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THREE-D'S NEW LEADERSHIP CHARTS COURSE FOR GROWTH



Three-D's head office team in Johannesburg.

By: Ilana Koegelenberg

Three-D Agencies, a local electrical distributor with a 40-year heritage, is embarking on an exciting new chapter following recent leadership changes. Last year, Derek Gilmore assumed the post of interim managing director, while Gabriel Pieterse joined as the new sales director. What does this mean for Three-D and its customers?

A new era for Three-D

Three-D was originally founded in 1977 and is particularly known for its cable accessories. With 68 employees across branches in Johannesburg, Durban, and Cape Town, it has established itself as a significant player in the electrical distribution sector over its four-decade history. Now, it's setting its sights on expanding further, building on a solid foundation while prioritising customer service.

In 2013, Three-D was acquired by Hudaco Trading (PTY) Ltd. Since then, Three-D has operated at the same premises as Hudaco's other companies, Varispeed and Powermite, sharing common warehousing and back-office resources while maintaining their distinct corporate cultures and identities.

After the acquisition, Three-D's founder continued with the business for 12 years, demonstrating the group's commitment to preserving the entrepreneurial spirit of its acquired companies. When he retired in October 2024, Derek Gilmore, managing director of sister company Varispeed, was the logical choice to steer the ship, given the close operational ties between the companies.

The leadership transition continued with the appointment of Gabriel Pieterse as sales director in November 2024. Pieterse brings over three decades of electrical industry experience from companies such as CBI-Electric, ABB, Schneider Electric, and EM.

"I'm excited for the opportunity to help build the company to new heights," Pieterse says. "We have a chance to do really great things here."

Staying true to its values

Despite being part of such a large, international corporate group, Three-D has maintained its distinctive family-oriented culture and hopes to grow while remaining true to its core values. "We're large enough to make a difference but small enough to add a personal touch," Gilmore explains.

This approach has fostered remarkable employee loyalty, with many sales staff serving the company for over 20 years.

CONTINUED ON PAGE 3

40 | 2025/26 CATALOGUE

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Advancements in energy efficiency, protection, and lighting

The electrical industry is continuously transforming, driven by ongoing advancements that enhance sustainability through improved energy efficiency, enhanced system protection, and the evolution of lighting solutions. This ever-changing landscape reflects a commitment to constant improvement as the industry adapts to new technologies and evolving environmental demands.

Energy efficiency: optimising consumption

Energy efficiency has become a key focus for businesses and homeowners due to rising energy costs and sustainability demands. Advances in electrical systems, such as energy management systems and smart meters, allow for better monitoring and control of energy consumption. Modern distribution boards (DBs) and circuit



breakers now feature advanced monitoring

capabilities, helping users identify inefficiencies and reduce waste.

Energy-efficient solutions, including load management systems, help balance energy usage and prevent overloading. By incorporating these innovations, users can optimise their energy consumption, lower operational costs, and contribute to environmental sustainability. Voltex provides the latest energy-efficient electrical solutions, supporting its customers in reducing their carbon footprints and improving energy performance.

DBs, switches, sockets, and protection: enhancing safety

Electrical protection systems are critical for safeguarding installations against overloads, short circuits, and other potential hazards. Traditional protection systems were reactive, responding only once a fault occurred. Today, smarter systems proactively monitor electrical loads, reducing risks and preventing damage before issues escalate.

Modern DBs feature advanced circuit breakers, surge protectors, and isolators designed to ensure safety. Devices like arc fault circuit interrupters (AFCIs) and ground fault circuit interrupters (GFCIs) offer added protection, preventing electrical faults from becoming dangerous. These innovations improve the safety and reliability of electrical systems, reducing the risk of fires and costly repairs.

Voltex offers a wide range of protection solutions, including high-performance DBs and protection devices that provide both safety and reliability, keeping electrical installations in optimal condition.

Lighting: energy-efficient solutions

Lighting is a major energy consumer, but recent innovations in LED technology have significantly reduced energy consumption. LED lights consume less energy and have a longer lifespan than traditional lighting options. In addition, advanced lighting systems, including occupancy sensors and daylight harvesting technology, ensure that lighting is only used when necessary, further reducing energy waste.

Voltex offers energy-efficient lighting solutions that help customers achieve long-term savings and improve the sustainability of their spaces. Its range of lighting products integrates seamlessly with smart building systems, enhancing both energy efficiency and user comfort.

