Latest News on Smart Microgrid

Can a new AI model improve microgrid power restoration?
A new AI model that optimizes the use of renewables and other energy sources outperforms traditional power restoration techniquesfor islanded microgrids,a new paper shows.

How can microgrids be more affordable?
The trend with the most potential to make microgrids more affordable,quick to deploy,and ultimately ubiquitous is standardization. The evolution of microgrids from unique,custom-engineered projects into modular,repeatable systems - conceived and deployed in months instead of years - will be the key to faster adoption.

Are microgrids the future of energy?
The future of energy is here: microgrids and demand-side flexibility programs continue to usher in innovations that trend toward a better tomorrow. Here are the top trends we expect to see in demand-side flexibility programs and microgrids in 2024:

What are microgrids & how do they work?
Microgrids 12, 13 are small, localized energy systems that can generate, store and distribute energy independently or in conjunction with the main energy grid. In this context, community power storage systems are gaining relevance 14 and can serve as nuclei for microgrids in urban areas, offering potential interconnection possibilities 13, 15, 16.

What makes a microgrid a good investment?
Power Electronics: Microgrids frequently use power electronics converters like DC/AC or DC/AC/DC to interact with the power system, such as solar PV or microturbines. Controls and functionality: Microgrids have unique regulatory needs and techniques that help them achieve local balance and maximize their financial gains.

What is the smart grid 'the next decade'?
The "Smart Grid: The Next Decade" is the first of its kind promotional compilationfeaturing 32 "best of the best" insightful articles from recent issues of the IEEE Smart Grid Bulletin and will be the go-to resource for industry professionals for years to come.

Georgia"s Environmental Finance Authority and a group of electric cooperatives received $249 million (with $258 million in cost-sharing) to fund smart grid infrastructure ...

Smart microgrids offer an alternative that can means new infrastructure can operate without requiring lengthy, costly grid connection works. By designing a site that can operate independently of the grid, known as ...

Project TIGON to design a hybrid AC/DC microgrid system has reported satisfactory progress at its mid-way point. Project TIGON, launched in January 2020 with EU Horizon 2020 funding, is aiming to develop solutions to ...

The share of new energy in China"s energy consumption structure is expanding, posing serious challenges to the national grid"s stability and reliability.As a result, it is critical to construct large ...

In addition to the new equipment, the works on the new facility that will host the microgrid and power electronics laboratory are underway. The new facility, a 1200m 2 building, will be home ...

Three southern communities are now developing "smart neighborhood" microgrids. In one, energy-efficient homes feature community-scale microgrids designed by Alabama Power / Southern Company and ...

A new AI model that optimizes the use of renewables and other energy sources outperforms traditional power restoration techniques for islanded microgrids, a new paper from Assistant Professor of Electrical and ...

Redesigning the Data Center With Battery-Powered Microgrids. Verrus" design combines a high-capacity battery with software capable of detecting power needs and directing energy where and when needed. The ...

Thus, the performance of microgrid, which depends on the function of these resources, is also changed. 96, 97 Microgrid can improve the stability, reliability, quality, and security of the ...

The technologies that support smart grids can also be used to drive efficiency in microgrids. A smart microgrid utilizes sensors, automation and control systems for optimization of energy production, storage and distribution. Smart microgrids ...

Cost was the primary concern. With a full-time resident population of only 70 people or so and a summertime crowd of 200 to 300, Isle au Haut faced a steeper-than-usual capital infrastructure upgrade.