



“eBuilding” Solutions

Energy Storage Solutions for Buildings and Multi-Tenant Properties

Worldwide growing energy demand and often shortage of supply is leading to growing power interruptions in both residential and business buildings.


The use of diesel generator is expensive, polluting, and hungry in maintenance. The associated management of collections, failures and service requests make building manager seek cleaner, cheaper and self managed energy alternatives.

Using its leading solar energy generation, energy storage technology and pay as you go energy meters, E24 solves it all in a clean, easy to install and hassle free solution.

With its leading smart energy storage technology and energy billing system, eBuilding eliminates the need for generators and seamlessly manages the cost of back-up power fairly among building residents.

S311E

E24TM
BRIDGING THE ENERGY GAP



“Finally, a solution that fairly and smartly distributes the cost of energy among building residents.”

Why eBuilding?

Global gap in energy supply

With rapid demographic and economic growth, demand for electricity is ever-increasing, and with it the gap between energy supply and demand. Electricity production from fossil fuels is the largest source of greenhouse gas emissions and will continue to grow as more people are connected to the grid. With the time and resources required to upgrade grid capacity, it is becoming harder for utilities to stabilize the availability of energy on the grid. In some countries, the supply-demand gap, and oftentimes utility mismanagement have led to a situation where utilities must ration available power through regular blackouts.

Global challenges

With utilities resorting to financial measures such as Time of Use billing (TOU), Capacity Billing, and Low Power Factor Surcharges (LPFS) to influence consumption, homeowners' energy bills continue to grow higher.

Additionally, blackouts and brownouts create a burden and added expenses for home and villa owners. Most of the time, people resort to diesel generators that are inconvenient on several levels:

- They are costly to buy, refuel and maintain
- They create air and noise pollution and are harmful in residential environments
- They require space, regular maintenance and repetitive refuelling

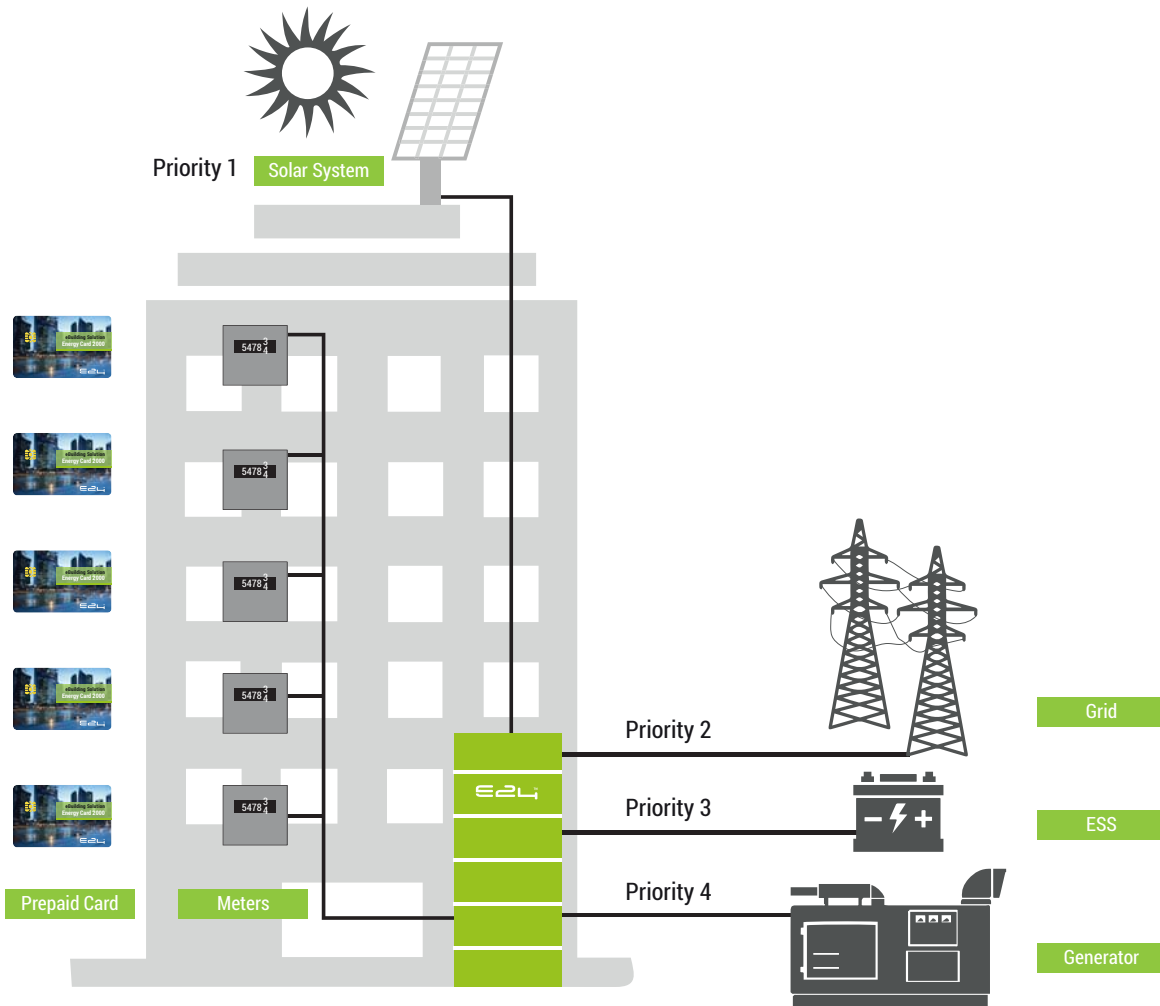
The associated costs of operation and maintenance of back-up generators are complicated to manage among the residents of buildings who consume different amounts of energy.