A sustainable future

Advancements in energy efficiency, protection, and lighting are shaping the future of the electrical industry. Voltex is dedicated to providing innovative solutions that help customers optimise energy use, improve safety, and reduce costs, paving the way for a greener, more efficient future.

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Versalec customers mainly consist of a select group of electrical contractors and consulting engineering firms involved in electrical reticulation projects and Renewable energy projects. Versalec Cables is able to

provide comprehensive commercial proposals with supporting technical data as appropriate, customized to the needs of each particular project. In addition, they can assist electrical engineering consultants with budgets related to forthcoming projects. Versalec offers the additional service of delivering cable to site with its own crane trucks, operated by trained personnel, ensuring that correct off-loading and handling techniques are adhered to, as required by the manufacturers.

With a team of dedicated, hardworking and experienced staff, Versalec Cables continues to strive towards service excellence, empowering both customers and suppliers with confidence and trust.



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Never stop learning



Ilana Koegelenberg

"Horses for courses" is one of my favourite expressions. An HVAC contractor shared this wisdom early in my journalism career when I asked him what equipment he prefers to specify. I quickly learnt there's no "one-size-fits-all" solution – not in any industry. You must pick the right "horse" that suits the individual "course".

More than a decade later, as I navigate my way through a new industry, this principle remains

constant. Every project demands individual attention, and what serves as the ideal solution for one project (or customer) may prove entirely incompatible with another. Success stems from experience – and staying current with industry knowledge.

In today's fast-moving business environment, doing things "the way it's always been done" is a certain path to obsolescence. Technology advances continuously, new solutions emerge regularly, and R&D never ceases. Keeping abreast of your industry's latest trends and releases isn't just beneficial – it's essential.

Yes, you've likely guessed where this is leading – I'm making the case for why you should read this magazine. But not just read it; examine it with a critical eye. What insights can you extract from each story and apply to your life and work? A good student never stops learning, regardless of age.

You'll notice I sometimes publish articles with opposing viewpoints – as evidenced in this edition's coverage of solar subscriptions. This is where "horses for courses" comes into play, requiring you to apply your knowledge

and experience to evaluate topics critically. What might be brilliant for one application could prove wholly inefficient for another. Your role is to consider both perspectives and make an informed decision.

That's precisely my purpose: providing you with the information to make those decisions. Whether it concerns new products, industry trends, community updates, project insights or business management strategies, *Sparks* ensures the tools in your toolbox remain sharp.

This edition spotlights Energy Efficiency, with solar taking centre stage – particularly regarding financing options. Explore our articles on this topic from Probenenergy (page 8) and One Energy (page 9). Which solution best suits your project?

We also delve into distribution boards, switches, sockets, and protection, featuring CED's new catalogue (page 10) and Crabtree's modern range of switches (page 12), amongst others. Are you using the right product for the job?

Our regular Lighting section offers both beautiful project overviews and valuable insights. A BHA School of

Lighting student contributes a fascinating article about lighting heritage sites (page 15), while Aurora Lighting Africa examines the positive environmental impact of LED lighting (page 14).

Don't forget to check our Happy Holidays winners on pages 4 and 5. Did you win?

As the saying goes, the only constant is change. Don't be left behind – stay informed and choose the right horse for the course. On that note...I rely on you, the industry, the community, to keep me informed about developments in your world. Please don't hesitate to send me an email or give me a call if you have something to share.

For now, happy reading.

Ilana Koegelenberg

sparks@crowm.co.za

CONTINUED FROM PAGE 1

THREE-D'S NEW LEADERSHIP CHARTS COURSE FOR GROWTH

As such, while there may have been a change in management, the company has maintained the knowledge and expertise it's built over the years, ensuring that customers are in good hands.

Back to basics

Customer service lies at the heart of Three-D's business philosophy, with the new leadership team making it their primary focus for 2025. "Our whole team is passionate about customer service," says Pieterse. "We're always looking at how we can serve customers better."

This service-oriented approach is deeply embedded in the company's culture, fostered by a family-like atmosphere that sets Three-D apart from its more corporate competitors. The company plans to enhance its service offering through several initiatives, including conducting its first comprehensive customer survey to gather feedback about service levels.

They also plan to implement more training sessions this year – both internally and externally with additional training sessions at customers' premises, aiming to build stronger relationships while increasing product familiarity and confidence.

A growing product offering

Three-D takes a dynamic approach to its product portfolio management. While the company maintains a core focus on cable accessories, complemented by products such as trunking and lux cable accessories, it constantly evaluates its product range to ensure the customer is getting the best selection.

