

Is underground hydrogen storage possible in Italy?

First Assessment of an Area Potentially Suitable for Underground Hydrogen Storage in Italy. Int. J. Hydrog. Energy, 2023, in press. [ CrossRef]

Can hydrogen play a role in Italy's energy system?

Snam, with the support of McKinsey, has studied the potential role of hydrogen in the Italian energy system. The study shows that Italy is particularly well-suited for hydrogen due to its excellent natural resources for generating renewable power and its existing gas infrastructure network, including connections to North Africa.

How can we start the deployment of hydrogen in Italy?

To start the deployment of hydrogen in Italy, industry and policymakers should work together to put a supporting regulatory framework in place and begin deployment. International co-operation will accelerate the uptake of hydrogen across the EU and create a single unified European hydrogen market in the future.

Which natural gas storage facilities are currently used in Italy?

"Cellino" and "Fiume Treste" are currently used as natural gas storage facilities. "Cellino" has five active wells and the storage depth is about 850 m, while "Fiume Treste" has 84 storage wells and a storage depth of 1200 m. Figure 7. Detailed map of the depleted hydrocarbon fields identified in central Italy.

When will low-cost hydrogen break-even in Italy?

In Italy, low-cost hydrogen will break-even before 2030, 5-10 years earlier than in many other countries, including Germany. This is due to Italy's strong renewables endowment, which will make 'green hydrogen' from renewables cheaper than 'grey hydrogen' from natural gas.

Could Italy import hydrogen from North Africa?

Italy could import hydrogen from North Africa at a cost 14% below domestic production. This could be achieved by employing Italy's existing pipelines to North Africa to produce hydrogen locally and then transport it back to Italy.

Hefei, China, April 11, 2025 - Sungrow, a global leading PV inverter and energy storage system provider, proudly announces the launch of PowerStack 255CS, the next ...

Italian startup Hybitat Srl has developed a hydrogen production and storage system for long-term storage of surplus residential and commercial solar power. The system includes a main unit...

This strategy is a key policy for Italy's energy transition and sustainable economic growth, focusing on promoting hydrogen usage in industries, transportation, and energy production. One of the primary goals is ...

In terms of BESS infrastructure and its development timeline, China's BESS market really saw take off only

recently, in 2022, when according to the National Energy Administration (China) and China Energy Storage ...

Hydrogen energy technology is pivotal to China's strategy for achieving carbon neutrality by 2060. A detailed report [1] outlined the development of China's hydrogen energy ...

The project adopts supercapacitor hybrid energy storage assisted frequency regulation technology, consisting of 60 sets of 3.35 MW/6.7 MWh battery energy storage systems and 1 set of 3 MW/6-minute ...

Hydrogen could provide almost one quarter of all energy in Italy by 2050. In a 95% decarbonization scenario (needed to reach the 1.5-degree threshold), hydrogen could supply ...

From ESS News. China has connected to the grid its first large-scale standalone flywheel energy storage project in Shanxi Province's city of Changzhi.

With world's largest renewable power capacity 1, the government aims to establish a comprehensive hydrogen industry spanning transportation, energy storage and industrial sectors and "significantly improve" the portion of green ...

Italy had 650,007 grid-connected energy storage systems at the end of June 2024, according to Italian PV association Italia Solare, with a total of 4.5 GW of rated power. "During the first half ...

Fabio Zanellini, co-coordinator of Italia Solare's energy storage and hydrogen working group, attributed the surge in standalone energy storage installations in the first half of ...

A state-backed consortium is constructing China's first large-scale compressed air energy storage (CAES) project using a fully artificial underground cavern, marking a major step in the ...

A China-based firm has achieved a groundbreaking feat by successfully igniting the world's first 30MW-class pure hydrogen gas turbine. Called Jupiter I, the gas turbine is ...

Italian researchers have found hydrogen storage offers more supply-side flexibility than batteries. Their study, published in Applied Energy, shows the optimal PV-to-electrolyzer ratio ranges from ...

With the first auctions for procuring new storage capacity in Italy expected in the second quarter of 2025, Aurora Energy Research has analyzed the internal rate of return for projects supported ...

A group of core equipment representing the State Energy Group's accelerated development of the hydrogen energy industry, including the National Energy Hydrogen ...

In March 2022, the Chinese authorities released a plan to develop hydrogen energy for the 2021-35 period, outlining the establishment of a hydrogen supply system and application promotion goals.

In 2023, China invested more in clean energy technologies than the cumulative total of the other top 10 investing countries. The country has become a global force in the acceleration of advanced energy solutions deployments. ...

With government-backed incentives, a growing infrastructure for hydrogen production and storage, and a complementary synergy with solar and wind energy, the ...

Italian researchers have found hydrogen storage offers more supply-side flexibility than batteries. Their study, published in Applied Energy, shows the optimal PV-to-electrolyzer ratio...

the majority of China's hydrogen is derived from fossil fuels and is predominantly utilized as an industrial feedstock, and the proportion of hydrogen sourced from clean energy ...

Benny Wang, CEO at Hygreen Energy, highlighted that this project is a significant development in the region's renewable energy transition and implementation of larger electrolyzer systems: "With its 25-megawatt ...

2025 is set to see rapid growth in investment in the Italian energy storage sector, led by battery energy storage systems (BESS), with the implementation of MACSE. The eagerly anticipated...

Francesco Del Pizzo, president for grid development strategies and dispatching at the Terna Group, said this on the sidelines of an event organized by Italian renewable energy ...

Italy (4), Australia (3), Hong ... Process modelling and simulation, Energy systems design and analysis, Energy storage and Hydrogen economy. View full biography. Professor Martin ...

: teamed with China's sovereignty wealth fund CICC, Tsinghua Sichuan Energy Institute to establish a hydrogen private equity fund. The AUM of the fund is at &#165;3Bn. 2019/04: asset ...

China's Energy Law reclassifies hydrogen as an energy resource, reducing regulatory barriers to its production, storage, and use. The new legislation encourages greater investment in hydrogen infrastructure and ...

Italian energy group Enel says it is scrapping its plans to build a hydrogen project in La Spezia, Italy, despite EUR13.72 million (\$14.7 million) in European subsidies, while Toyota has ...

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China has been an undisputed leader in the battery energy storage system deployment by a far margin. The nation more than quadrupled its battery fleet last year, which helped it surpass its 2025 ...

Italy unveiled its National Hydrogen Strategy in December 2020, aiming to achieve complete decarbonization by 2050. This strategy is a key policy for Italy's energy transition and sustainable economic growth, focusing on ...

Energy Storage Technologies Empower Energy Transition report at the 2023 China International Energy Storage Conference. The report builds on the energy storage-related data ...

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