

## European Solar Energy Storage

# Northern Mariana Islands yunicos battery storage



## Overview

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Centrica (UK) Yunicos has been selected by Centrica to design and deliver one of the world's largest battery-based energy storage systems. To be completed by winter 2018, the 49 megawatt (MW) lithium-ion system will respond to fluctuations in electrical demand in less than a second, to maintain electric power frequency and stability.

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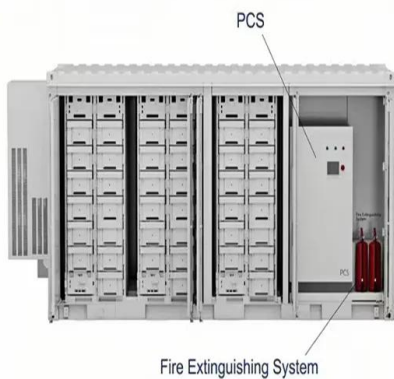
### Failed battery at Hawaii solar farm part of learning process, says



The "accelerated capacity fade" of the lead carbon battery storage system is less a major setback, more a step in the learning process for Hawaii, according to Dean Frankel of Lux Research. Image: Flickr user: tdlucas5000. Xtreme Power is no longer around and Younicos [the German battery storage maker which purchased Xtreme Power in April

### Energy storage system integrators: Six of the best

Then last year, over 75MW of contracts were awarded to the US-German company, including a 49MW battery storage system in the UK for utility giant Centrica, meaning Younicos now has 200MW completed or under construction and a claimed 1.2GW pipeline over the next two years.



### Grid-stabilising battery park goes online in northern Germany

The battery power plant has a rated power output of 5MW and a capacity of 5MWh and is fully automated. It was built by renewable energy and battery system specialist Younicos, with lithium-ion cells supplied by Samsung SDI. The project has been delivered for the regional subsidiary of utility company WEMAG.

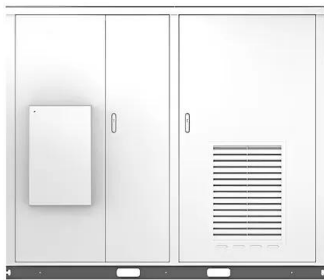
## Yunicos

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Centrica (UK) Yunicos has been selected by Centrica to design and deliver one of the world's largest battery-based energy storage systems. To be completed by winter 2018, the 49 megawatt (MW) lithium-ion system will respond to fluctuations in electrical demand in less than a second, to maintain electric power frequency and stability.



Solar



## Samsung SDI first to meet stringent new UL

Meeting the test criteria also means battery racks "can be installed without needing to add separate fire-fighting system(s)," Samsung SDI said in a release sent today to Energy-Storage.news. UL9540A testing is applied to rack-level safety with an optional battery system safety test. Samsung SDI is the first to meet the rack-level requirements.

## 'Physics meets art' at Germany's 100% renewable village grid battery

Image: LG Chem. Europe's largest energy storage battery project could conceivably also be its best looking, as these pictures show. The two companies behind the project, which saw a large-scale energy storage system deployed in the small German village of Feldheim, also decided to call on professional street artists and invited schoolchildren to get ...



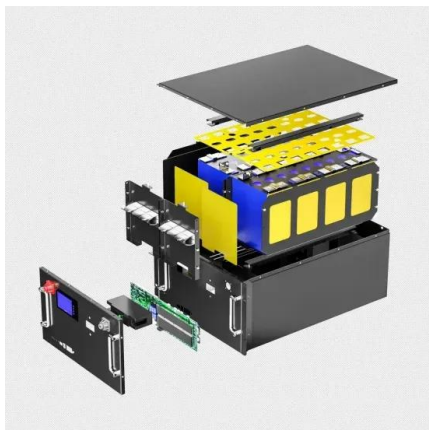
## Yunicos to upgrade energy storage system on ...

"We're grateful to be chosen once more by KEA to upgrade their battery storage facility," said Jayesh Goyal, chief commercial officer of Yunicos. "Their decision to collaborate again on this project demonstrates a high level ...



