

Your World First

C/M/S/

Law . Tax

Global infrastructure report

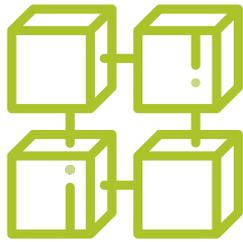
Energy storage

Infrastructure for our 'Connected Future'





Projects are moving from contracted to merchant revenue streams.



Blockchain and energy storage are transforming the transactional landscape of supply and demand.



Decreasing risks opens doors for debt financing.



Lithium-ion batteries facing competition from new technologies.

Countries to watch



Chile



China



Germany



UK



Netherlands

Contents

- 03 Foreword
- 04 **Energy storage**
- 05 Interview with Mark Simon, **Eelpower**
- 06 In the spotlight: countries to watch
- 09 Interview with Tom Vernon, **Statera Energy**
- 10 Investment opportunities in energy storage
- 12 Interview with Hannah Staab, **Natural Power**
- 14 What does the future hold for energy storage?
- 15 Methodology



This report is part of Connected Future. For more information, please visit cms.law/connectedfuture

Foreword

It is recognised that flexibility in the electricity system will become increasingly valuable in the coming years as the wider energy transition, including the greater penetration of intermittent, distributed generation and more proactive consumers, across the world progresses.

In the last few years, energy storage has come to the fore as a key sector in providing such flexibility. The commercialisation and wide scale deployment of energy storage seeks to take advantage of the range of revenue streams available to energy storage projects, such as reserve, system services and balancing. There are a variety of business models that create opportunities for investors, funders, generators and developers, including co-location and behind-the-meter / Storage-as-a-Service (SaaS).

Nevertheless, there remain jurisdiction-specific challenges to the full scale roll out of energy storage, in particular around the future predictability of revenue streams and the wider regulatory regime and the extent of merchant risk that investors can accept.

The energy storage sector will continue to evolve with increasing opportunities in alternative storage technologies to lithium-ion batteries and pumped hydro, such as Compressed Air Energy Storage (CAES) and hydrogen.

I would like to thank our interviewees who gave up their time to contribute to our report: Mark Simon of Eelpower, Tom Vernon of Statera Energy and Hannah Staab of Natural Power.

This report is one of four supplements, expanding on the findings of our 2018 Connected Future report and our 2017 CMS Infrastructure Index. The 2019 Infrastructure Index will be available at the end of 2019.

Watch Munir Hassan gives his view on energy storage



Munir Hassan
Partner, Head of Clean Energy
t. +44 20 7367 2046
e. munir.hassan@cms-cmno.com



Energy storage

Storage technologies are at the forefront of the energy transition. Their ability to alleviate traditional grid balancing challenges and to foster a shift towards a more flexible and reliable decentralised energy system are some of the main reasons storage is seen as such a critical component of future power systems.

The energy storage market is transitioning from its early ancillary service contracts-based phase, and project developers are looking at opportunities on a merchant basis. The flexibility of services a storage asset can provide to customers is expected to decrease merchant risk and facilitate debt financing.

Based on our findings we have identified the following future key trends within the market:

Energy storage is critical to electricity system services

Electricity systems require a range of ancillary services that energy storage technologies are able to provide. Such services encompass frequency response, electric supply reserve capacity, balancing demand and black start. Utility-scale battery storage projects are already helping utilities deliver their obligations to keep the 'lights on' through short and long-term contracts.

Co-location offers a valuable proposition for energy producers

Co-location is an attractive proposition for both renewable and conventional energy projects. A number of initiatives are already in the pipeline, both for retrofitting existing grid-connected projects, as well as new projects, where energy arbitrage could make subsidy-free projects more attractive and diversify the revenue streams available.

Behind-the-meter offsets pricing risks

Large-scale energy consumers can now offset the risk of fluctuating energy prices with behind-the-meter opportunities. Such demand shifting offers a wealth of benefits, providing cost reductions in day-to-day operations by avoiding peak use of system charges, while simultaneously increasing revenues from the provision of system services, such as demand side

response, improving productivity and contributing to sustainability objectives. The storage-as-a-service business model can offer solutions on a service agreement basis, without consumers needing to invest in owning a system.

