

# Shaping the future.

Enabling businesses to become more green,  
productive and in control of their energy  
usage and costs.



Creating the future - the Exide Technologies way:



Innovation



Reliability



Sustainability



High Performance

# The world is changing. That's why we are energizing a new world.

For Exide Technologies, now is the time to release new energies to move even further into the future. Our new claim “**Energizing a new world**” is designed to convey this aspiration. We want to bring change to life, face challenges together with our partners, and develop solutions for today and tomorrow. **Let's create the future – the Exide Technologies way:**



**Innovation** is the engine of technology leadership. That's why we are constantly evolving, remain self-critical, and continue to inspire our customers. We believe that great questions deserve great answers, which is what our innovative R&D is responsible for.



**Reliability** defines our business. This applies to our products as well as our innovative development work, services, and partnerships. We have a responsibility that doesn't stop with our products, but rather starts there.



**Sustainability** is an important part of our responsibility. That's why we rely on renewable energy and intelligent recycling concepts.



**High performance** is the standard we set for our products and services. We want all our solutions to be best in class. This gives our customers the certainty of being optimally equipped for any task.

## Inspire today. To achieve tomorrow.

As a global player of battery and energy systems, Exide Technologies is in prime position to inspire today's and tomorrow's generations, as we recognise the need to both preserve and energize the world. Recycling, sustainability and the environment were already at the heart of our strategy, but how could we take that approach to the next level?

As a market leader in energy storage, we recognise the need to lead by example. We have injected significant investment into our business to ensure that our customers – and the planet – will be better off.



**GNB becomes **E** /**

In a world that is constantly evolving, we are entering into a new era: “**E**” will replace “GNB Industrial Power”. From now on, our customers can find all our industrial products, systems and solutions under “**E**/ a division of Exide Technologies”. Or briefly: **E** for the industry.

# Customized Energy. Delivered instantly.

**Customized Energy Systems** offers smart energy storage solutions, based on innovative lithium-ion battery technology, that solve the challenges of today and tomorrow. We develop, build and deliver energy storage solutions to support the transition from fossil energy to renewable energy sources. Our modular solutions phase out pollution and noise, and enable businesses to become 'greener', productive and in control of their energy usage and costs.

Discover how **Customized Energy Systems** can energize your business by solving challenges in:



**Boosting**



**Saving**



**Operating**



**Generating**



**Trading**

## Boosting

Electrification is growing in momentum; demand for electric vehicles (EVs) from both motorists and industrial businesses is surging, and the race is on to ensure the right fast-charging infrastructure is in-place to service these types of vehicles. This shift puts pressure on the electrical grid, as, often, the existing grid infrastructure is not sufficient to provide the high output required for EV fast charging. The process needed for grid operators to increase grid capacity and make cables heavier is lengthy and often requires major investment.



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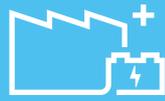
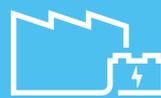
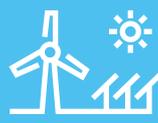
**Customized Energy Systems'** battery buffered EV charging systems facilitate this electric evolution and help close the 'EV fast charging gap' in a fast and cost-efficient way. Our modular systems help buffer power from the grid, so avoid peaks that would otherwise exceed the capacity and mitigate costs. The systems are not only interesting for traditional gas stations expanding into EV charging, but also for hotels and supermarkets, public transport operators, company fleet managers and businesses operating from rental

locations that are looking for a more flexible solution. For warehouse operators, **Customized Energy Systems** offers a rapid peak shaving system to charge more electric forklift trucks than the grid connection would normally allow. It enables fast and opportunity charging during breaks, ensuring no downtime and boosting productivity – it can transform the operation.

**It's not about  
the next  
best thing.**



# It's about the best for all of us.



# Whenever, wherever.

## Volatile energy made reliable.

### Saving

Energy storage is one thing; **smart** energy storage is quite another – how do the two differ?



Having sufficient energy available wherever and whenever it's needed can be a challenge and present a real bottleneck in operations or daily life. This is particularly true when it comes to the integration of volatile renewable energy sources, such as solar or wind power, or in remote areas or situations where there is no electrical grid available. Energy storage bridges the gap between power generation and demand, thus enabling the transition from fossil fuel to renewable energy.

**Customized Energy Systems** provides smart and modular energy storage, from smaller plug and play systems up to multi-megawatt containers. They are based on lithium-ion battery technology and our own developed software. With many megawatts of energy storage systems already installed in the field, customers can count on our project knowledge and a fast and efficient roll-out.



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**Plug-and-play system  
with factory pre-set  
parameters.**

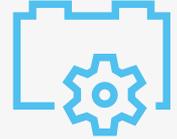
**Go mobile!** Our systems can also go mobile; from construction sites to rock concerts, we offer a flexible and reliable energy supply, whenever customers need it.



