

Who owns the most energy storage-ICT patents?

The State Grid Corporation of China owns the most energy storage-ICT patents, with 127 invention applications and 73 utility models. Goertek Technology owns the most utility models with 100 patents. Except for Goertek, all the top eight applicants owned more invention application patents than utility model patents.

How do you calculate energy storage patents?

Our model can be stated as follows, 
$$\ln(E S P a t e n t i t) = \alpha + \beta_1 D i g i t a l i t + \beta_2 X i t + \beta_3 o t + \beta_4 j + \beta_5 g k + \beta_6 e i t$$
 where the dependent variable  $E S P a t e n t i t$  is the number of energy storage patents held by firm  $i$  at year  $t$ .

Is electricity storage innovation tackling the energy transition?

"The rapid and sustained rise in electricity storage innovation shows that inventors and businesses are tackling the challenge of the energy transition.

Is there a patent landscape analysis of grid-connected LIB energy storage systems?

Nevertheless, no similar patent landscape analysis was discovered to have been carried out in the field of grid-connected LIB ESS. The goal of this study is to extract the important aspects of the publications with the most citations and to provide insight into the assessment of grid-connected LIB energy storage systems. 3.1.

Why is energy storage a new technology?

One possible explanation is that energy storage technology is currently in a rapid development stage, with new technologies such as large-scale stationary energy storage continuing to emerge.

What is energy storage technology?

Energy storage (ES) technology has been a critical foundation of low-carbon electricity systems for better balancing energy supply and demand [5, 6]. Developing energy storage technology benefits the penetration of various renewables [5, 7, 8] and the efficiency and reliability of the electricity grid [9, 10].

HOUSTON, June 21, 2021 /Newswire/ -- New Energy Development Company LLC (New Energy TM) today announced the completion of an engineering design which promises to save 10 to 20 percent on green hydrogen and sustainable LNG storage costs. The hydrogen production and storage facilities New Energy TM had previously announced will now use the GreenER TM ...

Co-classified patent analysis was used to identify changes in energy storage-ICT patents over the years, shedding light on digitalization trends in the development of smart energy storage systems. Fig. 1 presents the trends of energy storage-ICT patents in China. Patent information before 2000 is not depicted due to the limited number of ...



# New energy storage patent

The present U.S. Utility patent application claims priority pursuant to 35 U.S.C. § 121 as a divisional of U.S. Utility application Ser. No. 15/411,154, entitled "ENERGY STORAGE SYSTEM", filed Jan. 20, 2017, which is hereby incorporated by reference in its entirety and made part of the present U.S. Utility patent application for all purposes.

Ma, who holds a handful of patents on the technology, previously served as the principal investigator on an ARPA-E funded project known as ENDURING, for Economic Long-Duration Electricity Storage by Using Low-Cost Thermal Energy Storage and ...

Rechargeable lithium ion battery (LIB) has dominated the energy market from portable electronics to electric vehicles, but the fast-charging remains challenging. The safety concerns of lithium deposition on graphite anode or the decreased energy density using  $\text{Li}_4\text{Ti}_5\text{O}_{12}$  (LTO) anode are incapable to satisfy applications.

The present invention provides a distributed energy storage system, and applications thereof. In an embodiment, the distributed energy storage system includes power units, wherein each power unit has a multi-cell battery; a battery manager that monitors battery cell voltages and temperatures; and a controller. The controller provides a first control signal that causes the ...

Using firm-level patent data from 1978 to 2015, I examine the impact of market-based environmental policies on innovation in energy storage. My results highlight the role of environmental taxes, feed-in tariffs for solar energy and tradable certificates for CO<sub>2</sub> emission to promote firms' patenting activity, whereas renewable energy certificates and ...

Electricity storage inventions show annual growth of 14% over past decade, joint study by European Patent Office (EPO) and International Energy Agency (IEA) finds. Amount ...

The use of Energy Storage Systems (ESS) with conventional electricity to create a hybrid microgrid is crucial for mitigating the unpredictability and increased intermittent of RESs. ... As in most of the new technologies, the earliest patent filings represent technological advancements and commercial information. Patents are also one of the ...

Grid-connected lithium-ion battery energy storage system towards sustainable energy: A patent landscape analysis and technology updates. Author links open overlay panel S.B. Wali a, M.A. Hannan b c, Pin Jern Ker d, ... A patent generally refers to a new invention, which may be a product or new technology development and the technological ...

Energy Storage Patents | Hydrogen . image credit: Irena. Charley Rattan 3,663,593 . Global Hydrogen Trainer & Advisor, Charley Rattan Associates. Charley Rattan, Upskilling, advising and informing the global energy transition. Charley heads Charley Rattan Associates, a team of seasoned trainers and advisors driving forwards the energy ...

## New energy storage patent

Huawei has filed a new patent for a fireproof energy storage system. The company is planning to develop a method of storage technology that can enhance the safety aspects and avoid explosive accidents under high temperatures or other conditions. The Chinese tech giant has introduced several data and energy storage products for its enterprise ...

3 ???&#0183; SweetBunFactory /iStock. In a move that would provide major boost to battery technology in electric vehicles (EVs), Chinese tech conglomerate Huawei has filed a new patent application for a ...

It was seen that patent filings in gravity based energy storage systems has been, on average, increasing year-on-year. 2023 was also full of commercial developments and brought news that Gravitricity and Energy Vault are moving forward with commercialising gravity energy storage systems around the world; Gravitricity are partnering with ABB and ...

Constructed from cement, carbon black, and water, the device holds the potential to offer affordable and scalable energy storage for renewable energy sources. Two of humanity's most ubiquitous historical materials, cement and carbon black (which resembles very fine charcoal), may form the basis for

An energy storage system converts variable renewable electricity (VRE) to continuous heat at over 1000&#176; C. Intermittent electrical energy heats a solid medium. Heat from the solid medium is delivered continuously on demand. An array of bricks incorporating internal radiation cavities is directly heated by thermal radiation. The cavities facilitate rapid, uniform heating via reradiation.

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