Competition and flexibility are set to increase

Increasing installed capacity will create competition between storage projects and other generation projects for various revenue streams. For example, the increased number of battery storage projects has been one of the contributing factors to the reducing prices for the provision of frequency response in the UK. Business models that seize rising merchant opportunities on short notice will be of most importance for the future of the storage market.

Blockchain will unlock consumer opportunities

Blockchain and energy storage have the potential to transform the transactional landscape of supply and demand. Energy giants are rallying together, forming high-level consortiums to launch systems that will shift the dynamics of the traditional market, enabling peer-to-peer trading and empowering 'community microgrids', which are already popping up in the US and Australia.

Decreasing risk opens the doors to debt financing

Regulatory acceptance, rapidly falling costs of batteries, the increasing need for flexibility services and increasing co-location opportunities have appeased many of the initial concerns of long-term investors, making debt financing more readily accessible. That said, low-risk projects are still currently favoured over those projects relying on merchant revenue, despite potential higher returns.



Eelpower

Mark Simon,
CEO

Since building the first ground-mounted solar farm in the UK in 2010, Mark Simon has run companies that build, operate and own renewable assets, most recently large-scale commercial energy storage infrastructure. With a project pipeline of 860MW, Eelpower Limited plans to build 1GW of grid-connected storage by the end of 2021.

Simon believes that batteries will play a key role in accommodating the significant volume of renewables now featuring in the energy mix.

“The UK has done an amazing job in introducing renewables. Few are truly aware of the new world we are in. The assets we’re seeking to deploy deliver the services that make renewables sustainable. You cannot do this without a sustainable set of solutions in which batteries play a vital part,” he says.

In 2014, it installed the UK’s first commercial battery alongside a renewable power project (Slepe Solar Farm in Dorset), and in 2017 Simon and his team launched Eelpower, with the construction of its 10MW energy storage barn at Leverton, near Lincoln. The company has since added more projects to its portfolio.

“We have won the two largest frequency response contracts awarded since August 2017 which have underpinned our first two projects: Leverton, and the 20MW Rock Farm scheme near Ludlow which went live in July [2018],” says Simon.

Since Rock Farm is in open air, the company is interested in performance differences between seasons. High temperatures during

the very hot summer in 2018 had quite an interesting effect on the project’s use of power.

On the group’s ambitious capital raising plans, Simon explains, “We have a pipeline of 1GW to build in the next few years. Building 100MW every quarter requires strong low cost capital providers.”

For Eelpower, 1GW is just the starting point. The company hopes it will reach its target sooner than the currently pencilled-in 2021. Funding for the projects will be highly diverse. “It will be a combination of debt, mezzanine of some sort and a small proportion of equity from multiple parties,” explains Simon.

Although there are evident changes in the attitudes of investors in the sector, information on investments and their correlation to prices offers more certainty. According to Simon, power prices are set to decrease and become more volatile. While the former will not reach zero, there will continue to be an increase in the frequency of negative pricing.

Considering the aforementioned dynamics of the market, Simon stresses, “traditional infrastructure investors are investing based on an appreciating price of power and short volatility; Eelpower offers investment that is long volatility and is largely indifferent to the price of power. It doesn’t need to be low for us, because our battery assets are efficient and the costs are marginal versus the value of the revenues – we’re getting between 86% and 90% efficiency.”

While Eelpower is less concerned about the price of power, volatility will bring benefits for the business and is seen as an opportunity

for arbitrage. “Batteries are like solar: they are easy to deliver, and we don’t worry about delivery risk,” adds Simon.

On the other hand, there are also multiple risks to be addressed within this sector. Politicians not grasping technology issues represent one of the clear obstacles to further development of energy storage. “They understand prices, they understand keeping the lights on, but few understand the complexity.”

In addition, very few politicians actually show interest in technology, even though it is a critical component of the economy. The energy trilemma, which encompasses low carbon, low prices and energy security, is at the forefront of the political agenda.

Nonetheless, Simon asserts, “Energy security comes at a cost, low prices as well, therefore it’s really challenging for politicians to deliver this.”