A hassle free, cost-effective solution

eBuilding overcomes these problems by providing a fully integrated building energy storage solution that uses a smart system to fairly manage energy costs among building residents. eBuilding acts as a backup power source in times of blackouts or peak billing periods and guarantees substantial savings over any fuel based alternative while improving power quality, removing noise and environmental pollution, and limiting human intervention.



eBuilding: A new concept



eBuilding is a centralized energy storage solution conceived for buildings in areas where utility power is intermittent. eBuilding comprises a centralized energy storage solution and energy management and billing system. Its main functionality includes:

Continuous Power & Quick Switch to Backup Mode

When utility power fails, eBuilding quickly switches to backup batteries (less than 3s transfer time) in a way that you never see it happen. It does this through a backup system which stores energy from multiple possible sources, including optional solar panels and electricity from the grid. This substantially reduces the use of expensive, polluting diesel generators and minimizes the frequency and costs of the maintenance it requires.

Integration with Renewable Energy to lower building energy bills

Solar energy offers the lowest cost per KWh, followed by Utility. In countries where utility power is not supplied 24/7, Diesel generators provide the complementary energy at a steep cost: Generators must be oversized to handle the peak building demand but are operated most of the time at minimum load where the cost per KWh is the highest.

eBuilding solution is designed to store solar and utility energy

(during non-peak time tariff) in industrial long life batteries in order to avoid starting diesel generators.

Should the solar and utility stored energy be insufficient to power the load during a power failure, the system starts the generator and loads it in a manner to reach the minimal load of the generator where the energy cost is optimal (generator sweet-spot).

eBuilding solution minimizes the overall building energy costs, saves on the environment and keeps 24/7 power to the residents.

Energy Fair Distribution

eBuilding distributes energy to each residents according to a pre-set maximum power limit agreed upon. When a resident exceeds that power limit, the system disconnects the residents for 1 minute to allow him to reduce his consumption. Energy consumption to each resident is monitored and controlled to avoid abuse.



eBuilding Key Benefits

eBuilding's demonstrated benefits make it the ideal all in one solution for your energy needs, saving money and improving quality of life:

Substantial Cost Savings

eBuilding saves on your energy bills, with a lower cost of operation compared to diesel generators, and achieving the greatest savings when coupled with solar PV.