"There's continual evolution of the product," explains Gilmore. "When products become slow-moving or obsolete, we work to phase them out and find complementary products that are either equivalent or better in brand quality and cost-effectiveness. We always try to optimise our basket of products according to our customers' needs."

Uni-T measuring instruments and accessories were added to Three-D's portfolio in 2004 and have grown significantly. Uni-T has gained market recognition through its three-year unconditional warranty on meters and local repair capabilities, competing with the likes of Fluke in the local market.

Another big plus is that Three-D maintains a large stock holding at all its premises, ensuring depth and breadth in its product range to serve customers efficiently.

In 2025, the plan is to continue selecting only the best products for its distributors.



Three-D's Cape Town team.



The Three-D team in Durban.

A bright future ahead

Looking toward future growth, Three-D aims to not only expand its product range but also its geographical presence – particularly in the Southern African Development Community (SADC) regions. The company remains committed to its distribution channel model, working through distributors rather than selling directly to end users, even as it expands.

As Three-D welcomes 2025, its vision is clear: expand geographically, enhance its product range, but never lose the personal touch that built its reputation.

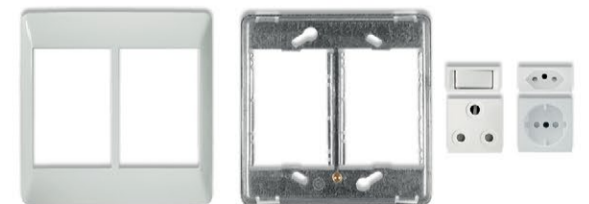
"We're building on forty years of excellence," concludes Pieterse. "The best is yet to come."

Enquiries: www.three-d.co.za

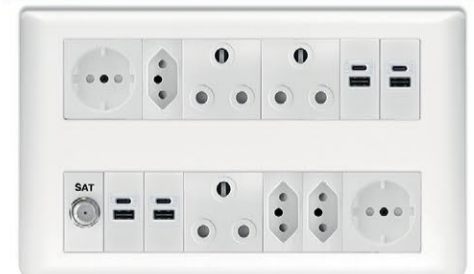


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Image/Unsplash



Congratulations!

Annual Happy Holidays competition winners crowned

To kick off 2025 on a positive note, *Sparks Electrical News* partnered with ten leading electrical companies to bring our readers another exciting giveaway event. After collecting entries from across the country, our editor visited each sponsor to conduct the prize draws. Could you be among our fortunate winners?



Richard Egenrieder of CED.



Jannie Dirks (left) and Leanne Cole of Comtest.



Pieter Knoetze of Crabtree.



Erica Moreira of Enerji Electrical.



Natasha Van de Loo of HellermannTyton.



Ravi Naidoo of WACO Industries.



Dale Engelbrecht of Vermont Sales.



Derek Gilmore (left) and Gabriel Pieterse of Three-D.



Beverly Potgieter of Radiant Lighting.



Johan Basson Jnr of JB Switchgear.

And the winners are...

- | | | | |
|---|--|---|---|
| <p>CED</p> <ul style="list-style-type: none"> Prize: 8 kW AC pre-wired combiner accompanied by a 2in 2out DC pre-wired combiner box Winner: Mark Vigus Brown of Magnitech <p>Comtest</p> <ul style="list-style-type: none"> Prize: 2 x Fluke 114 True-RMS electrical multimeter CAT III 600 V Winners: Ilan Miller of Ilan Miller Electrical + Yuveer Budram of Sonic Electrical Services <p>Crabtree</p> <ul style="list-style-type: none"> Prize: Crabtree products hamper Winner: Akeel Budram of Sonic Electrical Services | <p>HellermannTyton</p> <ul style="list-style-type: none"> Prize: INSULOK cable ties: 200 mm x 4.6 mm; insulated screwdriver kit; compact digital multimeter 600 V; FOSPRO HellermannTyton multipurpose lubricant; red HellermannTyton electrical insulation tape (20 m); Helacon Releasable 3 and 5 connectors; blue A5 hardcover HellermannTyton Made For Real notebook; HellermannTyton gaming mouse pad; cable tie chart; Ottawa wireless charger and desk lamp Winner: Rirhandzu Mathebula of Mantech Systems and Solutions | <p>JB Switchgear Solutions</p> <ul style="list-style-type: none"> Prize: Toolbox and cordless drill. Winner: Zainub Goga of Sapeer Investments <p>Eurolux</p> <ul style="list-style-type: none"> Prize: Eurolux model F82 rechargeable portable mist fan with LED emergency light Winner: Sonnyboy Sieda of Sieda Engineering of Companies <p>Synerji</p> <ul style="list-style-type: none"> Prize: Industrial floor fan (SYF24F) Winner: Surekha Thilukdharrie of RS Printers | <p>Three-D</p> <ul style="list-style-type: none"> Prize: UT89XD meter Winner: Themba Percy Gama of Barloworld Power <p>Vermont sales</p> <ul style="list-style-type: none"> Prize: Tork Craft 172-piece Cantilever toolbox Winner: Mark Marusich of CMW Automation <p>WACO</p> <ul style="list-style-type: none"> Prize: Smart Home automation kit consisting of a central controller, 2 x 1-lever switches, 1 x 2-lever switch and 1 x 3-lever switch Winner: Don Smith of Mimic Components |
|---|--|---|---|



