



Protecting the power
that powers the world.

Where reliability is critical,
We are your peace of mind.



Speed

When speed is critical to your operations, you need a flexible solution. We work with you to deliver reliability - on time.



Cost

When reliability can never be compromised, but budgets are constrained, we help you identify your critical priorities.



Compliance

Compliance is more than just checking boxes. It's about solving the underlying problems and being adaptable with the solutions used.

Your business operates where others cannot. **So does ours.**

When your dependence on critical systems can be the difference between safety or disaster, reliability must be absolute. We understand the complexity of heavy industries and utilities, and know that not every facility faces the same challenges.

That's why Chloride specialises in problem solving in industrial environments, for a full range of mission-critical applications. We support you where expert knowledge and an adaptable approach are key to safe operations.

“ ”

At Chloride, we pride ourselves on simplifying your critical infrastructure challenges. As industries evolve, and technologies become increasingly complex, it's impossible for a single engineering team to know everything. So we do the impossible for you.

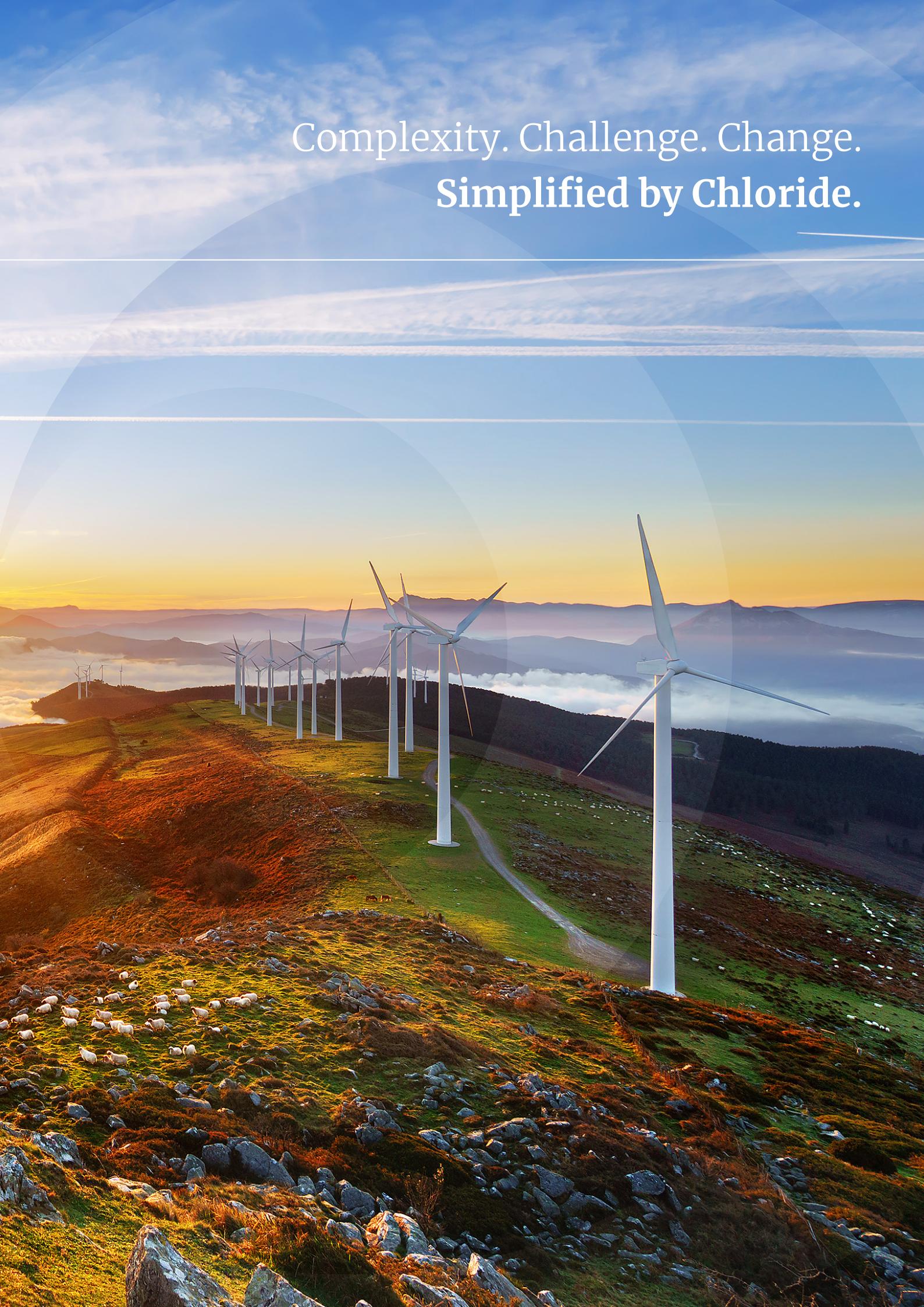
Our customers are looking for absolute trust in the solutions they use. When you're managing a critical infrastructure, we understand that you want reliability at all times, everywhere you operate. That's why our team is focused on being a partner for the full lifecycle of the solution. From custom design, through deployment to end of life and replacement - we provide the expertise and technical support needed to keep your critical infrastructure operating.