Fair and dynamic distribution of costs

eBuilding's solution ensures a fair distribution of energy and costs among residents according to the pre-agreed power limit to each resident. The distribution of power among residents may be altered by software anytime as agreed between residents.

Safe and Reliable

eBuilding accepts wide utility input voltages and frequencies, operating safely between 154V and 280V, and 40 and 70Hz.

Calm and Clean

eBuilding allows you to avoid the use of noisy, polluting diesel generators that release harmful gases.

Resilient

eBuilding is conceived in a manner to bypass itself in case of an unlikely failure in order to avoid disconnecting the utility supply.

Eco-friendly image and values

Choosing solar energy demonstrates a commitment to lowering carbon emissions. eBuilding improves your image, sending a message of environmental responsibility.

Unattended operation and low maintenance

eBusiness is a standalone system that automatically switches between power supplies and manages energy storage, requiring very low maintenance. Its remote monitoring tools allow our technicians to ensure smooth operation and get notified in case of any issues.

Adaptable & Compatible

eBuilding is easily compatible with PV panels or existing auxiliary power sources, and includes technology to automatically start any available generator in case of extended blackouts beyond storage capability. (This can also be inhibited between certain hours of the day).

Modular and Upgradable

eBuilding's modularity means that is possible to add more inverters in parallel to increase power and reliability, and more battery modules to increase backup time. eBuilding dynamically grows with your evolving energy needs.

Continuous Elevator Operation

eBuilding's backup system ensure that building common areas are lit, and elevators receive uninterrupted power.

Plug and Play

E24 technology is supplied in prepackaged boxes allowing systematic assembly without external components.

Health Comes First

Installing diesel generators in residential areas is harmful to health and wellbeing

- Toxic gases have a direct effect on the respiratory system, posing a variety of diseases
- Fine particle pollution contributes to asthma, emphysema, chronic heart and lung disease, with elderly and young people being more sensitive.
- Exposure to diesel exhaust poses high risks of cancer.
- Engine produces irritating audible noise
- Exhaust interaction with other particles in the air contributes to smog creation.