Changes in technology models might also lead to high variation in costs. The mobile phone industry is a relevant example; in past years everyone worried about what was included in their plan, whereas nowadays the cost of using a mobile phone has become so low that few people fret over this anymore.

Simon reveals the aim of Eelpower is to develop a network of assets that provides services to the grid, making it ultimately able to make renewables sustainable across the nation. This is going to be highly necessary if the move towards a carbon-free power system is to become a reality.

In the spotlight: countries to watch

The changing energy landscape has triggered significant evolution within the energy storage market. Technological advances in battery storage and its intrinsic versatile nature are cementing the technology as a pivotal tool for offering the flexibility that future energy systems require to overcome obstacles from increasingly intermittent sources.

Reductions in costs have helped pivot battery storage's financial attractiveness in the energy market. The average cost of grid-scale battery projects that came online in 2017 globally is estimated to be under USD 600 per kilowatt hour (kWh) for an average duration of four hours. Lithium-ion battery prices are also expected to drop considerably, with the IEA forecasting prices to reach USD 70/kWh by 2030. Cost reductions have been one of the main enablers of battery storage deal flow.

We have singled out five key jurisdictions that we think pose the greatest opportunities for investors based on past deals, local incentives and predicted future investment activity:



UK

Setting sights on merchant revenues

The emergence of readily available revenue streams for storage projects in the UK has sparked significant development over the last three years. The UK grid operator's Enhanced Frequency Response (EFR) tender & Fast Frequency Response (FFR) service has offered considerable ground for battery storage projects to highlight their ability to contribute to National Grid's legal obligation to balance supply and demand on the grid. 201MW of projects were awarded EFR contracts, and dozens of projects profit from FFR contracts. Statera Energy holds FFR contracts for its operational 49.99MW lithium-ion battery storage system, and the 48MW Creyke Beck Storage project currently under construction.

The Capacity Market, a key policy of the UK's Electricity Market Reform programme, has also been a key facilitator of projects to date, however, the low clearing prices and de-rating applied in the 2017 auction resulted in fewer storage projects benefitting. The recent decision of the General Court of the European Union has resulted in the suspension of the Capacity Market until the European Commission undertakes a formal state aid investigation.

In 2018, the first battery storage assets will be used in the UK's Balancing Mechanism (BM). Through BM, National Grid promises GBP 350m annual rewards to participants, potentially inaugurating a new era for the battery storage industry in the country.

Co-location opportunities and behind-the-meter deployment for large consumers are set to be the next big trends.



The Netherlands

Pioneering battery storage and grid support

The Netherlands has no specific legislation for energy storage, but has seen increasing investment in battery storage technologies. The 10MW AES Netherlands Advancion Energy Storage project was the first large battery-based energy storage facility to commence operations in 2016.

Dutch company Alfen has developed a 3MW renewable energy and battery storage co-location facility. Launched in 2017, the project integrated battery storage into Princess Alexia Windfarm to help smooth out peaks and troughs in power supply and better match the demand for energy. The system uses BMW car batteries to store the surplus energy. There are plans to expand the project to 12MW, making it the largest of its kind in the country.



Germany

Driving leadership through R&D

Increasing renewable capacities and the ongoing decommissioning of nuclear plants has put a focus on battery storage technologies. Although Germany's grid is stable, and blackouts are virtually non-existent, researchers in the city of Schwerin have aspired to develop a battery park to 'black start' the grid, to recover from a shutdown. The project, named WEMAG, is led by Younicos – a smart energy and grid solution provider that bases its services on battery storage. The system can provide energy storage for renewables as well. Due to its easy installation, the software is expected to make its way into other jurisdictions where grid stability and blackouts are more of an issue.

China

1.6GW of electrochemical storage capacity planned or under construction

China boasts by far the largest renewable capacity in the world, opening a range of opportunities for new battery storage facilities. The central government extensively supports innovative energy solutions, and in 2017 the first national-level energy storage promotion policy was released. China currently has around 1.6GW of storage capacity planned or under construction. China Energy Storage Alliance has forecasted that, by 2020, the country's storage market will have a capacity of 67GW. The country enjoys a strong presence of more than 100 lithium-ion battery manufacturers and technology providers including BYD, China Aviation Lithium Battery, and Lishen.