DesignSpark unveils PCB software upgrade

Last year, RS released an upgrade to its award-winning software, DesignSpark PCB, backed by the support of Infineon, Germany's largest semiconductor manufacturer. The latest iteration, version 12, introduces new features in the tool for free and paid DesignSpark subscription plans as part of a commitment to its community of 1.4 million members to develop and enhance its offer continually.

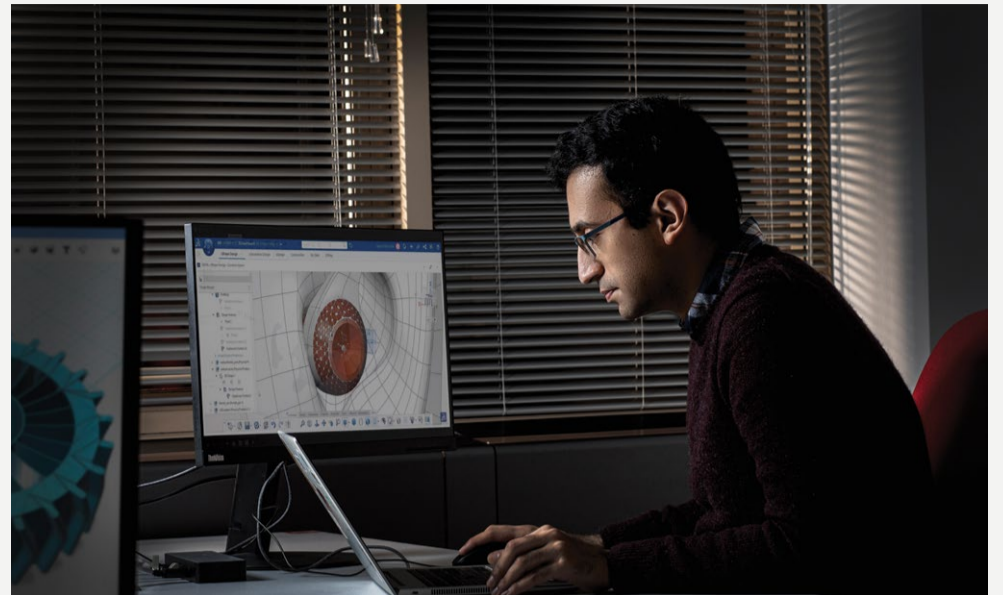
Launched in July 2010, DesignSpark PCB provides accessible, professional-grade PCB design tools for students and engineers. It became popular for its user-friendly interface, supporting schematics capture and PCB layout design without cost.

The tool makes designing circuit boards easy, and alongside the current features, which include a huge database featuring millions of PCB symbols and footprints and unlimited circuit board layers, new advanced functionalities across the DesignSpark subscriptions

include:

- Pre-plot checks, for correct layer selection.
- New edit component options, useful for high-pin footprints like BGAs.
- Angular precision setting for design units.
- Dual units for measurement tool.
- Export component(s) from any Library, including referenced symbols.
- Segment mode for shape/track editing.
- Translate to PCB options to improve reference design conversion to PCB.
- Design rule check on the current view.
- Save project-specific libraries.
- New component bin options like sort and filter for high component count designs.
- Additional Design Rule Check options, like Max Vias allowed in each Net, Max Stub route length allowed, and check PCB-only Nets.

Markus Rick, head of global account management eCommerce Distribution Partner, Infineon Technologies AG, said:



"We're excited to support the launch of DesignSpark PCB v12. We are supporting the tool in recognition that it empowers engineers with user-friendly technology, enabling faster innovation and a more efficient design process."