Enhanced Quality of Life

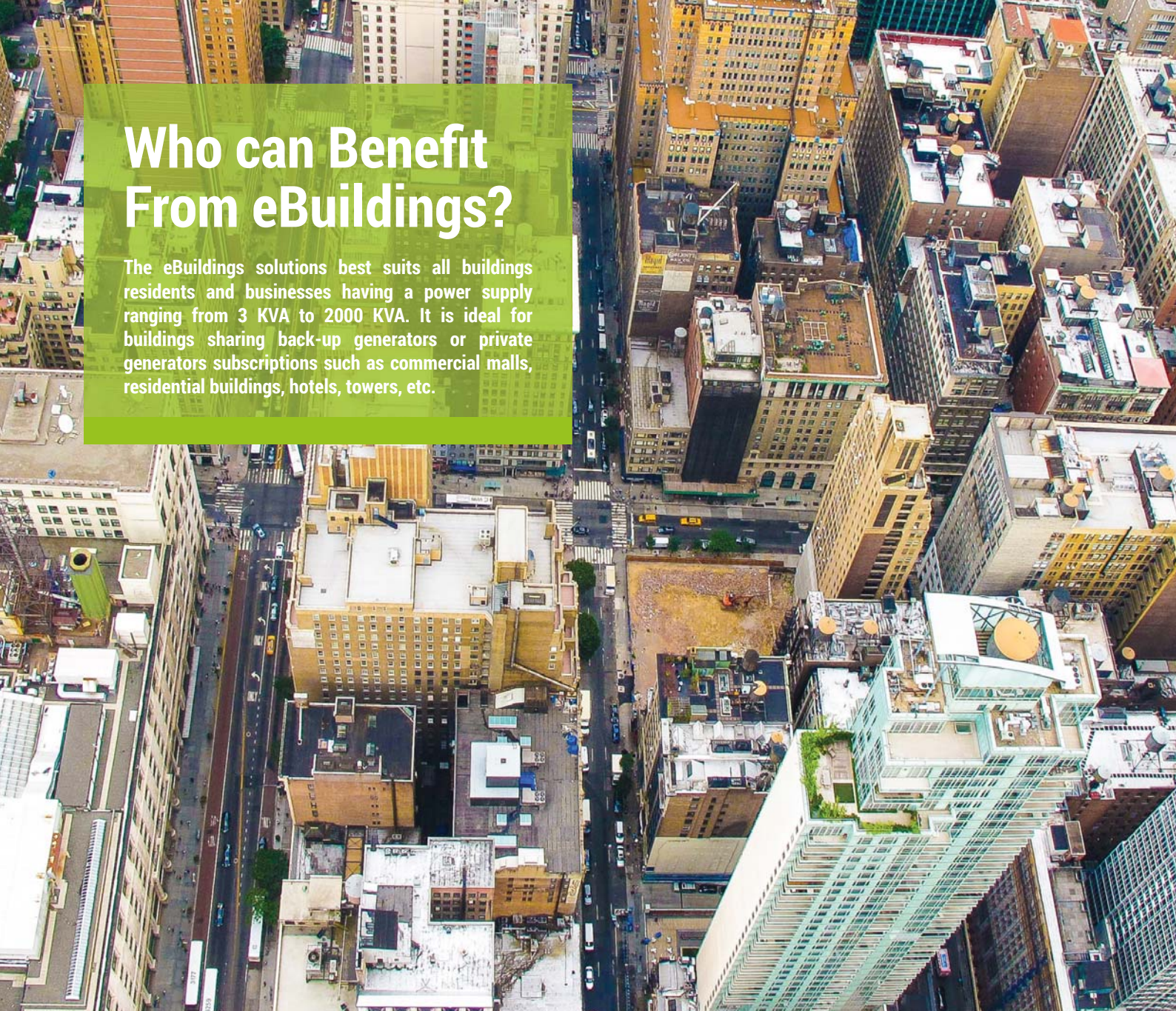
There are multiple operational advantages that eBuilding has over diesel generators

Generator

- High operational cost
- Air & noise pollution
- Continuous maintenance
- Power cut between utility and generator
- Minimum 30% load
- Bulky (fuel tank and exhaust required)
- Continuous refueling
- Narrow temperature operation (deration)

eBuilding

- Low Operational Cost
- Silent and non polluting
- Low maintenance
- Reliable
- Stable voltage and frequency
- Can be installed in any space
- Install once - replace batteries every 6 to 10 years
- Wide temperature operation
- Ready to be coupled with Solar PV



Who can Benefit From eBuildings?

The eBuildings solutions best suits all buildings residents and businesses having a power supply ranging from 3 KVA to 2000 KVA. It is ideal for buildings sharing back-up generators or private generators subscriptions such as commercial malls, residential buildings, hotels, towers, etc.

eBuilding Applications

eBuilding is optimally designed for residential or commercial buildings in areas or countries where utility power is intermittent. With its smart billing management system, eBuilding is ideal for applications where power is distributed among several users and consumption needs to be monitored and billed individually.

eBuilding is always sized to your requirements as recommended by our energy consultants. To guarantee continuous operation, highest cost savings, and extended battery life, it is always recommended to couple eBuilding energy storage solution with one of E24's solar energy generation solutions.

E24 Quality Pledge



E24 has been designing energy technology solutions since 2011. E24 accumulated substantial experience across diverse markets and segments, resulting in a demonstrated market edge, experience and leadership.

E24 designs, engineers, manufactures, assembles, tests and delivers its solutions in modular components that are easy and cost-effective to assemble on site.

E24 commissions its solutions through a network of affiliates or business partners under strict quality standards and procedures to ensure the highest optimal performance and customers' satisfaction.

E24 continuously invests in R&D and develops its own proprietary technology. Each part of the energy solution supplied is optimized to bring the highest customer value.

