

From a big year for BESS to an even bigger one: Predictions and take-aways for 2024

Market trends | Andy Colthorpe takes soundings from key energy storage market players on their forecasts for the industry in 2024, following a year of significant progress in 2023

As each year draws to a close, Energy-Storage.news approaches a select few industry figures for their views on the 12 months just gone and the year ahead as part of our annual 'Year in Review' series.

Here are some quotes from the eight industry representatives we heard from this time around, as 2023's big year for energy storage ended and we welcomed 2024 with cautious optimism.

Looking back to 2023

What did 2023 mean for the energy storage industry, both from your own company's perspective and in bigger-picture terms?

The energy storage industry has continued to grow in 2023 – both in terms of the number and size of projects. Despite this growth, several important hurdles – including the rise in global interest rates – have held the US industry back. Projects are expected to be delayed into 2024 and beyond due to changes in local regulations, uncertainty around how policies like the Inflation Reduction Act/Green Deal will be implemented, and the market looking for stability in interest rates.

Andy Tang, head of Wärtsilä Energy Storage & Optimisation

Have supply chain constraints eased in 2023 and what sort of supply chain dynamics are you seeing in the industry going forward?

The supply chain disruptions caused by the COVID-19 pandemic have been mostly resolved, and their resolution is coinciding with an ease in demand for EVs, which means there is more lithium carbonate available to devote to energy storage projects.

On the battery front, more manufacturers are coming into large scale battery

production, first spurred by the EV market and now into the energy storage space. That is a good thing for the energy storage projects: there is physically more supply coming off production lines and there is more innovation in energy density and safety features as manufacturers work to keep up and exceed each other.

Ray Saka, VP of business strategy and services, IHI Terrasun

The challenges we face in the supply chain continue to be diverse. The biggest bottleneck encountered in battery storage projects is still the long delivery times for high-voltage components, especially HV-transformers. This bottleneck is affecting projects throughout the industry and has increased further due to the strong expansion momentum.

At the same time, there are encouraging signs that the market for battery components, including modules, containers, inverters and switchgear, is easing. Delivery times for these crucial elements have normalized again to less than 12 months, depending on the size of the project. This easing of the market promises greater flexibility in the planning and implementation of our projects.

Florian Antwerpen, managing director, Kyon Energy

Looking ahead

What are some major trends in energy storage technologies that readers should keep an eye out for?

Lithium-ion. No, for real. In the solar sector in the mid-2000s, there were about a dozen competing technologies that triggered investment and media, but they all lost to the basic solar photovoltaic technology. Solar PV started getting deployed, creating an unstoppable



Credit: Fluence

Despite challenges, our interviewees believe the industry is on a strong foundation for a big year in 2024

feedback loop of incremental efficiency gains and supply chain consolidation. Over a 15-year timeline, that combination dominated the market.

It's the same now with lithium-ion. Don't get me wrong, there are some really exciting technologies out there and I wish everyone the best but look at the cost curves. It's going to take a lot of time for the new entrants to come to the market in a truly cost-competitive way.

It's not sexy and doesn't get clicks – but watch and report on the incremental lithium-ion gains on the density and efficiency side. Pay attention to what's boring – that is what is going to have a big impact.

Jeff Bishop, CEO, Key Capture Energy

How are energy storage projects and different market opportunities evolving, as technologies and stakeholder understanding mature?

We see that stakeholders across Europe are recognising more and more the essential role that BESS plays to integrate renewables into the power grid. Policy makers, regulators and grid operators are key to setting the right framework for BESS capacity growth. In this sense, for example, grid connections, permits and grid fees are still slowing the deployment of BESS in many countries.

However, we see that in most countries stakeholders are now actively pursuing strategies to reduce hurdles and to activate the BESS build-out. This is enabling us at Aquila Clean Energy to continue to grow our investment, development and construction activities in this space. We also welcome the approach of countries like Greece and Spain to set up dedicated incentive systems for battery projects.

Kilian Leykam, director energy storage, Aquila Clean Energy EMEA

What do you think 2024 will mean for energy storage?

The biggest year of new energy storage to date! At this point, each year we expect the global demand for battery-based energy storage systems to be larger than the previous, and that continues in 2024 – still driven by the largest global markets, but with newer markets starting to contract for large-scale storage as well.

Andrew Gilligan, director of commercial strategy, Fluence

Energy trading in itself is not a new concept, but the role of battery storage within that is perhaps one that many people are still learning about. What's the easiest way to explain what optimisers do?

Power traders traditionally have only been able to trade across markets or across the curve, but batteries allow power to be traded across time, which isn't otherwise possible. But it's not as simple as just charging the battery at night when the price is low and discharging during the day when the price is high. Power prices are very volatile so there are numerous chances to buy and sell every day, but at different times that are hard to predict and optimally trade across. And there are multiple power markets, state of charge, cycling, degradation costs to manage and so on.

As an optimiser it's our job to manage all of these variables and make sure a battery is in the right market, at the right time, all of the time, while respecting its operational parameters.

Dr Ben Irons, co-founder and director, Habitat Energy

What should the industry's main priorities be in 2024?

Education. Education. Education. As we talked about in our interview with *Energy-Storage.news* at RE+ last year, positive

engagement with authorities having jurisdiction (AHJs) is vital for success in the US battery storage industry. We need to continue educating the AHJs on each project we're building and the change in technologies and what that means for their first responders.

Adam Bernardi, director of renewables sales and strategy, and Chris Ruckman, vice president of energy storage, Burns & McDonnell

To take full advantage of the opportunity storage systems present, there are several challenges we must look to address in the coming year. Firstly, we urgently need a paradigm shift in the political and regulatory community on every level to acknowledge the importance of storage. A key component to this is increasing the number of studies that emphasise the cost benefits and flexibility advantages of storage systems, especially to political decision-makers.

We also need political regulation to grant storage systems priority access to the grid and creation of market environments that offer many different applications such as wholesale trading, frequency and non-frequency ancillary services and capacity markets so that it becomes a more economically attractive venture to storage developers. The regulations in the European Renewable Energy Directive (RED III), as well as the planned approval of the new Energy Market Design, are steps in the right direction.

There must also be a concerted effort to get communities on board with storage systems. Community acceptance is a pivotal part of the success of

any renewable energy solution. Although concerns must be taken seriously, these can be mitigated by planning, executing and operating projects to the highest social, technical and environmental standards.

Storage is a stable, sustainable all-rounder and, simply put, the successful energy transition depends on it. This is why there must be tangible progress made in 2024, from regulators to communities to storage operators, so that together we can take advantage of the benefits storage has to offer.

Julian Gerstner, head of storage, Baywa r.e.

Congratulations on being recognised for your Outstanding Contribution to the industry at the Energy Storage Awards 2023. What does being part of this industry mean to you, personally and professionally?

It has always been and remains a privilege to work with one of the most important asset classes there is within the transition to a low carbon society. I've been a renewable energy investor for many years and energy storage is the most complex and rewarding technology I've come across in what it can achieve to move us towards a sustainable future.

It gives me a huge amount of satisfaction in my daily working life to be surrounded by dedicated, knowledgeable and passionate colleagues using their talents to drive energy storage forward on a global scale.

Alex O'Cinneide, founder and CEO, Gore Street Capital

You can read the full 2023 series and previous years' editions on energy-storage.news



Last year's Energy Storage Awards, organised by PV Tech Power publisher Solar Media, gave the assembled industry in Europe the chance to celebrate

Credit: Solar Media