Pete Wood, director, DesignSpark commented: "Having the approval of Infineon means a great deal. They

play a significant role in supplying the components that PCB designers using the tool, within industries such as industrial automation and automotive, will integrate into their layouts. Their backing signifies a powerful endorsement of DesignSpark PCB's capabilities."

Enquiries: www.rs-online.com/designspark

Shaping business resilience with cloud and cybersecurity investments

In today's digital-first world, cybersecurity has evolved beyond a technical safeguard. It's a strategic business imperative that impacts every layer of an organisation. Alchemy Defence explains why cybersecurity should be considered a cornerstone of a company's strategy.

1. Cybersecurity as a financial safeguard

Cybersecurity investments are far more than just a protective measure against hackers; they provide significant financial value by optimising resources and reducing waste. One often overlooked inefficiency in many businesses is "dead usage" – redundant tools and underutilised licenses that silently drain budgets. With a strategic approach, cybersecurity becomes a powerful driver of financial efficiency, cutting unnecessary expenses and freeing up capital for growth-focused initiatives.

Businesses should view cybersecurity as a profit protector and financial enabler, driving operational efficiency while proactively managing risks that could otherwise lead to preventable losses.

2. Improving investor confidence

As digital threats continue to escalate, investors increasingly scrutinise cybersecurity protocols during due diligence. A company's approach to cybersecurity – its rigour in data protection, risk mitigation, and regulatory compliance – has become a key indicator of its overall stability and resilience, directly impacting investor confidence.

This heightened focus underscores cybersecurity's role as a value driver. Investors are becoming increasingly selective, favouring companies with robust cybersecurity frameworks as a mark of operational competence and effective risk management.

3. Protecting brand and reputation

The financial impact of a data breach extends far beyond immediate losses to encompass lasting damage to a brand's reputation. Cybersecurity lapses can trigger a public backlash, regulatory fines, and class-action lawsuits. Companies that proactively invest in cybersecurity position themselves as trustworthy stewards of customer data, creating a brand advantage that drives customer loyalty and strengthens organisational resilience.

4. Complete visibility

In the age of digital transformation, visibility into the cybersecurity landscape is no longer a luxury; it's an essential asset for effective executive decision-making. For CFOs and other C-suite leaders, having real-time access to cybersecurity enables informed, data-driven decisions that directly impact business optimisation and cost control.

Complete visibility can uncover inefficiencies in the tech stack that could lead to budget waste.

5. Simplicity over complexity

The most effective cybersecurity strategies are often the simplest, emphasising the fundamentals over complex solutions. Basic protocols, like access control, regular audits, and continuous monitoring, form the foundation of a strong cybersecurity posture.

Elevating cybersecurity to a core business strategy

Cybersecurity has become an integral part of business strategy, directly impacting a company's operational efficiency, investor appeal, and brand reputation. Forward-thinking CFOs and investors understand that cybersecurity is not just an expense but an investment in resilience and future growth.

Enquiries: www.alchemycyberdefence.com/

The data storage behind smart and safe cities

Smart cities use information and communication technologies to improve operational efficiency, share information with the public, and provide better quality services to local authorities.

There's also an important security element to smart cities. 'Smart' video or cameras utilise artificial intelligence (AI) algorithms and deep learning (DL) to analyse visual data in real time and can dispatch orders from a hub to AI-powered devices faster than a human can process. Going further than just providing data, smart technologies can actually enable the devices to deploy intelligent insights.

Smart video is also being deployed in connected cities to deliver critical assistance to help reduce crime. Business owners, for example, need security cameras to help protect their property, reduce shoplifting, and monitor employee or customer incidents.

The process behind smart video

The smart video sector is going through a transitional phase for recording video at scale: it has moved away from recording raw data from a standard camera to analysing the AI-enabled camera itself. In the past, data analysis was only possible at a centralised location, such as a data centre; however, the rise of onboard AI chips used in smart city technology allows the analytical load to be distributed. The ability to distribute the work is crucial when working at the scale of a smart city, enabling the data to be processed more quickly at the endpoints.

As AI and 4K increase the adoption of smart video cameras, higher video resolutions drive the demand for more data to be stored on-camera. Video data is so rich nowadays that you can analyse it and deduce a lot of valuable information in real time instead of post-event.

The role of storage

As a result, storage is critical to the evolution and efficient working of smart



video systems. Smart video architectures require innovative storage technologies, which deliver needed flexibility, performance, capacity and reliability. Robust on-board storage must be specially designed to meet the needs arising from multi-streaming devices, on-device deep learning systems and AI-training solutions.

