

FROM BLOCKCHAIN TO MICROGRIDS: TECHNOLOGIES THAT WILL REVOLUTIONISE ENERGY*

Microgrids: Empowering the Local Market

Today there is a shift from a highly centralised power system and a return to smaller scale, localised systems that optimise power demand, consumption, and management. Microgrids are emerging as one of these decentralising technologies. They bring together a combination of clean technologies such as distributed generation, batteries, and renewable resources to help organisations operate autonomously from the traditional electrical grid.

Commercial, industrial and institutional energy buyers can now see instant cost savings by implementing technologies embedded within a microgrid. These insulate their facilities from the risk and changing cost components of an ever-evolving energy market.

Energy Storage: An Opportunity to Decarbonise at Scale

Batteries and other types of storage play a vital role in enabling companies to embrace clean, low-cost, renewable energy at a higher level. Renewable power sources can face intermittency issues. Energy storage helps remove this significant barrier which previously prevented greater adoption of wind and solar resources.

As the price for batteries and other storage solutions drops, corporate buyers will be well positioned to maximise energy investments, while contributing to the clean energy transition. Additionally, with microgrids on the rise, energy storage, in conjunction with other new energy opportunities, may become commonplace for companies.

Fuel Cells: Investing in the Future

Fuel cells electrochemically combine a fuel with oxygen and convert the resulting chemical energy into electricity without any form of combustion. Because they require a constant, steady source of fuel to produce electricity, fuel cells are able to provide a continuous, baseload source of clean electric power. This provides facilities with a need for a reliable minimum supply of energy, from manufacturing plants to hospitals, to incorporate renewables into their energy mix without compromising the safety and stability of their baseload.

As a baseload resource, fuel cell technology helps bridge the gap where other renewable energy sources face challenges. The intermittency issues that wind and solar must overcome are not a concern for fuel cells. Partnered with other renewable technologies, fuel cells can balance the difference between demand and generation of intermittent resources. Although the technology is new, and expensive as a result, in the same way

other clean technologies have found success, they should become a vital technology to consider.

Blockchain: Efficient Transactions

Blockchain technology is a distributed, digital ledger used to record and track transactions. It uses sophisticated algorithms to validate, encrypt, and instantaneously record transactions for virtually anything of value in a secure and decentralised manner. Energy is one area of interest for blockchain applications, particularly when it comes to certifying the energy sources you are using. With the increased autonomy that blockchain introduces, corporate energy buyers may find it easier to accomplish these goals — and at a lower cost and time commitment.