Chile

Big ambitions for ancillary services and co-location

Chile's share of renewable energy has tripled in the past five years. The country's ambition to increase share of renewable energy supply to 20% by 2020 and the network's increased grid stability needs are among the main drivers behind energy storage deployment. Under the 20.571 law, which introduced a net-billing scheme for self-consumption, producers can sell the electricity they do not consume to the grid at wholesale energy prices. Through this mechanism, households have the incentive to optimise their production, raising hopes for a boost of behind-the-meter battery storage applications for small consumers.

AEG has showcased the benefits of co-locating battery storage projects with conventional power plants. AES Gener built the 12MW lithium-ion Andres BESS next to its Andres substation to provide frequency regulation and spinning reserve services, becoming the country's first battery storage project.



Statera Energy

Tom Vernon, Managing Director

As a fully integrated developer, owner and operator of flexible infrastructure that focuses on energy storage and high efficiency gas reciprocating engines, London-headquartered Statera Energy aims to deliver enhanced flexibility for the UK electricity system and to assist in the transition to a low carbon economy.

The company is working on solutions, such as fast responding electricity storage and generation, to the challenges of electricity intermittency generated by solar and wind power plants.

“Unlike the approach historically prevalent in renewable investment, we believe it is important to focus on the commercial model just as much as the assets themselves when investing in the flexible generation and storage sector. Without doubt a differentiating factor is innovation on the business plan”, says Tom Vernon, Managing Director at Statera Energy.

Focusing on the asset is no longer enough. It is necessary to look at the broader market and potentially at other assets, to reduce risk and add cash flow certainty.

“That is certainly the benefit of deploying a portfolio of assets,” Vernon says. The company currently has 100MW of battery storage projects operating and it is aiming to build a further 50MW during the next six to twelve months. It pre-qualified a further 800MW of projects for the capacity market earlier this year.

Currently, the revenue streams that are available for energy storage projects are represented by grid support services.

“The predominant ancillary service opportunity for batteries is frequency response, but there are other potential revenue streams available for reserve or voltage support,” Vernon says.

Undoubtedly, the energy storage sector poses a broad range of risks, such as the degradation of the systems, depending on how assets are dispatched. Pricing and policy are two other additional risks.

“On the cell pricing risk, we have seen a significant decrease in the costs of cells over the last ten years, but for the growth in the market to continue we need to see further declines. Buying at scale across a portfolio of projects helps in this regard.”

Besides, the recent de-rating for storage projects entering the capacity market auctions had a very significant impact, which has increased risk for developers and investors.

“Contracted revenue offered by the UK capacity market and National Grid ancillary services is critical for investor certainty on project cashflows. The cuts we’ve seen to the capacity market derating factors and decreases in frequency response pricing are substantial. For the time being, it has undoubtedly reduced the attractiveness of storage as an investment proposition,” Vernon says.

With the lack of government or regulatory support developers are having to look at other avenues to build out projects.

“Looking forward we believe successful delivery of utility scale storage requires innovation and optimisation across the whole supply chain. This ranges from site development and location, route to market and business plan, equipment procurement, and economies of scale. The market is competitive and we aim to optimise all these areas.”

For what concerns co-location, these projects have the potential of bringing pre-technical feasibility, but at an increased technical cost, which is otherwise not achievable with standalone storage projects.

“The question for developers and investors is actually whether the overall investment delivers a more attractive return. The risk with co-location is developing a site that has a broad technical capability but at a higher cost per megawatt of export capacity. The broader technical capability doesn’t necessarily correspond to a proportional increase in revenue” says Vernon.

Investment opportunities in energy storage

Balancing participation

Global grid-connected energy storage is expected to grow to USD 7bn by 2025. Storage projects can be a more sophisticated offering for investors than simply providing capacity and ancillary services such as frequency response, as revenues are finite.

Other procurement options for system services are being explored by various system operators, including week-ahead auctions which are already being seen in Europe and are to be launched in the UK. Investors see participation in balancing mechanisms as one of the main sources of income for energy storage. Price arbitrage also represents one promising operation strategy benefiting from price differentials.