All solutions are designed for quick and hassle-free capital recovery and high return on investment.

E24 Comprehensive Services

Our turnkey approach is what sets us apart. In addition to our complete solutions, we offer a variety of services, allowing you to make the most of your investment:

- **Site Assessment Visits**
- **Energy Saving Analyses**
- **Feasibility Studies**
- **Structural Designs**
- **Multi-Level Training Programs**
- **Commissioning Services**
- **Financing Services**

E24 works closely with its clients to look at all aspects of their energy-related costs and performance, identifying opportunities for improvement and potential to lower overall costs.

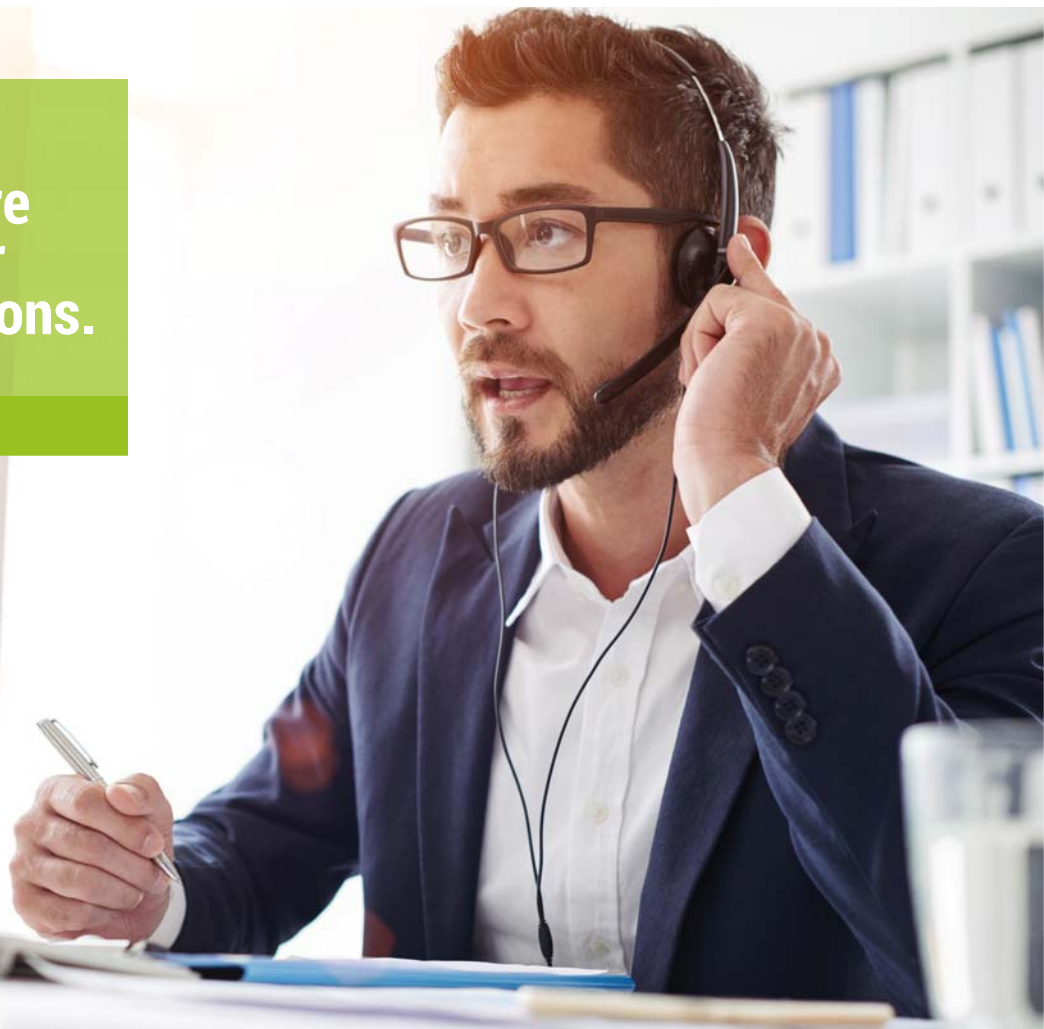
E24 also offers a number of financing services allowing customers to pay for their equipment gradually and partially finance their investments from the savings they generate.

