

MODULAR ENERGY STORAGE

Flexibility made simple



MODULAR ENERGY STORAGE

We accelerate the shift toward green energy. With our modular approach, smart functionality, and unmatched scalability, our flexible energy storage solution adapts and expands to your evolving energy needs, making it the smart investment for a sustainable future.



ENABLING THE GREEN CHANGE

The electrification of our society is putting pressure on an already congested and unstable grid.

Our innovative technology is revolutionizing the way energy is stored and used. This contributes to the UN's sustainability goals by enabling homes and businesses to make the most of their energy and reduce their environmental impact.

The need for renewable energy sources that provide clean and reliable power has never been more important. Together with our partners and customers, we will decarbonise the energy sector and create a lasting, meaningful impact on the world.

PIXIIBOX INSIDE

The PixiiBox is the beating heart of our system. It can serve as a bi-directional inverter, solar converter and rectifier, all-in-one box. The PixiiBox can perform a wide range of functions, including peak shaving, PV self-consumption, frequency support, phase balancing, and more, giving you unrivalled flexibility.



SAVE COST



- Arbitrage
- PV self-consumption
- Reactive power compensation
- Peak shaving

GENERATE INCOME



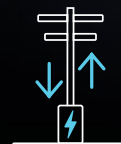
- Arbitrage
- Frequency support
- FCAS, FFR & FCR-D

BOOST POWER



- Active power compensation
- Phase balancing
- Peak shaving

SUPPORT THE GRID



- Frequency support
- Voltage support
- Phase balancing

PIXIIBOX INSIDE

ALL IN ONE BOX

The PixiiBox is bi-directional, allowing the energy to flow from the grid to the battery and back to the grid, through the same power electronics.

It connects to a range of energy sources, like solar panels, the grid, generators, and more. It is software configurable and can be set to perform various functions, ensuring optimal performance and adaptability. And with our modular approach it's easy to scale your BESS by adding more modules, batteries, or cabinets.



The PixiiBox modules are stacked in 1U rows above the batteries in our PowerShaper. You can add more PixiiBoxes and cabinets as your energy need changes over time.

PixiiBox + Pixii Gateway

The Pixii Gateway is a built-in powerful controller, enabling you to connect with, monitor, and control all components within the system, as well as external sensors and other hardware at your site.

The Pixii Gateway allows you to configure a wide range of services, monitor and optimize performance, collect energy data, manage alarms, and take part in the energy flexibility market to open new

revenue streams. It runs on Pixii OS, giving you full flexibility with MQTT and Modbus protocols, allowing you to integrate with 3rd party management software and connected hardware. The Pixii Gateway can act as an individual controller, or as a master, controlling a cluster of Pixii cabinets as one.

Now you can unlock a wide range of smart functionality, like arbitrage, peak shaving, PV self-consumption, frequency support, phase balancing, and more to optimize your system for your energy needs.



Data security

All Pixii systems are designed with security in mind right from the outset to safeguard your data and energy management ecosystem. By employing advanced encryption and rigorous security protocols, we ensure that communication between your devices and the outside world remains secure, effectively protecting against unauthorized access and data breaches.

Our commitment to system safety includes the ability to update Over-the-Air (OTA), ensuring your system remains shielded against ever-evolving threats!

Pixii Gateway Web App

Pixii Gateway comes with a Web App for effortless setup, configuration, and advanced monitoring of your energy system. Access through any web browser on smartphones, tablets, or laptops, directly at site over Wi-Fi or remotely through a VPN connection, eliminating the need for additional installation tools.

The Web App gives you real-time performance insights and historical data analysis, so that you can optimize cost savings and performance. Integrate seamlessly with site energy management systems for enhanced efficiency, and configure your power system to participate in virtual power plant initiatives.

Pixii Cloud

Pixii Cloud allows you to monitor your fleet of sites through a secure web connection, giving you a complete performance overview. Monitor and manage alarms, collect historical data, effectively reducing call-outs and maintenance cost, slashing your TCO.

Your battery of choice

Our system supports a wide range of battery brands and technologies. Whether the application requires LFP or NMC batteries or emerging battery technologies, the PixiiBox together with the Pixii Gateway ensures optimal performance, monitoring and managing the health and efficiency of the battery.





Pixii Home is a compact, all-in-one solution, saving you cost and reducing your dependency on the grid. With the MPPT functionality¹⁾ in the PixiiBox'es, it can be a hybrid solar & storage system or it can connect with existing solar installations, allowing you to store excess solar energy for later use. With smart functionality, you can store energy from the grid when the cost is low to use when the cost is high. And you can cut your service fees to your grid supplier by shaving off the peaks of your power consumption.