Co-location

Co-location of storage is an attractive proposition for both renewable and conventional energy projects. A number of initiatives are already in the pipeline, both for retrofitting existing grid-connected projects, as well as new projects. Energy arbitrage could make subsidy-free projects more attractive and stakeholders could expect greater participation as energy projects get increasing market exposure.

If a battery storage system is to be co-located with an existing power plant, it is necessary to consider how the battery will interact with the project's subsidies, Power Purchase Agreements and financing arrangements. In September 2017, Anesco became the first commercial solar farm operator in the UK to retain its Renewables Obligation accreditations after co-locating 1.1MWh battery storage installations to each of its three 5MW solar sites. The producer is now getting paid for both the electricity it exports to the grid for the services provided by the solar panels and through the battery. Ofgem's landmark decision has been characterised a game-changer for the future of co-location with existing renewables projects in the UK.

For conventional fossil-fuel powered energy projects, battery storage solutions offer cost cuts to operators by replacing spinning reserve costs and increasing

For conventional fossil-fuel powered energy projects, battery storage solutions offer cost cuts to operators by replacing spinning reserve costs and increasing efficiency.

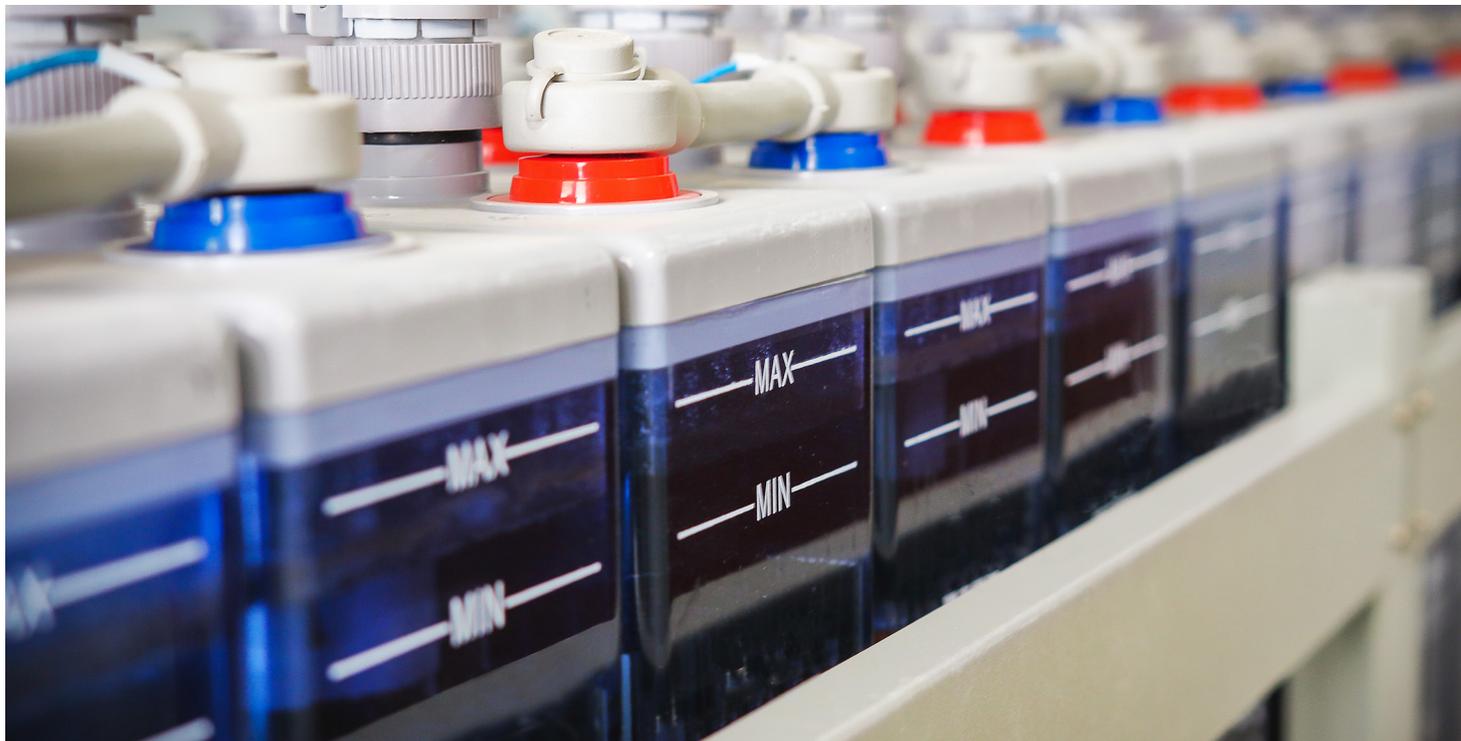
efficiency. In May 2018, Australian utility Alinta Energy commissioned a 30MW/11.4MWh Energy Storage System next to its 178MW OCGT Newman Power Station to manage peak demands and improve its efficiency.