With support centers, regional offices, and knowledgeable personnel, E24 brings an uncompromising commitment to customer satisfaction. Our after sales services include:

- **Warranty Extension Programs**
- **Comprehensive Maintenance Programs**
- **Field Service**
- **Overhaul & Refurbishments**
- **E24 certified parts**

Our services are provided by engineers operating from E24 regional offices, allowing customers to benefit from accurate data based on relevant local field experience.

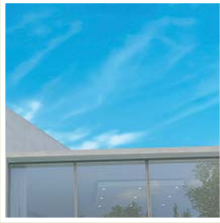
**Our Energy
Consultants are
here to answer
all your questions.**



Energy Storage Solutions



eHome



eVilla



eBuilding



eBusiness



eGrid



eVillage



eTelecom



eGrid

Energy Generation Solutions



eSolar



eHybrid



eParking



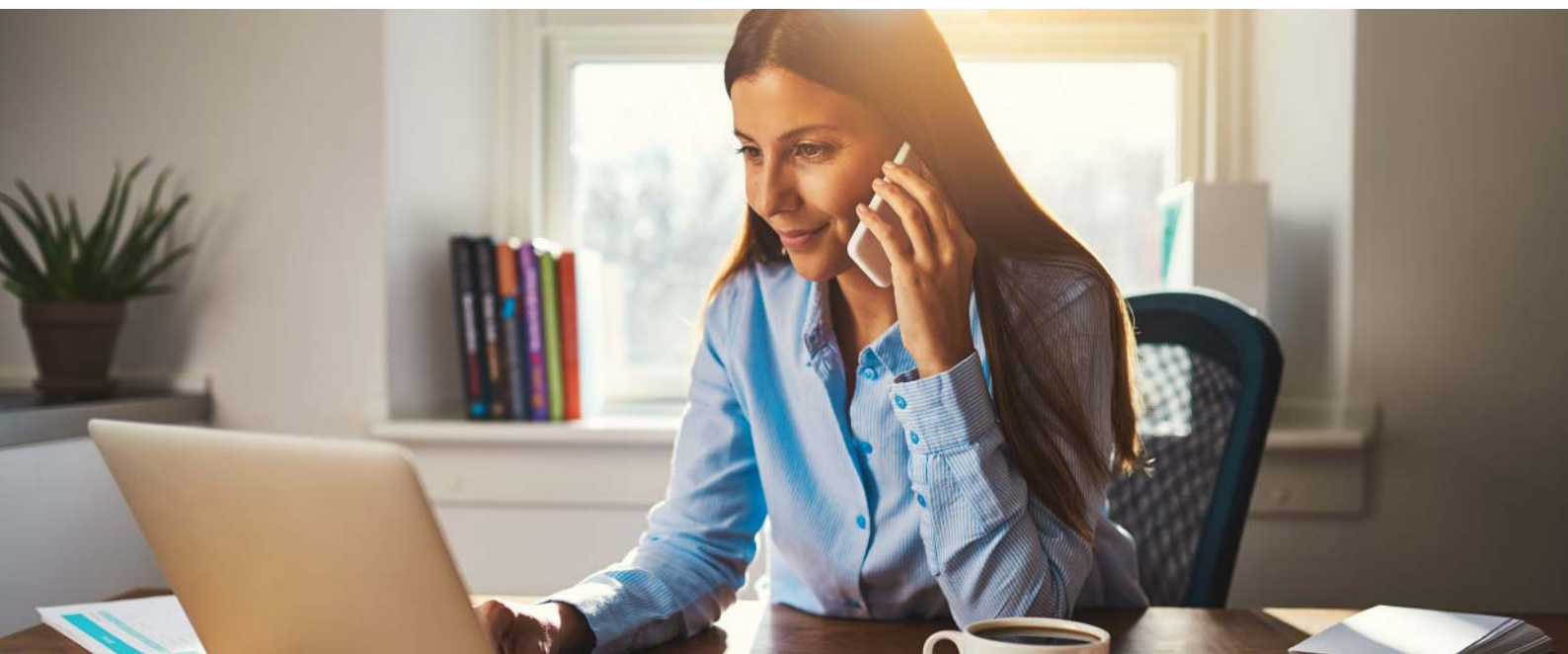
Comprehensive Energy Solutions

E24's broad portfolio of successfully completed projects ranges across a variety of sectors including Residential, Commercial, Industrial, Telecom and Governmental. We have built our reputation on our client focus and versatility to solve their problems. Our tailored solutions that place the lifestyle and needs of customers at their core. E24 leverages technology as a problem solver and enabler.

It is in this spirit that E24 develops targeted, personalized, seamless energy solutions for homes, villas, businesses, buildings, factories, villages, telecom and utility operators. E24 is constantly working towards enhancing the economics and lifestyle of its customers while saving on the planet.

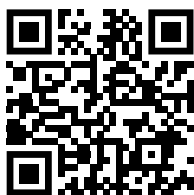
Ordering Information

Ref Number	Description
S311-122-72I	Energy Storage Solution, eBuilding Series, 122A Max, 72kWh, 220V, 50/60Hz
S311-122-144I	Energy Storage Solution, eBuilding Series, 122A Max, 144kWh, 220V, 50/60Hz