Optimise how you store and use energy with smart functions like peak shaving, arbitrage, and PV self-consumption, effectively reducing your electricity bill. Pixii Home comes in 10kW and can easily be upgraded to 20kW adding two more batteries and three more PixiiBoxes.

¹⁾Full off-grid and MPPT functionality will be available Q3, 2024



The Pixii PowerShaper is a modular battery energy storage system that scales to your needs. It comes with smart functionality like arbitrage and peak shaving to reduce your energy cost, and it's fully integrated, enabling you to get the most out of your new or existing solar installations. With PowerShaper you can take part in the flexibility market and open new revenue streams.

It comes with the Pixii Gateway for remote monitoring and control, with cloud services giving you the complete overview of all your sites, including performance stats, historical data and alarms. And through MQTT and Modbus protocols you will get the flexibility you need.



The PowerShaper ID is an IP20 complete modular energy storage system for indoor use. It is fully integrated and ready to be connected to the grid for applications as solar self-consumption, demand charge reduction, peak shaving, arbitrage and various ancillary services.

Each cabinet can house up to 50kW of power conversion and 50kWh energy storage capacity in LFP batteries, to match different applications and requirements.

The PowerShaper ID can provide a variety of energy saving or grid supporting services. These functions can be executed autonomously or controlled by commands and settings from higher level energy management systems communicating over different protocols.

** The stated power and energy capacities are baseline, or nominal, values. Actual performance can vary and may be constrained by several factors, including the state of charge (SoC), state of health (SoH) of the system, as well as thermal conditions.*



The PowerShaper XL is an IP55 complete modular energy storage system designed for energy oriented applications. It is fully integrated and ready to be connected to the grid for applications as solar self-consumption, demand charge reduction, peak shaving, arbitrage and various ancillary services.

The cabinet is designed for shipment with batteries installed and can house up to 60kW of power conversion and up to 200kWh storage capacity with LFP batteries. The PowerShaper XL can provide a variety of cost and energy saving functions as well as grid supporting services. These functions can be executed autonomously or controlled by commands and settings from higher level energy management.



The PowerBase is a robust energy storage system on a steel frame with the footprint of a standard ISO 20-foot container. It comes pre-wired and pre-configured to reduce site preparation requirements and installation cost. It can hold up to 12 Pixii PowerShaper cabinets, with a maximum power capacity of 600kW*.

It is a fully integrated system, allowing for a range of energy saving services like arbitrage, peak shaving and optimal consumption of solar energy, enabling you to get the most out of your new or existing solar installations. With grid support services, like fast frequency support you can take part in the energy flexibility markets and open new revenue streams. The PowerBase is quick to deploy and can be placed on a leveled ground, or on eight solid resting points, significantly reducing on-site preparations, civil work and installation time. PowerBase is easy to relocate at a later need.



The PowerBase XL is a complete energy storage system on a steel frame. It can include up to 9 PowerShaper XL cabinets with a maximum capacity up to 530kW and 1,8 MWh*.

It is designed for 14,4 kWh LFP batteries to provide an optimal combination of energy density and cost efficiency. The cabinets are designed for transport with batteries installed for minimum battery handling and installation work at site. The PowerBase comes pre-configured from the factory. The AC distribution cabinet is also installed with all internal wiring to all PowerShaper XL cabinets. The Powerbase XL reduces on site preparations, civil work and installation work significantly.

CONFIGURE YOUR SYSTEM WITH OUR ONLINE CONFIGURATOR

The Pixii PowerShaper is a scalable energy storage solution that adapts to your changing demands. You can customize your system by adding more cabinets, each with a 50kW capacity, to match your load requirements.



Configure your Battery Energy Storage System and get a quote. Scan the QR code to explore now

ONE HARDWARE MANY FUNCTIONS

A software-configurable BESS can offer unprecedented flexibility and adapts to your specific needs. This ensures you maximize the return on your investment by consistently getting the most out of your system.

The Pixii Battery Energy Storage System (BESS) offers a comprehensive suite of benefits designed to enhance energy efficiency, reduce costs, and support the grid.

With Pixii BESS, you can capitalize on arbitrage opportunities to save and generate income by buying low and selling high in the energy market. The system can boost voltage in areas with insufficient grid capacity and employ peak shaving techniques to lower electricity bills and avoid high tariff periods.

Additionally, Pixii BESS enables the generation of income through participation in the flexibility market, offering services like FCAS, FFR and FCR-D.