Behind-the-meter/Storage-as-a-Service (SaaS)

Behind-the-meter storage systems alter the demand profile of both small and large consumers by giving them the freedom to control the way they purchase energy and use the energy stored. For instance, it allows large-scale energy consumers to offset the risks of fluctuating energy prices, while integrating additional generation and revenue streams.

When co-located with a renewable energy asset, large consumers, which are energy producers at the same time, can store intermittent energy produced to use at peak times when it is more expensive to import from the grid. This way, companies can make significant cost reductions. The stored energy can both function in an energy security capacity to ensure consistent energy flow, and provide further power for additional operations. As well as contributing to a company's sustainability objectives, the battery can also contribute to a company's bottom line by providing potential demand side response revenue streams.

SaaS offers this solution to customers not targeting ownership of battery storage assets but aiming to take advantage of the benefits on a service agreement basis. SaaS providers make a stacked business case by offering services to customers, combining back-up power, peak shaving, energy arbitrage, and market ancillary services.



Increased availability of debt financing

The learning curve on energy storage technology has allayed many concerns, including rapid battery degradation, revenue streams in system services and balancing, and behind-the-meter opportunities.

A report by Moody's suggested that in March 2018 project financing of battery storage projects had reached a risk parity with conventional power projects.

The first half of 2018 saw a steady, stream of debt financing deals, for example in the UK with Santander leading the charge in lending GBP 28.5m to Battery Energy Storage Solutions. Gravis Capital Management also agreed a GBP 20m financing facility with Eelpower, which will fund Eelpower's ambitions to build, own and operate a fleet of grid-connected batteries.



Decreasing risk opens doors for debt finance



Natural Power

**Hannah Staab,
Senior Due Diligence
Project Manager**

Natural Power is an independent advisory firm offering services to a wide range of renewable energy clients. Their services extend to supporting the construction of battery storage projects as well as feasibility analysis and consenting for co-located onshore wind, solar and storage.

"I think there are definitely still some challenges in getting these projects financed from a technical point of view," says Staab. "Some of the most interesting risks are around battery performance and operational behaviour, because there isn't that much operational data out there yet on batteries, particularly not over a ten-year lifespan or even beyond that."

Warranties relating to performance can be restrictive, limiting the way developers operate their assets or revenue streams they have access to.

Staab says, "Performance warranties can be very specific to the way the battery is operated. They might be suitable for the initial primary revenue stream, typically frequency response, with regards to the allowed number of cycles per day or continuous operation at nominal power. But these limitations may be less suitable for future revenue streams the project may access."

When asked about the best way to tackle these technical issues, Staab says "The key thing is to make investors aware that the details of the performance warranty matter, and to consider how the battery will realistically be operated under its initial and potential future core revenue streams."

Understanding the temperament of your asset is crucial. Hannah states, "Operational performance monitoring is crucial to make sure you're getting the best out of your battery."

But performance data is very limited in the storage market. "Manufacturers are quite protective of their data. For wind and solar we have years of performance data to verify theoretical models. There is little long-term field data for battery projects yet. This knowledge gap will close over the next few years, but technology will move on at the same time."

Lenders currently look at this lack of data as a key technical risk, joining revenue uncertainty and a lack of visibility over the lifetime of batteries as primary concerns.

