



AMTE's battery cells use a raw material that is plentiful almost everywhere – sodium | Photo source AMTE Power

Innovation > Agriculture & Energy > Ground-breaking new batteries for remote communities

GROUND-BREAKING NEW BATTERIES FOR REMOTE COMMUNITIES

 AGRICULTURE & ENERGY

A new generation of sodium-ion batteries is designed to bring clean, affordable, and sustainable power to some of the poorest and most remote regions

Spotted: UK-based renewable energy and battery specialist AceOn has teamed up with battery pioneer AMTE Power to use next generation solar-powered energy storage units to bring electricity to remote sub-Saharan African communities. AceOn has developed the AceOnPES (portable energy storage) power unit which will run on sodium-ion battery cells produced by AMTE.

While conventional lithium-ion batteries use raw materials—such as lithium and cobalt—that are in finite supply, sodium-based cells use sodium instead. This offers huge potential advantages, as sodium is plentiful almost everywhere and can be extracted using minimal energy. This could allow wider and cheaper battery manufacture.

Because they lack heavy metals, sodium batteries are also much easier to recycle, and their use would eliminate much of the risk of pollution from both mining and battery disposal. The two companies point out that sodium-ion batteries have huge potential for application in energy storage – where there is a need to vastly scale-up production of safe, stable battery technology to support the growth of renewable energy.

Mark Thompson, managing director of Telford-based AceOn, explains that the new battery chemistry can make global electrification more sustainable. “We’ve been championing sodium-based technology for years as a sustainable alternative to lithium-ion, and thanks to our partnership with AMTE, we can finally use it in our product... These batteries are the future.”

Efficient and sustainable energy storage is vital for the large-scale use of renewable energy. At Springwise, we have recently covered innovations in this area such as a technology that yields almost [pure graphite](#) from used lithium-ion batteries, and an energy storage system located at the [bottom of the sea](#).

Written By: Lisa Magloff

21st March 2022

Website: amtepower.com

Contact: amtepower.com/contact

[Download PDF](#)

Takeaway:

Although sodium battery technology is not new, until now, there was little interest in developing it further. Instead, most effort has been put into further developing lithium-ion batteries. However, the realisation that lithium is a finite resource, and that mining it is extremely polluting, has spurred a number of researchers and companies to take another look at sodium battery technology. Recently, University of Texas at Austin researchers developed a sodium-based battery material that is stable, can recharge as fast as a traditional lithium-ion battery, and has the potential for a higher energy output than current lithium-ion batteries. Developments like this could eventually lead to a cheaper, safer and more sustainable battery solution.