For power enhancement, it provides peak shaving and voltage support to ensure a reliable and efficient energy supply.

It also offers robust back-up solutions with AC Back-up and gen-set integration, ensuring that power is available even during outages.

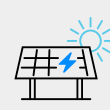
Pixii BESS plays a vital role in grid support by offering frequency and voltage support, contributing to the stability and resilience of the energy network.

Through these capabilities, Pixii BESS not only offers economic benefits by optimizing energy costs and creating income opportunities but also enhances the reliability and sustainability of power systems.

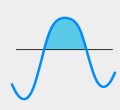
SAVE COST



Arbitrage



PV self-consumption

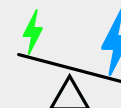


Peak shaving

GENERATE INCOME

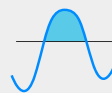


Arbitrage



Balance services

BOOST POWER

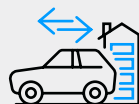


Peak shaving

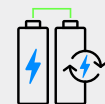


Voltage support

BACKUP POWER



Vehicle-to-home



AC back-up



Gen-set integration

GRID SUPPORT



Frequency support



Voltage support

An aerial photograph of a winding asphalt road with yellow and white lane markings, curving through a dense, lush green forest. The road starts from the top left and winds down towards the bottom left of the frame.

Join our journey to a more sustainable future

Pixii is committed to a future where sustainable energy is a fundamental pillar of global infrastructure. Our vision is to impact an ecosystem where every watt of power is generated, store, and utilized in harmony with our planet.

Battery Energy Storage Systems (BESS) are key for a stable resilient power grid, integrating renewable sources to empower communities with energy that's clean, reliable and affordable.

Sustainability for us is all-encompassing, affecting not just how our products have a positive impact on energy infrastructure, but how we source materials, promote reuse and recycling, and make decisions that prioritize environmental and social responsibility.

