

## xStorage Buildings

Eaton Nissan energy storage systems for buildings



**EATON**

*Powering Business Worldwide*



# Energy storage for Buildings: designed and built for sustainability and resilience

The world of commercial and industrial buildings is being challenged by

- Rising electricity costs and complexity
- More distributed energy resources
- Greater adoption of demand response programs
- Increasing complexity of building energy management systems
- The need for resiliency and power quality

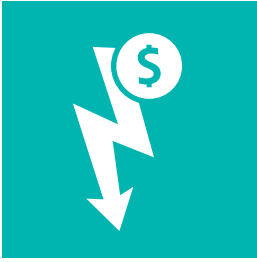


**Eaton Nissan xStorage Buildings**  
selects the right power sources  
according to the load, the grid  
constraints and the availability  
of renewable energy.

This system allows end users to  
store energy once produced so that  
it can be used on demand to power  
the business or to participate in  
demand response programs selling  
energy back to the grid.



# Benefits



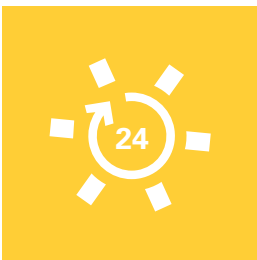
## Save money on electricity and operational expenses

- Manage load shifting/ demand
- Generate self-consumption of PV
- Enable peak shaving
- Maximize feed-in tariff opportunities to sell power back to the grid
- Ensure regulatory compliance



## Optimize use of renewable energy

- Maximize consumption of onsite generation, primarily solar energy



## Maintain power when the grid is down

- Ensure backup power supply in case of natural disasters
- Protect equipment from damage during blackouts
- Reduce time of restart



## Safe technology

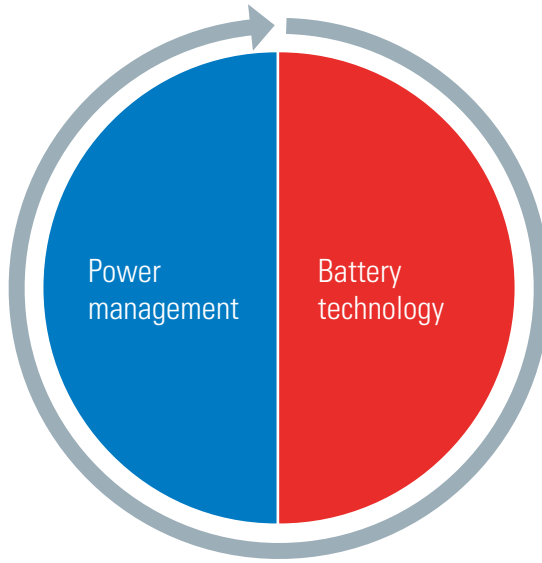
- Industrialised, tested and configured to deliver high levels of quality, reliability and performance
- Eaton as a 100-year power management company and Uninterruptible Power Supply (UPS) leader brings a depth of experience that is unmatched by most storage players
- Nissan is the leader in Electric Vehicles and as such is a proven, high volume, maker of reliable Li-Ion batteries that meet the high safety standards of the automotive market



## Customer service

- Supported by a network of over 1,000 distributors, working with qualified installers in 77 countries

# xStorage Buildings systems have been developed by two leaders in areas critical to Energy Storage



**Leader** in both electrical energy for buildings and in power electronics with **a depth of experience** unmatched by most storage players

**Leader** in Electric Vehicles and a proven, high volume, maker of reliable Li-Ion batteries **for 15 years**

## Making energy storage simple for you

### Minimized risk



- Two global brands with strong financials
- A strong heritage of success
- Technology leadership

### Customized solution



- Scalable and customizable solutions
- A portfolio of solutions from 10 kWh to several MWh

### Global support

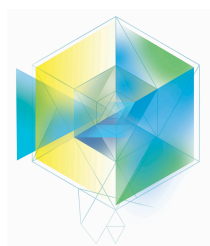


- Over 24,000 employees in more than 40 countries in EMEA
- A network of over 1,000 distributors working with qualified installers in 77 countries

# Technical overview

Storage capacity	<ul style="list-style-type: none"> <li>• From 24 kWh to several MWh when using strings of 5 battery packs</li> <li>• Battery pack capacity:             <ul style="list-style-type: none"> <li>• 4,2 kWh - Second life batteries</li> <li>• 6 kWh - New batteries</li> <li>• 7,5 – 9,6 kWh - New batteries available end of 2017</li> </ul> </li> </ul>
Output	230/400V, 3~ + N
Power	From 20kW to several MW
Installation	<ul style="list-style-type: none"> <li>• Fits in 19 inch standard racks (EIA-310-E)</li> <li>• Up to 10 battery packs per 42U rack</li> </ul>
Operating temperature	5°C – 40°C
Battery life	~10 years - Estimate based on 1 daily full cycle usage
Efficiency	<p>Online (on utility grid): &gt;96%</p> <p>Battery mode: &gt;95%</p>
UPS features	<p>Up to 97% efficiency in double conversion</p> <p>&gt;99% efficiency with Energy Saver System</p> <p>Compact footprint</p>

Smart and  
clean power.  
Made simple.



ENERGY STORAGE

[eaton.eu/energystorage](http://eaton.eu/energystorage)