## Aggreko and Yunicos combine solar-diesel hybrid ...

Increasingly, solar energy and behind-the-meter battery storage assets are being deployed on an 'as-a-service' basis and system integrator Yunicos has decided to replicate the strategy for



## Yunicos to upgrade energy storage system on Kodiak Island, ...

"We're grateful to be chosen once more by KEA to upgrade their battery storage facility," said Jayesh Goyal, chief commercial officer of Yunicos. "Their decision to collaborate again on this project demonstrates a high level of trust in both our company and our storage control technology."

## Grid-scale battery makers Vzn and Yunicos make

UK politician Amber Rudd is shown around at the opening of the large-scale battery trial for which Yunicos is a partner in Leighton Buzzard, England. Image: Yunicos. As well as its involvement in grid-scale storage in North

America, Samsung SDI is also targeting the region's EV market with its lithium-ion batteries.  
Image: Samsung SDI.



## Power and capacity will be provided by Aggreko's 4.5MWh

...

Notrees 36MW wind farm in Texas, where Aggreko M& SS (then Younicos) retrofitted an advanced lithium battery system to replace lead acid fitted by a previous project partner. Image: Younicos/Aggreko. A large-scale battery storage system will be built in Texas for the US' biggest electric utility cooperative, to time-shift solar-generated loads

## Transmission system operator awards Sardinia battery storage

Italy's electricity transmission system operator has awarded a tender to Younicos, Samsung SDI and Italian renewable energy producer Green Utility to provide 1MW/1MWh of battery storage aimed at



## [Northern Mariana Islands](#)

The Northern Mariana Islands, officially the Commonwealth of the Northern Mariana Islands (CNMI), [b] [11] is an unincorporated territory and commonwealth of the United States



consisting of 14 islands in the northwestern Pacific Ocean. [12] The CNMI includes the 14 northernmost islands in the Mariana Archipelago; the southernmost island, Guam is a U.S. territory.

## Scotland's first utility-scale battery brought

Broxburn represents Scotland's largest energy storage facility, with a 2MW battery installed at a power station in Orkney thought to be the next largest. This is followed by the 1MW/1.3MWh 'Batwind' project, connected to an offshore floating wind farm, which was brought online by Younicos in July this year.



## Engie-Drogenbos Battery Energy Storage System, Belgium

Alfen, Engie, General Electric, Toshiba and Younicos have delivered the battery energy storage project. Additional information. The Drogenbos project consists of five batteries, having different cell technologies and coming from different suppliers, piloted separately or as a whole for a total of 6 MW/6 MWh (Alfen, GE, Younicos, INEO, Toshiba).

## 'Europe's largest' grid storage battery trial goes online in UK

A 6MW/10MWh lithium-ion battery has been installed at a substation in Leighton Buzzard,

Bedfordshire as part of a two-year trial. The project, completed by S& C Electric Europe, Samsung SDI and Younicos, has been designed to help assess the potential role of energy storage in the future of the UK grid.



## 'Physics meets art' at Germany's 100% renewable ...

Image: LG Chem. Europe's largest energy storage battery project could conceivably also be its best looking, as these pictures show. The two companies behind the project, which saw a large-scale energy ...

## Schwerin-WEMAG Younicos - Battery Energy Storage System 1, ...

Yunicos GmbH (Yunicos), a subsidiary of Aggreko Plc, is a provider of smart energy and grid solutions based on battery storage technology. The company offers Y-Cube ...



## Faroe Islands storage project to provide commercial grid services

Other commercial installations of large-scale storage have been implemented in grid-connected locations already, although only a handful so far. Two notable examples are in Germany, where Younicos recently inaugurated a wind-integrating battery park and Belectric has

co-located a solar farm with a large-scale battery system.

## 'Minimal downtime': Younicos swaps out lead

Notrees is a wind farm owned by major utility Duke Energy, with 153MW of turbines, straddling the west Texan counties of Ector and Winkler. Xtreme Power, an energy storage integrator acquired by Younicos in 2013, had executed the battery storage portion of the project a year prior to that, utilising lead-acid batteries.



## [Kaheawa Wind \(KWP II\) Battery Park](#)

The agreement calls for Younicos to replace existing lead-acid batteries with advanced Samsung SDI lithium-ion batteries, which will be managed by Y.Q, Younicos's proprietary control software. The market for battery energy storage is estimated to grow to \$10.84bn in 2026.