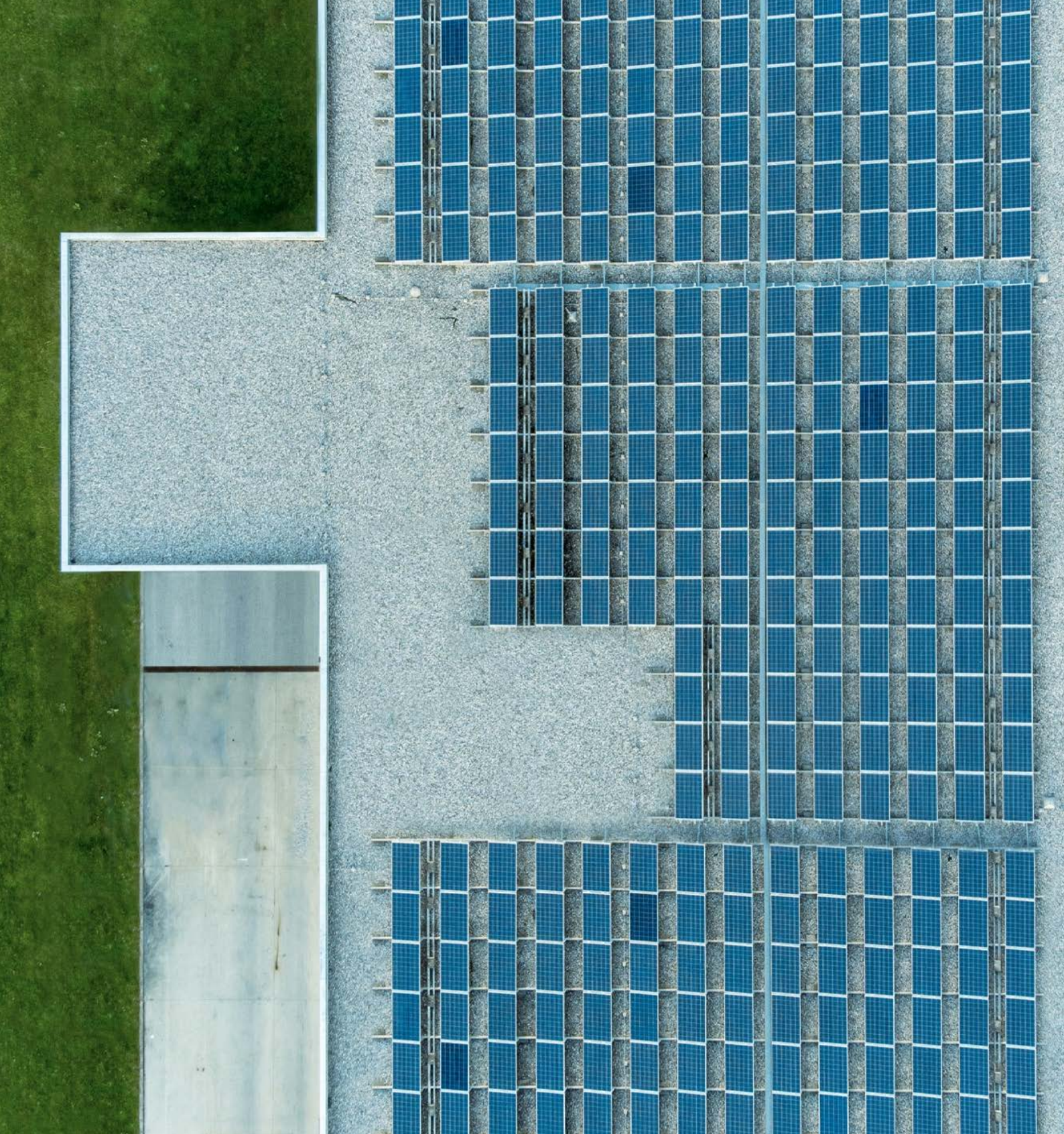
Walk the talk

As a new company, we've had the chance to build sustainability into our core from the beginning. Our progress includes initiatives and commitments within ESG reporting, ISO certifications, and setting clear actionable goals.

We are actively engaged in initiatives that uphold the United Nations Sustainable Development Goals 4, 5, 7, 8, 9, 11, 12, 13, and 17. Our efforts are thoughtfully designed to contribute to; quality education, gender equality, affordable and clean energy, decent work and economic growth, industry innovation and infrastructure, sustainable cities and communities, responsible consumption and production, climate action, and strategic partnerships to deliver on these goals.

We have lists of initiatives and commitments on our web page, some activities executed and some in progress when you read this.

Learn more at www.pixii.com/sustainability



MEETING MARKET NEEDS

Our modular battery energy storage system is ideal for a wide range of markets, allowing you to scale your battery energy storage with growing and changing needs.

Battery energy storage systems (BESS) are necessary to enable the green change by providing a reliable and cost-effective way of storing renewable energy. This helps to reduce emissions from traditional fossil fuel sources, as well as provide more stability for electricity grids that rely heavily on renewables.

Battery energy storage help improve grid efficiency by managing peak demand and allowing utilities to better plan for future growth.



DSO/DNSP

Decongest your grid and improve power quality with our flexible battery energy storage system.

With electrification of society comes high peak loads and uncontrollable distributed energy production, making it challenging to manage distribution grids designed decades ago. Grid operators need a quick-to-deploy and cost-effective solution to support aging assets and improve quality of supply.

Functionalities like voltage support, phase balancing, active and reactive power compensation, giving network operators the tools they need to ensure power quality and grid performance.



Commercial/Industrial

Reduce energy cost and unlock new revenue streams to meet green targets.

New green targets and pressing regulations are forcing companies to electrify their business. Our battery energy storage system allows for optimization of energy consumption and costs whilst unlocking new revenue streams.

Our solution is fully integrated, enabling you to get the most out of your new or existing solar installations. It allows for EV charging, and with smart functionality like time shift and peak shaving you can store energy during off-peak hours to reduce costs and manage energy demand.



Telecom

Activate your “lazy” power systems to generate new revenue streams from flexibility markets.

Bi-directional power conversion enables telecom infrastructure owners to generate significant revenue streams from flexibility markets.

Telecom networks around the world represent a great resource in power and energy which is hardly ever utilized. With modular bi-directional power conversion these assets can be activated, creating additional revenue streams. The telecom loads will have the same resilience, if not better.



EV Charging

Multiply available power for EV fast charging in locations where the grid is weak.

With the rapid adoption of electric vehicles comes an increase in power demand. Upgrading old grid infrastructure is costly and time consuming. BESS enables fast charging in locations with weak grid – to meet the growing demand.

With smart functionality like time shift and peak shaving you can store energy during off-peak hours to reduce costs and minimize demand charge.



Residential

Optimize your energy consumption and reduce cost with our smart BESS.

With rising energy cost, consumers have a growing need to minimize their energy spending and get more out of solar investments. They need a battery energy storage and management solution that is quick to install and easy to use.

With smart functionality, like time shifting and peak shaving, you will reduce your energy bill. You may also generate income by participation in the flexibility markets.



Micro Grid & Off-Grid

Green, cost-effective, and reliable electrification.

