Renewable energy sources are growing quickly and will play a vital role in tackling climate change. Our World in Data. Browse by topic. Latest; fuel made from crops such as corn, sugarcane, hemp, and cassava ??? are now a key transport fuel in many countries. This interactive chart shows modern biofuel production across the world. Click to

technologies run by renewable energy. This paper outlines the discussions and findings to date on the possible role of patent information to encourage innovation in RET development and deployment ??? a role that is not well understood. This paper sets out to ex-plain the use of patents in renewable energy innovation,

During the lifetime of the European Patent Office, renewable energy technologies have begun to revolutionise our energy systems. won the award for his invention of liquid metal batteries to store renewable energy at a Most countries and major economic regions have now pledged to go carbon neutral by some point this century, with the

RENEWABLE ENERGY PATENTS BY COUNTRY

Achieving sustainable development necessitates proactive measures to mitigate the economy's negative impact on environmental standards. A new empirical association between renewable energy patent innovation and net international trade on carbon emissions in ASEAN countries from 1990 to 2021 is presented, along with its significance. Using present panel data ???

We rely on Ember as the primary source of electricity data. While the Energy Institute (EI) provides primary energy (not just electricity) consumption data and it provides a longer time-series (dating back to 1965) than Ember (which only dates back to 1990), EI does not provide data for all countries or for all sources of electricity (for example, only Ember provides ???

This is a list of countries and dependencies by electricity generation from renewable sources each year. Renewables accounted for 28% of electric generation in 2021, consisting of hydro (55%), wind (23%), biomass (13%), solar (7%) and geothermal (1%).

RENEWABLE ENERGY PATENTS BY COUNTRY

Evolution of patents by country Notes: The chart show the share of new renewable energy patents by country for top 10 countries with higher average share over the 1980???2020. All the other 71 countries in our sample are grouped together. 3.2. World uncertainty index (Wui)

Renewable energy sources have received significant attention owing to their potential impacts on carbon dioxide (CO2) emissions. Various studies have demonstrated that an increase in "green" patent applications for renewable energy technologies is linked to lower CO2 emissions (Li et al., 2020; Luo et al., 2021; Khan et al., 2022). Based on

The transformation of energy occurs in tandem with the growth of human civilization. It is a strategic choice made by countries all over the world to support energy transformation and consumer revolution, as well as to develop a green, low-carbon, safe, and clean energy system based on renewable energy [[1], [2], [3]].The world's energy focus has ???

RENEWABLE ENERGY PATENTS BY COUNTRY

Patents in Renewable Energy Patents in Enabling Technologies-Transport Sector EV Charging : 16 fold growth in last 10 years Solar : 6 fold growth in last 10 years Which countries and innovators are active Which countries are potential markets Patenting Licensing

??? Country specific and only issued by the country through national patent offices (USPTO, JPO, KPO, etc.) - navigate easy and comprehensive access to the renewable energy technologies patents - build up on the existing databases and search systems 9 . Discussion themes 10 1. What are the roles of IPR including patents in the innovation for

Fig. 13 shows the PCT patents for our six renewable energy technologies ??? PCT patents being a sign that the patentee is keen to distribute their patents in multi-countries. On the whole, China has the largest total patent publication, but PCT patents account for the smallest proportion at less than 4%, which is significantly lower than other

RENEWABLE ENERGY PATENTS BY COUNTRY

Although most green energy technologies have seen a downward trend in the annual number of patents published since 2012, the decline has been most pronounced in nuclear power generation technologies and alternative energy production technologies. The latter notably include renewable energy technologies, such as solar and wind energy, and fuel

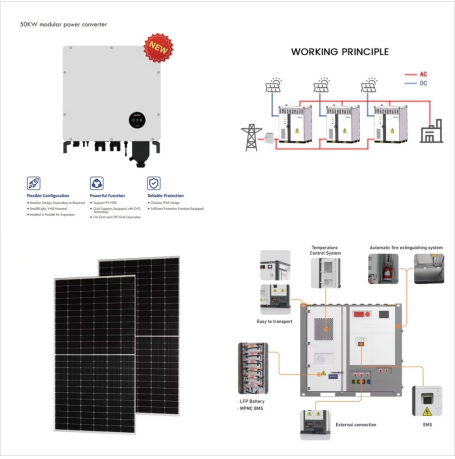
Despite their immense potential as sustainable energy sources, many countries remain in the early stages of clean energy production (Fatima et al., 2021; Awijen et al., 2022).According to reports by the International Renewable Energy Agency (IRENA, 2023) and the International Energy Agency (IEA, 2023), challenges such as inadequate policies and ???

Figure 7 Total filed ocean energy patents by country per year (2000-2017) Figure 8 Annual offshore wind capacity additions Oceans are a source of abundant renewable energy potential, capable of driving a "blue economy" based on sustainable use of ocean resources. Energy harnessed from the oceans,

RENEWABLE ENERGY PATENTS BY COUNTRY

Patents and the energy transition Global trends in clean energy technology innovation | April 2021 Countries are specialising nationally and It ranks first in most renewable energy fields. With 25% of all IPFs since 2010, Japan remains closely behind, followed by the US (with 20% of all IPFs). Japan is a world leader in batteries and

This dashboard ranks countries/areas to their renewable energy power capacity or electricity generation. The data can be further refined based on region, technology or year of interest. Enabling Technologies Patents; Policy. Renewable Energy Auctions; Renewable Energy Balances. Country Profiles; Final Renewable Energy Consumption; Overview



"Data Page: Total number of patents in renewable energy technologies", part of the following publication: Hannah Ritchie, Pablo Rosado and Max Roser (2023) - "Energy". Data adapted from International Renewable Energy Agency.

RENEWABLE ENERGY PATENTS BY COUNTRY

We use a novel dataset, making use of the IPC Green Inventory of the World Intellectual Property Organization (WIPO) to analyze four broad categories of green energy technologies including ???

This dashboard provides an overview on the renewable energy balances for a selected number of countries. Renewable Energy Balances > Country Profiles. Data Overview; View data by topic. Benefits. Employment Time Series; Renewable Energy Employment by Country; Capacity and Generation. Country Rankings; Patents Evolution; Enabling

Renewable energy is defined as the contribution of renewables to total primary energy supply (TPES). Country-level progress in combatting climate change. Inflation (CPI) Inflation rates and their impact explained. News & Events. News & Events Explore news and events.

RENEWABLE ENERGY PATENTS BY COUNTRY

The Offshore Wind Energy Patent Insights Report published by the International Renewable Energy Agency (IRENA) and the European Patent Office (EPO) shows that between 2002-2022 patent filings for offshore wind technologies have grown on average by 18%. In the ranking of the top ten countries in filed International Patent Families (IPFs

The International Renewable Energy Agency (IRENA) produces comprehensive, reliable datasets on renewable energy capacity and use worldwide. 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.

Patent information can provide valuable insights on the renewable energy sector as new technologies arise and markets continue to evolve. Analysis of renewable energy technology patents, for example, can reveal: which countries and innovators are most active in inventing technologies; the potential markets where technologies need to be protected; technological ???

RENEWABLE ENERGY PATENTS BY COUNTRY

We examine the impact of regulation and policies on green patent generation and evolution of renewable energy technologies in the OECD countries. Public and private investment, investment in education, research and development, and environmental regulation are considered. There is considerable variation in innovation systems and investments in ???

Keywords: Kyoto Protocol, White space analysis, OECD countries, renewable energy, patent, policy, wind, solar, biofuels, clean development mechanism Energy is a prerequisite requirement for driving all living forms on this planet. Non-conventional or renewable forms of energy are the most sought after