# Nature benefits. Business profits.

## Operating

Businesses are coming under increasing pressure, whether it's to reduce their carbon footprint, cut rapidly increasing energy costs, or utilize their equipment in the most efficient way. To achieve this, they need a strong and reliable infrastructure that doesn't cost the earth – quite literally!



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**Customized Energy Systems** step-ups with a smart battery buffering solution. Our modular peak shaving units increase the power capability of the wall socket and deliver additional energy when needed. This, for example, might be the case when starting-up a machine at the beginning of a shift, or operations that experience seasonal peaks – where energy consumption could exceed

the contractual maximum or where the grid is close to capacity. By offering a constant stream of energy flow, without peaks or changes, it cuts grid costs, optimises usage, and flattens energy bills.



### Cost optimization:

- Reduce contracted grid cost



### Peak-power supply:

- Peak-power supply due to fleet increase



### Optimization of grid power usage:

- Avoid costs that exceed the contractual electricity limit



### Opportunity charging during breaks:

- Offers longer working time by power-charging the battery
- May reduce battery changes between shifts

What's more, operators can still rely on the electricity grid that powers their business, but they can also integrate and switch to an alternative energy source, such as solar panels, giving them the choice and flexibility to 'buffer' when they want to. In a volatile market, where electricity prices are rising and the pressure is on to reduce carbon emissions, operators can be smart and use renewable energy to their advantage.

## It's a win-win!

Ultimately, using existing power supply and a 'green' solution means managers are being mindful of the environment while increasing their business's productivity.

# You have a plan.



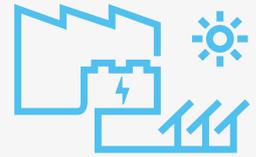
# We have the power.



# The future is a sheet of white paper. Perfect for a declaration of independence.

## Generating

No doubt, the success and the speed in which we will be able to transition away from fossil fuels towards generating energy from sustainable sources will also determine our path towards a 'net zero' world. Moving towards 'green' energy sources also means that power generation is no longer just a matter of large electric utilities, but becomes increasingly decentralized – individuals, neighbourhoods, agricultural operations, and commercial or industrial businesses are seeking to make a genuine and positive change.



However, generating energy is only half of the equation. Only the ability to generate, store, and consume their own energy will mean they will be able to reduce their emissions, become truly autonomous from the available grid, and slash their energy bills. Given the volatile market conditions, with fuel supply fragile and costs escalating, there isn't a better time for businesses to start relying on themselves – taking the heat away from the grid!

**Customized Energy Systems** provides turnkey solutions to enable the storage of self-generated energy that are cost efficient and easy-to-install. With our modular approach, our experts will help businesses configure the right-sized storage system for their application, ensuring a fast return on investment (ROI). Businesses can discover and digest our case studies and customer testimonials for more information on systems that are already running successfully in the field – from medium-sized neighbourhood systems up to large-scale container storage units.



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# Some pursue their goals. We achieve our goals.

## Trading

Deregulated energy markets, high fluctuation of energy prices, and the growing share of volatile and unpredictable renewable energy sources as part of the energy mix create an imbalance of 'supply and demand' and can also lead to grid instabilities. In turn, this provides new business models and revenue opportunities for battery energy storage.



**Becoming part of  
the energy trading market**



**Customized Energy Systems** provides scalable, containerized battery storage solutions that allow generators of renewable energy to participate in the deregulated energy trade (day-ahead or intra-day); for example, reducing their energy buying costs and selling surplus energy when prices are high.

Our smart storage systems are also able to switch dynamically from charging to discharging in order to stabilize

the grid, depending on the network frequency, acting as a so-called-frequency containment reserve (FCR). This is the last resort for grid operators to secure the stability of the whole electricity grid during actual operation and requires significant power for only short periods of time.

## About Customized Energy Systems

In 2021, global player Exide Technologies acquired Ateps Nederlands b.v., an innovative and dynamic provider of lithium-ion based energy storage and its management in future key applications, such as time shift, frequency control, peak shaving, energy trading and more.

Combining innovation and global energy storage expertise, they become Customized Energy Systems, thereby

making the use of sustainable energy through smart energy storage accessible to more regions and projects. Customized Energy Systems develops, builds and delivers energy storage systems to transition from fossil energy over to renewables. Its focus for a successful and sustainable future is on storage systems and solutions for greenhouse gas reduction and an optimization of TCO in energy-intensive industries.



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# Energy that goes beyond.



- Automotive plant
- Industrial plant
- R&D facility
- Recycling
- Global HQ
- Principle sales offices  
+ sales offices and distribution centers across the world



All manufacturing plants  
**ISO 9001**  
certified

All automotive plants  
**IATF 16949**  
certified

All manufacturing plants  
**ISO 14001**  
certified

All manufacturing plants  
**ISO 50001**  
certified

Most manufacturing plants  
**ISO 45001**  
certified

**ENERGIZING  
A NEW  
WORLD**

**EXIDE**<sup>®</sup>  
TECHNOLOGIES