Micro grids allow businesses and communities to operate where the grid infrastructure is not sufficient or unstable. Typical applications include fish farming, agriculture, mining and construction sites as well as enabling economic growth in remote villages.

Our BESS is a fully integrated solution. It distributes power from PV panels, AC or DC coupled, and will store your excess energy for later use. It can seamlessly integrate other energy sources, to ensure a reliable supply of electricity.



RESIDENTIAL ENERGY STORAGE

INTRODUCING PIXII HOME

Pixii Home is a game-changer in residential energy solutions. Building on our expertise on delivering battery energy storage systems for the industrial sector, we are now bringing our cutting-edge technology to the residential market, accelerating the green energy transition.

The battery that pays for itself!

Pixii Home enables homeowners to get more out of solar energy, cut electricity bills with smart energy saving functionality, and generate income by renting out battery capacity to support the local grid through ancillary services like FFR, FCR and FCAS.

Energy independence is now within reach – with clean, green energy.

Durable Nordic design

Pixii Home combines the simplicity and elegance of Nordic design, built to withstand harsh weather conditions. It is designed for outdoor installation with an industrial-strength metal casing and is backed up by a 10-year warranty for enduring reliability.

Grow as you go!

Pixii Home's modular design allows homeowners to start with a 10kWh system and expand up to 20kWh as their energy demands or family grows. With regular software updates, the Pixii Home is future-proof, always ensuring compatibility with the local grid.



Explore Pixii Home at
www.pixiihome.com

OEM's - Offer greater value with Pixii Power Inside

Collaborate with Pixii and excel with the latest in power conversion technology, opening new markets and revenue streams for your brand. Strengthen your position and grow your market share.

Our modular and bi-directional power technology with software defined hardware makes it easy to integrate our components into your system.



PIXII ACADEMY



Explore our comprehensive training for installers and partners today.



The Pixii Academy is an online training portal designed to help partners and installers educate themselves on the latest in Pixii's modular BESS technologies and best practices.

Our comprehensive training cover a wide range of topics, including installation, commissioning, maintenance, and troubleshooting for Pixii BESS. Our online courses, webinars and classroom trainings are led by industry experts and provide hands-on learning opportunities to help you build your skills and confidence.

After completing a course, Pixii Academy provides a certification to participants who pass the exam.

In addition to training, the Pixii Academy also provides access to a range of resources, such as technical manuals, user guides, and FAQs. These resources are designed to help you stay up-to-date on the latest information and provide support when you need it.

With the Pixii Academy, you can become an expert in BESS technology and take your career to the next level.





SLA - SERVICE LEVEL AGREEMENT

PIXII AT YOUR SERVICE

With our range of services you will get access to our expert team, cloud services, and software enrichment updates, to ensure you stay ahead of the curve and get the most out of your investment.

Signing up for a Service Level Agreement (SLA) with Pixii offers a multitude of benefits, ensuring that you get the most out of your investment through high-quality service, reliability, and dedicated support, giving you peace of mind.

Enhanced system reliability

An SLA from Pixii ensures that your systems operate at peak efficiency and are always within warranty requirements.

Regular physical check-ups, timely software updates, and precise battery calibration are all part of our commitment to maintaining the health and performance of your systems. This proactive approach not only extends the life of your equipment

but also optimizes its functionality to meet your operational needs. It ensures that the system is run properly, maintained regularly, and that any faults affecting uptime are corrected promptly, freeing you from worrying about compliance with warranty conditions.

Predictable operating costs

With a Pixii SLA, you gain clarity and predictability regarding your system maintenance costs. Our SLA outlines all service charges upfront, eliminating unexpected expenses related to system updates, maintenance, or support. This transparency allows for more effective budgeting, giving you control over your operational expenses.

Responsibilities

Gold SLA



Silver SLA



Bronze SLA



No SLA



Service	No SLA	Bronze	Silver	Gold
5 years limited warranty	✓	✓	✓	✓
Technical support (email)	✓	✓	✓	✓
Technical support (response time, business days)	10	5	3	1
Pixii Cloud monitoring tool (access level)	1	1	2	3
Remote system access (# of users)	0	2	5	Unlimited
System monitoring by Pixii	-	-	Fortnightly	Daily
Condition report	-	-	Annually	6 months
Customized solution planning and engineering	-	-	✓	✓
Remote commissioning	\$*	✓	✓	✓
On-site commissioning (when deemed necessary)	\$*	\$*	\$*	✓
Annual maintenance	\$*	✓	✓	✓
Battery performance check (fortnightly)	-	-	✓	✓
Swap replacement on products	-	-	✓	✓
Critical spare parts availability (business days)	-	-	5	2

**Service may be purchased on demand*

All data is subject to change without notice. You will find the latest updates on our website.