In the most extreme environments, in the heaviest industries, Chloride ensures that power is provided to your critical systems.

Guillaume Perol

President & General Manager,
Chloride

Complexity. Challenge. Change.
Simplified by Chloride.



Chloride[®] supports customers across industrial sectors:



Chemical



Steel



Cement



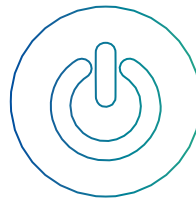
Marine



Manufacturing



Rail



Power



Oil and Gas

Project | **Natural gas field installation**
Location | **Arctic Circle**



Arctic operations:

Custom-designed AC and DC UPS systems for LNG Project

Project:

The LNG site located within the Arctic Circle is an integrated natural gas liquefaction complex with a production capacity of 15 to 16.5 million tonnes per year.

Challenge:

Chloride delivered solutions to 6 different shipyards (module assembly). Our team overcame significant logistical challenges during the 3-month summer shipping period to deliver tailor-made AC & DC UPS with 1, 3, or 8 hour backup time.

Solutions Used:

Chloride® CP70R • Chloride® CP60Z • Chloride® CP70Z • Appleton ATX battery protection enclosures • Distribution panels

Results:

- Strict compliance with all necessary specifications
- Reduced footprint to fit in the optimized module layout
- Localized Human-Machine interface (local language/Eng)
- Operational project management (5 operating centers, 6 building yards)
- Global service management

Trusted technology for critical infrastructure.

Chloride specialises in the protection of mission-critical infrastructure. We design, manufacture and customise products to specifically address our client's needs. Our technology can weather storms and survive explosions. If you have a challenge with no easy answers, trust us to find the solution.

Our Uninterruptible Power Systems (UPS) ensure that power is provided to your critical systems, overcoming the challenges that you confront on a daily basis.

- Our solutions offer up to a 60 years lifespan, to meet the most stringent industrial requirements
- We offer integrated transformers to ensure complete galvanic isolation between the mains network, the battery and the protected loads
- Unique design allows our complete range of systems to continuously operate at full load at 40°C and above
- We design customised mechanical and electrical solutions to meet onsite conditions (seismic, dust, vermin, H2S, IECEx)
- Dual AC and dual or triad DC UPS configurations ensure power redundancy for the load
- Integration of AC and DC UPS with multiple communication protocols to monitor the system and perform predictive and proactive maintenance
- Complete system software and interface integration between UPS and new generation sodium batteries for unprecedented power availability



A trusted partnership

The Al Sufouh tramway is a highly innovative project in the Middle East, that had to overcome a number of construction challenges. The power systems had to be significantly redesigned to meet rigorous safety standards, while being delivered to a strict delivery schedule.

Chloride's solution provided absolute reliability. The team delivered not only exceptional technical expertise, but were adaptable in the way that they worked to build a strong and trusted long term partnership.



Complexity simplified, **for every project.**

With critical systems, there is no room for gaps in performance or process. So Chloride acts as the bridge that spans engineering, operations, project management and solution development. Our services and solutions help you deliver absolute accuracy and reliability in any project.

Wherever resilience is needed, we operate.



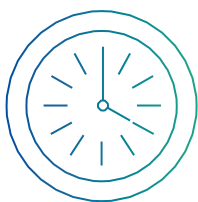
Technical Expertise

Inadequate scope definition and setting unachievable specifications can lead to projects becoming costly or even undeliverable. Backed by our technical expertise and insight, you can avoid any quality issues and complete projects to the highest standards.



Total Cost of Ownership

Your project profitability can be seriously impacted by unexpected requirements, costs and delays. We understand all of these pressures and work closely with you and your client to deliver the right results within budget.



Time Schedule

Projects can be delayed by any number of factors, from unexpectedly long approval cycles to mismanaging long lead items. You can trust our experience to eliminate these inefficiencies and deliver critical work on time.



Your **expert** consultant.

The Chloride team is invested in understanding your business and your infrastructure.

We will provide expert consultancy at every step of the project and beyond, to guarantee simple answers to the most complex challenges.

Technical capabilities for a full range of mission-critical industrial applications:

- We are trusted by critical industries to deliver a wide range of AC and DC power solutions
- Our team brings expert knowledge of the technical specifications and their special requirements, for all the major industry players
- Chloride has a proven capability to issue technical and commercial solutions, in line with all project requirements
- We provide sizing of the exact scope of supply, backed by detailed knowledge of industry best practices and expectations
- Our team are experts in battery technology, and we offer battery calculation based on international standards

Your globally-available engineering expertise.