S311-122-216I	Energy Storage Solution, eBuilding Series, 122A Max, 216kWh, 220V, 50/60Hz
S311-163-144I	Energy Storage Solution, eBuilding Series, 163A Max, 72kWh, 220V, 50/60Hz
S311-163-288I	Energy Storage Solution, eBuilding Series, 163A Max, 144kWh, 220V, 50/60Hz
S311-163-576I	Energy Storage Solution, eBuilding Series, 163A Max, 216kWh, 220V, 50/60Hz
S311-244-144I	Energy Storage Solution, eBuilding Series, 244A Max, 144kWh, 220V, 50/60Hz
S311-244-216I	Energy Storage Solution, eBuilding Series, 244A Max, 216kWh, 220V, 50/60Hz
S311-244-288I	Energy Storage Solution, eBuilding Series, 244A Max, 288kWh, 220V, 50/60Hz
S311-327-288I	Energy Storage Solution, eBuilding Series, 327A Max, 288kWh, 220V, 50/60Hz
S311-327-432I	Energy Storage Solution, eBuilding Series, 327A Max, 432kWh, 220V, 50/60Hz
S311-327-576I	Energy Storage Solution, eBuilding Series, 327A Max, 576kWh, 220V, 50/60Hz
S311-409-432I	Energy Storage Solution, eBuilding Series, 409A Max, 432kWh, 220V, 50/60Hz
S311-409-576I	Energy Storage Solution, eBuilding Series, 409A Max, 576kWh, 220V, 50/60Hz
S311-409-720I	Energy Storage Solution, eBuilding Series, 409A Max, 720kWh, 220V, 50/60Hz
S311-613-576I	Energy Storage Solution, eBuilding Series, 613A Max, 576kWh, 220V, 50/60Hz
S311-613-720I	Energy Storage Solution, eBuilding Series, 613A Max, 720kWh, 220V, 50/60Hz
S311-613-864I	Energy Storage Solution, eBuilding Series, 613A Max, 864kWh, 220V, 50/60Hz
S311-818-720I	Energy Storage Solution, eBuilding Series, 818A Max, 720kWh, 220V, 50/60Hz
S311-818-864I	Energy Storage Solution, eBuilding Series, 818A Max, 864kWh, 220V, 50/60Hz
S311-818-1KI	Energy Storage Solution, eBuilding Series, 818A Max, 1008kWh, 220V, 50/60Hz



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ISO 9001:2015



QUALITY STANDARD