Advanced monitoring tools

SLA customers gain access to Pixii's self-monitoring dashboard tools, available in basic and advanced versions. These tools empower you with real-time insights into your system's performance and health, enabling proactive management and decision-making.

Knowing that your systems are under the care of Pixii's experts allows you to focus on your core business activities, giving you the confidence to grow.

Support & rapid response

Pixii's tiered technical support structure ensures that you receive the level of assistance you need when you need it.

Whether you require standard support or more urgent care with a one-day turnaround, our SLA guarantees that your issues are prioritized and resolved swiftly, minimizing downtime and ensuring continuous operation.



At Pixii, we value the relationships we have with our partners and are committed to providing the support and resources they need to be successful. Our partner program is designed to help our partners grow their business and increase their expertise in the field of modular battery energy storage systems (BESS).

As a partner, you will have access to a range of benefits, including training and certification programs, marketing and sales support, and technical assistance. You will also have the opportunity to work closely with our team of experts to stay up-to-date on the latest BESS technologies and trends.

We offer several different levels of partnership, depending on your needs and goals. Whether you are a small business looking to enter the BESS market or an established company looking to expand your offering, we have a program that can help you succeed.

If you are interested in joining our partner program and becoming a part of our growing global network of BESS professionals, we encourage you to reach out to us to learn more. We look forward to working with you and helping you achieve your business goals.



pixii.com/partner-program



DSO/DNSP

First pole-top mounted battery energy storage solution in Australia.

Only the sky is the limit!

This is part of a \$10 million Queensland-first initiative aimed to help deliver “the renewable energy revolution”.

As part of this project, neighborhood batteries are being rolled out across Ipswich as part of the Palaszczuk Government’s Queensland Energy and Jobs Plan.

“The neighborhood batteries offers numerous benefits to communities including increased energy reliability, reduced energy costs, and a cleaner energy supply. These batteries will store cheap excess energy generated by the equivalent of nearly 600 rooftop solar systems during the day. Critically, they will deploy that cheap electricity during peak evening periods, lowering household energy bills.”

Mick de Brenni
Energy, Renewable and
Hydrogen Minister

The PoleTop PowerShaper from Pixii, is an IP55 complete modular energy storage system. It is fully integrated and ready to be connected to the grid for applications as grid support, solar self-consumption, demand charge reduction, peak shaving, arbitrage, FCAS and FFR services.



EV CHARGING

Pixii and Elywhere’s groundbreaking partnership. Innovating the future of EV charging - enabling fast charging in areas with poor grid conditions.

As the world moves towards cleaner and more sustainable energy solutions, the use of electric vehicles (EVs) is gaining popularity. Despite this trend, widespread adoption of EVs is still challenged by inadequate charging infrastructure. The biggest obstacle is the insufficient capacity of the grid. The cost and time to upgrade old grid infrastructure to meet the needs of fast charging is hard to justify financially, and time consuming to execute.

Circle K, the leading multinational service station and charge point operator, commissioned a pilot project from Elywhere in Ski, Norway. This project aimed to demonstrate the effectiveness of delivering reliable and convenient EV charging solutions, even in the most remote locations.

The solution

Circle K’s Ski pilot project was solved with 6 Pixii Powershaper cabinets, offering 300kW output from a 40kW grid input. The cabinets were pre-installed on a 360kW EV charging platform, enabling the simultaneous charging of up to 4 vehicles.

The benefits

The Pixii solution multiplies the available power from the grid, enabling fast charging. It’s standardized, modular design allows for the cabinets to be proven and tested at the factory, making installation, deployment and even relocation quick and simple, whilst enabling Elywhere to scale easily as demand grows.

EV charging drives traffic and sales. In addition to the revenue from kWh, fast charging gives drivers extra motivation to visit and make purchases while they wait, increasing sales, boosting the stations appeal as the destination of choice, and creating a steady stream of revenue.

It’s smart functionality like arbitrage and peak shaving allows for storing of energy during off-peak hours, reducing costs and minimizing demand charges. And with no single point of failure, it is one of the most reliable and robust battery energy storage systems on the market, reducing the need for maintenance.

The Pixii battery energy storage system even enables businesses to participate in the energy flexibility markets, such as the balance market for frequency regulation, allowing them to monetize the system’s flexibility for additional revenue streams. With a fleet of sites, this additional revenue can be significant. Since its launch, demand for charging has grown to 60-70 charging sessions a day, with up to 1 megawatt hour per day being sold. This level of performance would have been impossible without battery energy storage.