With regards to expected maturity and bankability of the storage market, Staab says, "I think the rise in co-location projects is going to get traditional wind and solar investors comfortable with storage."

"If you have a combined solar and battery project and are able to secure a long-term PPA for the solar generation, that can outweigh some of the revenue risk you're taking on the battery side of things. So I think we are going to see more renewable and battery colocation projects in the UK over the next few years."

Commenting on the recent de-rating of some storage projects in the UK's capacity market auctions, Staab states that the revision "has definitely taken some developers by surprise. I think a lot of developers saw storage as a lucrative alternative to onshore wind and solar, which continue to face a challenging route to market in the UK, and didn't really anticipate that the storage market would get this competitive this quickly."

But she adds that the build-out of large scale battery storage projects in the UK is far from over as "some developers managed to secure capacity market contracts at an early stage, and now have a pipeline of projects that they can build out with very robust revenues."



What does the future hold for energy storage?

Energy storage is expected to experience further cost reductions and performance improvements as it achieves commercial maturity. According to the International Renewable Energy Agency (IRENA), installed costs of battery storage systems are forecast to fall by 50-66% by 2030, opening up new economic opportunities for stakeholders as costs to support ancillary services and behind-the meter services for consumers drop significantly.

Alternative storage technologies

Compressed air energy storage (CAES) is expected to be a new technology on the rise. IRENA estimates installation costs will fall to USD 44/kWh by 2030. There is potential to repurpose old natural salt deposits or depleted oil fields as storage caverns for compressed air, which would be a welcome alternative seeing as purpose-built caverns hike CAES costs by 80%.

Hydrogen is increasingly referenced as an attractive alternative to battery storage. An area of development is water electrolysis whereby an electric current is passed through water to separate hydrogen and oxygen. According to the IEA, investments in building water electrolyzers picked up in 2017, with projects planned to come online in 2020 with a total capacity of 150MW.

Heat storage

Molten salt Thermal Energy Systems (TES) are rapidly developing as the preferred process for thermal storage, occupying a 75% share of total thermal storage operations.

“ Some of the most interesting risks are around battery performance and operational behaviour, because there isn't that much operational data out there yet on batteries, particularly not over a ten-year lifespan or even beyond that. ”

Hannah Staab
Natural Power

Opportunities in microgrids, particularly 'community microgrids', are emerging, as seen in projects like the LO3 Energy and Brooklyn Microgrid project in New York.

Developments in thermal storage are developing alongside CAES in the form of advanced adiabatic compressed energy storage (AA-CAES). The most promising concepts of AA-CAES involve molten salt-based TES because its costs are expected to fall to USD 10/kWh by 2030. The Gotthard tunnel in Switzerland is being converted into an AA-CAES system, and is expected to reach efficiencies of up to 72%.

Blockchain in energy storage

Blockchain acts as the transaction layer by which users sell or consume energy transparently. Storage, on the other hand, offers valuable capacity flexibility. Opportunities in microgrids, particularly 'community microgrids', are emerging, as seen in projects like the LO3 Energy and Brooklyn Microgrid project in New York.

Blockchain applications are being explored by a number of consortiums of energy giants led by the Rocky Mountain Institute and Grid Singularity. A number of shareholders including Shell, Equinor, Engie and Centrica have launched a joint initiative to explore the topic. Peer-to-peer trading is also enabled in the storage and blockchain mix. Supported by the Australian Renewable Energy Agency, Power Ledger has initiated its first P2P trading of electricity, a 53.6kW solar PV system paired with a 150kW lithium ion battery storage system, for a residential apartment block in Fremantle, Western Australia.

Methodology

Our research aims to identify the most promising markets and jurisdictions for investment for broadband, electric vehicles, energy storage and smart mobility. Since the four sectors analysed are markedly different in terms of their maturity, research methods have been tailored accordingly. The analysis of more mature sectors, for example, digital has been more quantitative, other sectors (i.e. smart mobility) required a more qualitative approach.

The quantitative data collated has been categorised according to sector, country, financing model, transaction stage, transaction value, participant role and status, with the goal of developing advanced data-driven analytics and insights. Our main source was dataLive, inspiratia's proprietary project database that monitors global project-financed social infrastructure, transport and renewables deals. Other sources include governments, international organisations, rating agencies, consulting firms, academic literature, newspapers, specialist press, press releases and in-depth interviews with market participants.