## Younicos: Energy storage from a pioneer's perspective

If C& I users deploy storage in conjunction with solar, our battery systems will also help them optimise self-consumption and synch it with both their own energy demand and opportunities on the grid. On top of that, C& I users ...



## Younicos bought out for US\$50 million

Energy storage provider and system integrator

Yunicos has been bought out by Aggreko, a power generation equipment and energy controls supplier. Yunicos, widely considered one of the 'pioneers' of advanced ...



## California battery's black start capability hailed as 'major

However, the 'world first' tag might be disputed. In January, Energy-Storage.News reported that a 5MW utility-scale battery park in Germany built by Yunicos using battery cells from Samsung SDI was the first to show that it could quickly restore the local grid in the instance of a disruption. Yunicos founder Clemens Triebel said at the time that the key to ...



## Faroe Islands storage project to provide commercial ...

Other commercial installations of large-scale storage have been implemented in grid-connected locations already, although only a handful so far. Two notable examples are in Germany, where Yunicos recently inaugurated ...

## 'Putting our money where our mouth is': Yunicos bullish on storage ...

Available globally, customers will pay Yunicos a rental fee for the battery as well as commissioning and decommissioning fees. "The

only thing we ask is that once you end the contract, we can keep it on the site for six months because we don't necessarily want to rotate it back into a warehouse but to redeploy it," Younicos spokesman Phil Hiersemenzel told ...

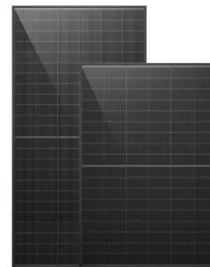


## Roundup: First ever 'blackstart' battery, Li

27 January 2016: A 5MW grid-scale battery park in Germany will be the first to utilise energy storage for quick restarting in the event of a blackout. Operated by utility WEMAG, the plant was completed in September ...

## ROUNDUP: Convergent 40MWh California BESS, Solar-plus-storage ...

Prince is former CEO of German-American battery storage pioneer Younicos, which was sold to microgrid and mobile power systems specialist Aggreko in 2017. More recently, he was on the board of Enerox CellCube, another vanadium flow battery company, and was president in North America for Centrica Business Solutions.



## World's first floating wind farm will have 1.3MWh battery system from

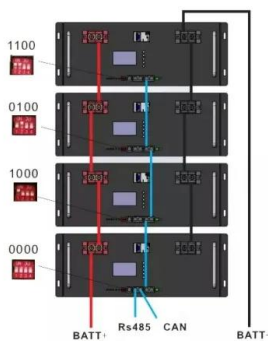
Statoil announced yesterday that it has awarded Younicos the contract to deliver a battery energy storage system of 1MW / 1.3MWh to connect to



Hywind Scotland. The battery energy storage system will be housed in two 10ft containers, scheduled for completion by the second quarter of 2018. When the project - considered to be a pilot of the

## Yunicos and WEMAG expanding Europe's 'first ...

Berlin-based energy storage software firm Yunicos and German utility WEMAG have started work on expanding the storage capacity of a battery park in Schwerin, Germany, from 5MW to 10MW power output and ...



## Microgrid and Storage Solutions

Integration and control of thermal, renewable and battery systems will be increasingly required to ensure power stability and reliability. Off-grid and microgrid energy solutions are adding more ...

## Expansion of EU's First Commercial Storage Plant Shows ...

Yunicos, which contributed to the second phase of the Schwerin battery park owned by North Germany regional utility WEMAG, said the extension will help the project ...





## Towards a solar baseload

For a start, there's the obviously disruptive price trend for both solar PV and battery storage. This year we saw PV record chasing record with prices as low as US\$0.07 per kilowatt-hour in India. Even if not all places are as sunny, recent German utility scale tenders have dropped as low as EUR0.085 - even in cloudy northern Europe.

## The Battery Storage System That Could Close Down Coal Power

The battery storage test center at Younicos. In 2009, Younicos started operating a 1-megawatt testing facility at its headquarters (pictured), using office space ...



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