COMMERCIAL AND INDUSTRIAL

Powering tour buses with solar power.

OsloBuss AS are using electric tour buses to align their business with green targets. At an old factory facility, just outside of Oslo, solar panels are covering the facade of the building. The solar energy is stored in a Pixii battery energy storage system (BESS), ready to charge the fleet of electric buses.

We believe this electric concept for transportation is leading the way for a greener and more sustainable way of people transport.



DSO/DNSP

Supporting the national grid in remote locations together with Elvia.

Remote, mountainous terrain and a cold climate compound the difficulties of building and maintaining power lines. And a scattered population makes the business case of larger grid upgrades difficult to justify.

On top of this, high penetration of electrical vehicles, high peak consumption,

and load imbalance create low voltage challenges in the grid.

In low consumption periods, solar energy fed to the grid can create voltage peaks way above strict regulations.

Ironing out those peaks is a mainstay of DSO Elvia's mission, because it enables prosumers to participate in the Green revolution – making the grid more inclusive for renewable energy.

Elvia needed a flexible solution that's quick to install, with advanced functionality for phase balancing, and active or reactive power compensation.

The Pixii Powershaper allowed Elvia to effectively upgrade the grid, fast-forwarding a process that might have taken 10 years to just a few hours.



COMMERCIAL AND INDUSTRIAL

Pixii delivers major battery energy storage system in Germany.

Power & Air Solutions (PASM), a Deutsche Telekom subsidiary, has completed its first battery energy storage system (BESS), supplied by Pixii.

"The current energy challenges in Europe underline the need for investments in energy storage. Battery energy storage systems are a key component in the green shift"

Bernd Schulte-Sprenger
CEO of Power & Air Solutions

The storage system is installed at one of Deutsche Telekom's main offices in Munich.

The installation has 1 MW of conversion capacity and 6 MWh of storage capacity. The solution is based on the PowerShaper product family. It will be followed shortly by a second installation in Münster.

In total, PASM plans to install battery energy storage systems with a total capacity of more than 300 MWh. This capacity will be used for peak shaving, arbitrage and to maximize the use of renewable energy, as well as to participate in energy markets to contribute to the stability of the German electricity network.



DSO/DNSP

Pixii, Peak Shaper and Tensio – Powering progress in rural areas by boosting energy capacity.

With the electrification of society, the power capacity is being stretched to its limits by business operations during the day, holding regions back from achieving their full economic potential.

A monster challenge

In the remote forest municipality of Lierne, Norway, there's a growing threat to the region's prosperity. The power demands of the Jule Industrial area often exceed the grid capacity during working hours, leading to shortages. Frustratingly, when night falls and businesses switch off, there is an abundance of capacity in the grid. This imbalance has been a thorn in the side of progress, deterring power-intensive commercial activities.

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With traditional grid expansion being prohibitively expensive and time-consuming, running into hundreds of millions of Norwegian kroner and often taking several years, Tensio, Lierne's energy provider, required a faster and smarter solution. Recognizing the need for innovation, Peak Shaper, a subsidiary of Eidsiva Energi, Norway's largest power grid company, initiated a pilot project to solve Tensio's power capacity problem using Pixii's groundbreaking battery energy storage technology.

The solution

Eidsiva's subsidiary Peak Shaper rents out Pixii's grid batteries to quickly enhance capacity.

The Pixii PowerBase solution, a robust 1MW storage system, pre-wired and pre-configured on an easy to transport steel frame with the footprint of a standard ISO 20-foot container, was the perfect fit for Tensio's demand in Lierne.

Pixii Power!

The Peak Shaper pilot project in Lierne is the first of its kind, investigating the effect of batteries on voltage regulation in the grid together with the network operator Tensio. The goal is to boost the voltage in a weak network, enabling industrial customers in the area to increase their electricity consumption without Tensio having to undertake other network-strengthening measures.

"Batteries are the future of our grid. Even as we expand rapidly, they offer a fast-track solution to challenges like Lierne's throughout Trøndelag."

Øistein Andresen
CEO Eidsiva

The Pixii PowerBase comes pre-wired and pre-configured, reducing installation cost and delivery time. Instead of pouring millions into traditional grid expansion, Pixii's approach allows for significant savings, paving the way for future-focused investments.

Pixii's 48-volt internal architecture offers easy maintenance, while its modularity guarantees reliable operation with no single point of failure. In the dynamic world of power, where needs are constantly evolving, the PowerBase can be quickly relocated to boost power in other areas with insufficient grids.