Our qualitative analysis was based on in-depth interviews with leading market practitioners to assess the interest of potential investors. This analysis provided insights on potential revenue streams, risks and inhibitors to successful investment, deeper understanding of the successful case studies, political support, regulatory framework, investment climate, technology maturity and gain an understanding of any other issues potentially affecting the investment landscape.

About CMS

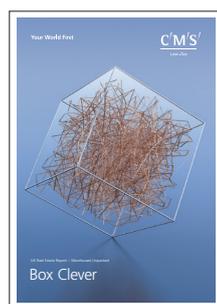
Ranked as the world's sixth largest law firm by lawyer headcount and the sixth largest in the UK by revenue, CMS can work for you in over 40 countries worldwide. Globally 4,500 lawyers offer business-focused advice tailored to our clients' needs, whether in local markets or across multiple jurisdictions.

Across our eight core sectors – Consumer Products, Energy, Financial Institutions, Hotels & Leisure, Infrastructure & Project Finance, Life Sciences & Healthcare, Real Estate, and Technology, Media & Telecommunications – we have some of the brightest and most creative legal minds ready to advise you.

In addition to this report, we have a broad range of thought leadership papers covering major sector issues.



*Infrastructure Index:
A new direction*



*UK Real Estate Report:
Box Clever*



*Finding the balance:
human touch versus
high tech*



*UK Real Estate Report:
Smart. Healthy. Agile.*

cms.law

About Inspiratia

inspiratia pushes the boundaries of analytics in the global infrastructure and renewables sectors, producing the most accurate and insightful analysis, uncovering new financial information and making robust sector predictions.

inspiratia 

inspiratia provides clients with the tools to anticipate and analyse market trends in a way that helps grow their pipeline of deals and assists with business development. Based in London and Washington DC, inspiratia has an international team of industry experts and analysts all with in-depth sector expertise and extensive professional networks. www.inspiratia.com



Your free online legal information service.

A subscription service for legal articles on a variety of topics delivered by email.
cms-lawnow.com



Your expert legal publications online.

In-depth international legal research and insights that can be personalised.
eguides.cmslegal.com

CMS Cameron McKenna Nabarro Olswang LLP
Cannon Place
78 Cannon Street
London EC4N 6AF

T +44 (0)20 7367 3000
F +44 (0)20 7367 2000

The information held in this publication is for general purposes and guidance only and does not purport to constitute legal or professional advice.

CMS Cameron McKenna Nabarro Olswang LLP is a limited liability partnership registered in England and Wales with registration number OC310335. It is a body corporate which uses the word "partner" to refer to a member, or an employee or consultant with equivalent standing and qualifications. It is authorised and regulated by the Solicitors Regulation Authority of England and Wales with SRA number 423370 and by the Law Society of Scotland with registered number 47313. It is able to provide international legal services to clients utilising, where appropriate, the services of its associated international offices. The associated international offices of CMS Cameron McKenna Nabarro Olswang LLP are separate and distinct from it. A list of members and their professional qualifications is open to inspection at the registered office, Cannon Place, 78 Cannon Street, London EC4N 6AF. Members are either solicitors or registered foreign lawyers. VAT registration number: 974 899 925. Further information about the firm can be found at cms.law

© CMS Cameron McKenna Nabarro Olswang LLP

CMS Cameron McKenna Nabarro Olswang LLP is a member of CMS Legal Services EEIG (CMS EEIG), a European Economic Interest Grouping that coordinates an organisation of independent law firms. CMS EEIG provides no client services. Such services are solely provided by CMS EEIG's member firms in their respective jurisdictions. CMS EEIG and each of its member firms are separate and legally distinct entities, and no such entity has any authority to bind any other. CMS EEIG and each member firm are liable only for their own acts or omissions and not those of each other. The brand name "CMS" and the term "firm" are used to refer to some or all of the member firms or their offices. Further information can be found at cms.law

1808-0061786-ENERGY STORAGE 3