy-efficient and demand-flexible residential and commercial buildings in both the new & existing buildings markets, in support of an equitable transition to a decarbonized energy system by ...

The federal government is taking steps to increase energy accessibility and affordability for all Americans by making once-in-a-generation investments through the Inflation Reduction Act and the Bipartisan Infrastructure Law. The Office of Energy Efficiency and Renewable Energy (EERE) funds research and development to drive down the costs of clean energy and improve energy ...

EERE is working to achieve U.S. energy independence and increase energy security by supporting and enabling the clean energy transition. The United States can achieve energy independence and security by using

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renewable power; improving the energy efficiency of buildings, vehicles, appliances, and electronics; increasing energy storage capacity; and ...

Renewable energy can play an important role in U.S. energy security and in reducing greenhouse gas emissions. Using renewable energy can help to reduce energy imports and fossil fuel use, the largest source of U.S. carbon dioxide emissions. According to projections in the Annual Energy Outlook 2023 Reference case, U.S. renewable energy consumption will ...

State and local energy efficiency and renewable energy investments can produce significant benefits, including lower fuel and electricity costs, increased grid reliability, better air quality and public health, and more job opportunities. While the costs of clean energy initiatives get the most attention, less is devoted to the many benefits of ...

Valerie Reed Bioenergy Technologies Office Director Valerie Reed leads the Bioenergy Technologies Office's overall strategic, technical, and project oversight of efforts to improve performance, lower costs, and accelerate market entry of advanced biofuels and bioproducts, which can help reduce America's imports of oil while enabling a new industry with an improved ...

The demand for renewable energy and efficient forms of energy is amplified across the world. The particular reason for the circumstance is that renewable energy output, efficient energy, and technologies reduce greenhouse emissions by fostering economic development and are obligatory for future generations [5].

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.

renewable energy share of all countries, assuming that renewable energy use will grow following business as usual This is particularly the case for countries where low demand growth is projected to 2030, such as Germany or the United States Accelerated deployment of energy efficiency and renewable energy creates a synergy for increasing

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Policies for energy efficiency and renewable energy are important to reduce CO₂ emissions and combat global climate change. Busu (Citation 2019) aims to measure renewable energy efficiency and its impact on CO₂ emissions at the European Union level. The findings of the study found that renewable energy efficiency has increased in the EU, and ...

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A listing of technology areas and technology offices within the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy. The History of EERE From the launch of federal energy and research agencies in the 1970s to legislation dedicating resources to clean energy research, EERE has a rich history that has shaped its mission.

It defines energy efficiency and renewable energy and describes why quantifying the multiple benefits of energy efficiency and renewable energy may be valuable to a decision maker or analyst. This chapter sets the context for the subsequent chapters that describe the framework, methods, and tools analysts can use to quantify the electricity system,

Deploying green energy is, directly and indirectly, related to energy- and environment-related sustainable development goals (SDGs). This study uses the stochastic impact by regression on the population, affluence, and technology (STIRPAT) model to examine the relationship between CO₂ emissions, energy efficiency, green energy index (GEI), and ...

If an analysis of an energy efficiency or renewable energy program refers to . net jobs, it means the study factored in any job losses that may have occurred in non-energy efficiency or renewable energy-related sectors due to the policy (e.g., decrease in demand for coal)

Renewable energy and energy efficiency work in synergy. When pursued together, they can bring faster reduction in energy intensity and lower energy costs, according to a newly released working paper from IRENA. Crucially, improved efficiency reduces total energy demand, allowing the share of renewables in the energy mix to grow faster. ...

1 day ago; At the COP28 climate change conference in Dubai last year, nearly 200 countries agreed to the goal of doubling the rate of progress, which would mean increasing it from 2% in 2022 to 4% by 2030. Boosting energy efficiency ...

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