The benefits

This successful collaboration between Peak Shaper, Tensio and Pixii marks a significant advancement in the energy transition journey.

Pixii's smart battery energy storage solution in Lierne is more than just an energy remedy; Businesses in the Jule Industrial area now operate unhampered, and the area stands at the cusp of new job opportunities and industrial growth.

The Lierne pilot project has exceeded expectations, reducing the cost of network loss for Tensio in the area by 22% and winning the Smartgrid Center's Innovation Award 2023!

COMMERCIAL AND INDUSTRIAL

Green grocers – Coop Norge's sustainability success with Pixii's BESS

In the competitive grocery retail market, sustainability is not just a trend; it's the cornerstone of consumer loyalty. With shoppers increasingly backing their values with their wallets, it's vital for businesses to make sustainable choices, not just in word but in action.

The challenge

Coop Norge, Norway's second largest grocery chain, were ranked by Norwegian consumers as industry winners in the Sustainable Brand Index 2023, Europe's largest market study in sustainability. While awards and recognition are great, Coop were determined to keep pushing forward to exceed their consumers high expectations and achieve their own ambitious sustainability goals.

With the aim of harnessing solar energy at their Gardermoen warehouse and limiting peak power consumption, all while reducing energy costs and CO2 emissions, Coop embarked on a pilot project to trial Pixii's battery energy storage technology.

The solution

Coop incorporated two systems of several Pixii Powershaper cabinets.

One system, consisting of 4 Pixii Powershaper cabinets, was strategically placed outside, while the other, housing 3 cabinets, was set up inside.

This distributed approach ensures that the energy solution is closer to areas of high demand, guaranteeing superior power quality. Additionally, with distinct meters for each system, optimization becomes a smoother process, maximizing efficiency.

The Benefits

The Pixii Powershaper comes with smart functionality like peak shaving, enabling Coop to reduce grid tariffs and deliver real load reduction to the grid owner.

The Pixii battery energy storage system is fully integrated, allowing Coop to get the most out of their solar panels and reduce their dependency on the grid through smart power management, re-directing excess power generation to batteries for later use during peak hours.

By boosting available power, the outside system has replaced a 2 MW transformer, enabling the electrification of mobile coolers on trucks that transport frozen and chilled food. It even opens the door for fast electric truck charging in the future. And with its modular architecture, the Pixii BESS makes it easy for Coop to scale the system to their needs, keeping CAPEX to a minimum.



"Our partnership with Pixii through Solcellespesialisten has propelled us closer to our sustainability vision and the first energy positive warehouse in Norway. It's not just about being green; it's about being smart, efficient, and future-ready, and also challenging regulators and grid owners by showing what is possible to achieve by using battery energy storage systems"

Roy Rossebø

Energy Manager Coop Norge SA

But Coop is not just saving money, they're making it. The Pixii system allows Coop to participate in the energy flexibility markets, enabling them to monetize their system's flexibility through Fast Frequency Reserve (FFR) as an additional revenue stream. And thanks to favorable government incentives, the system actively generates a recurring revenue, further increasing ROI.

The results

The success of the Gardermoen pilot project has exceeded expectations, not only boosting the power capacity of Coop's warehouse, reducing CO2 emissions and energy costs, but also enhancing Coop's green image by going beyond the already high expectations of their customers.

RESIDENTIAL

Pixii Home charges into the Swedish consumer market with cost-effective battery storage for all

As Pixii moves into the Swedish consumer market, we have strategically partnered with Greenely, a leading player in home energy management, to offer innovative and cost-effective energy solutions for Swedish households.

Greenely's first batch of 40 Pixii Battery Storage Systems is already on its way to excited customers, with installations set to begin shortly. Pixii Home will be integrated with Greenely's services, enhancing the capacity of Greenely's Virtual Power Plant and offering consumers the opportunity to reduce their energy costs and at the same time make money by contributing to society's energy needs.

"The collaboration between Greenely and Pixii responds to the growing need for sustainable energy solutions and represents a crucial step towards a greener future. By providing a platform for efficient energy storage and usage, this cooperation enables households to reduce their dependence on traditional energy sources while lowering their energy costs."

Tanmoy Bari

ECEO and co-founder of Greenely

The collaboration between Pixii and Greenely marks a significant milestone, signaling a shift towards more widespread adoption of Pixii's battery energy storage systems. The installation of the first batch of Pixii Home systems to consumers is just the beginning.

The success of this initiative has already created further demand and soon-to-be-announced partnerships. Together with our partners, Pixii are leading the charge, making households in Sweden greener and more energy independent.



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