Chloride has engineers in place across 5 continents:

- We adapt our approach to each client's needs - so you can expect a customised solution proposal for your infrastructure needs
- You will have access to the local team on the same time zone to handle project gates and support
- We provide management of the supply chain so that the project-specific requirements meet the project schedule
- Our service and support capability spans a global network of multiple service centers spread over 50 countries, and is backed-up by several dozens globally-available certified professionals



Customised solutions, for any environment.

We specialise in answering the demand for reliable industrial power

Chloride delivers Engineering, Manufacturing, Testing and Servicing of Low-Voltage, Static, Made-to-Order AC and DC Uninterruptible Power Supply Systems. Our team work closely with each customer to prioritise their needs, and deliver a customised solution designed to work wherever your business operates.

Products and Solutions

AC UPS systems DC/AC Inverters

- PWM inverter/UPS up to 500kVA
- Modular AC UPS systems
- Several input and output voltages available (from 1x110Vac to 3x690Vac)
- Single and redundant configurations
- Combination of AC and DC loads
- IEC or UL standards
- XP version for Zone 1 and 2 ATEX-rated applications

DC UPS systems Rectifiers

- SCR rectifiers/battery chargers up to 220kW
- Switchmode rectifiers up to 60kW
- Modular DC systems
- Single- or Three-phase input voltage as required
- Wide range of output voltages (24 to 220Vdc)
- 2-, 6- or 12-pulse rectifiers
- IEC or UL standards
- Special enclosures (IP level, IECEx)
- XP version for Zone 1 and 2 ATEX-rated applications

Connectivity and Monitoring

- Volt-free contacts
- PPVIS monitoring software
- Chloride BMS - Battery Monitoring System
- Most industry accepted protocols
- Number of volt-free contacts as required
- Proprietary PPVis software
- Cell-by-cell battery monitoring
- XP version of Battery Monitoring System (BMS) for Zone 1 and 2 ATEX-rated applications (battery room)
- Several protocols available (Modbus, Jbus, Profibus, DF1, IEC61850...)

Stationary Batteries

- Vented Lead Acid
- Valve Regulated Lead Acid
- Vented Nickel Cadmium
- Recombination Nickel Cadmium
- Sodium Metal Chloride Batteries
- Lithium Ion Batteries
- Up to 25 years design life
- Stackable or individual blocks or cells
- All technologies available

Battery Installation

- Racks
- Metallic Enclosures
- In-charger cabinet
- Several IP/NEMA types available
- Different earthquake zones

Battery Circuit Protection

- IP55 wall-mounted box
- E.Exd wall-mounted box
- Integrated fuse, fuse-switch or MCCB
- Black start function
- ESD reset function

Power Distribution

- Custom-made distribution panels
- IP42 to IP54 metallic enclosures
- AC 1-phase or 3-phase distribution
- DC distribution
- Auto-load shedding
- Form 1 to Form

Resilience for your **peace of mind.**

We understand that industrial businesses have a challenging balance of budget management, operational efficiency and compliance. With a full service offering and an extensive service network, Chloride ensures lifelong system reliability - so when you work with us you can trust you have the right solution.



Start Up

- Product warranty extensions
- Supervision of installation
- Systems commissioning
- On-site testing
- Project training
- Load bank rental and supply
- Commissioning spare-parts



Operate & Maintain

- Spare parts
- Preventive maintenance
- Repair services
- Third-party maintenance
- Site maintenance training
- Shutdown and turnaround services
- Systems upgrades



Optimize

- Full system Upgrade to latest generation of the electronics
- Spare parts obsolescence management
- Audit and consultancy
- Life extension overhaul
- Systems modification
- Battery replacement
- Systems MRO (Maintenance, Repair and Overhaul)

Securing power on an offshore oil platform in hazardous conditions

Project | **Alternative energy power supply**
Location | **Persian Gulf, off coast of UAE**

Project:

The Chloride team was approached to help this oilfield operator overcome their dependence on a solar system, replacing it with a reliable alternative power supply.

Challenge:

Chloride was tasked with selecting and deploying DC power UPS systems capable of providing 24VDC with a high power rating. The challenge lay in delivering this with certification for use in hazardous environments. We achieved this by laying 6.6KV sub-sea power cables to the wellhead platform.

Solutions Used:

Chloride® XP range of DC UPS systems | DC distribution boards | Appleton enclosures | Appleton PowerPlex™ switches

Results:

- With a 25 year relationship in place, we delivered a new design of enclosures and power electronics in response to updated footprint requirements
- The Chloride team enabled the retrofitting of 33 shallow water platforms
- We deployed 56 innovative DC chargers, with battery switching adapted to automatic functioning at unmanned operational sites
- Critical systems were protected by market-leading flameproof enclosures with the IP66 rating

Complexity simplified.
Reliability Guaranteed.
Wherever you operate.

Chloride is committed to supporting your business across a full range of mission critical industrial applications. If expert knowledge and an adaptable approach are key to safe operations, we're here to help.



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