Storage solutions, like Western Digital's WD PurplePro line, have evolved to provide high data transfer and write speeds, as well as the capacity to ensure world-class video capture.

WD Purple Pro is engineered with advanced capabilities needed for high-end smart video solutions. It is purpose-built for 24x7 operating environments and rated for high endurance and demanding AI workloads. Western Digital provides storage technology that protects and delivers video data to help systems prevent loss, improve situational awareness, and increase business efficiency. Adding these AI capabilities with WD Purple Pro ultimately helps deliver a smarter, more efficient, and data-driven world.

Enquiries: www.westerndigital.com



Lightning protection: new concepts and technologies

By: Richard Evert of the Earthing and Lightning Protection Association (ELPA)

Knowledge, awareness and cost

In most aspects of our society, how we do things and the tools we use determine how difficult it is to get things done. Our knowledge, ability to understand our needs, tolerance, and expectations influence our motivation to question the way we do things.

Lightning protection is no different. A catastrophic lightning event where a person is permanently injured, business production is disrupted, or electronic equipment is damaged could lead to considerable financial loss, instantly increasing the desire for knowledge about lightning protection.

A lightning protection system (LPS) diverts direct lightning strikes safely to ground, minimising the threat to humans and avoiding production disruption and damage to electrical and electronic equipment. Lightning surge protection measures (SPM) control overvoltages from indirect lightning strikes.

New concepts in standards

Standards explaining best practices for lightning protection manage risk and cannot be deployed as regulatory standards.

New concepts are introduced into standards when they improve the effectiveness of fulfilling the purpose of the standard. The IEC 62305 standards published in 2024 introduced three significant changes regarding lightning current flow in the external LPS part of an LPS:

Isolated LPS: The isolated LPS has no physical contact with the structure to be protected. This LPS prevents any dangerous lightning currents that could ignite the flammable or explosive contents and destroy the structure. The concept of an isolated LP is not new and has been adopted across South Africa for many years to protect thatch roof structures.

Attached LPS: An attached LPS that has physical contact with the structure being protected.

Electrically insulated LPS: An attached LPS that has no electrical contact with the structure being protected. The standard does not dictate the insulation level of the external LPS component.

New products: LPS insulated conductors

Electrically insulated conductors are well understood. In South Africa, power transformers with bushings that manage voltages in excess of 440 kV are common on the 765 kV extra high voltage (EHV) networks. Electrically insulated conductors will fail when the critical breakdown voltage of the insulation is reached.

An electrically insulated LPS component has better insulating characteristics than air. It is used in areas where the required air separation distance for the standard LPS component cannot be achieved.

The voltage on the insulated LPS component is dependent on the lightning peak current, the surge impedance of the conductor bonding this component to

ground and the installed earth resistance. Considering a common 10 kA lightning strike (highly probable), rise time of 5 microseconds, and an earth resistance of 10 Ohms, it will be possible to experience upwards of 200 kV on the insulated LPS component every time it operates.

Increased use may lead to accelerated ageing and insulation deterioration, which in turn would reduce the insulation effectiveness of the component.

No international standard for these components has yet been published.

New perspectives on old clauses in standards

Awareness of the meaning of concepts in standards is vital to appropriately using standards. It is natural, in a country where we have 11 official languages, that words can be misinterpreted. Subsequent controversial debates amongst laymen can contribute to further uncertainty and misinterpretation.

Lightning SPM and internal LPS:

The purpose of an internal LPS is often misunderstood. It addresses dangerous voltages produced by the external LPS. It exists with an external LPS and does not address indirect lightning events.

Indirect lightning does not strike the structure or the external LPS. The lightning protection designer must identify the threat of indirect lightning and include suitable lightning SPMs in the lightning protection scheme design.

The surge protection design adopted

in both the internal LPS and the lightning SPM falls outside the scope of work the electrician is responsible for (SANS 10142-1).

Maximum earth resistance of an LPS:

The induced voltages from an external LPS during a direct lightning strike will depend on the magnitude of the lightning peak current and the earth resistance of the external LPS. A legislated maximum allowable earth resistance value has no relevance in the successful operation of an internal LPS.

A good designer will always insist on having soil resistivity values. After designing an optimal earth electrode in the available space, they will then complete the internal LPS design. Future maintenance will require that the design earth resistance value must be maintained at all times.

New technology and economic decisions

New technologies in lightning protection are more difficult to validate than those adopted in industries where the primary element (such as electricity in an electrical installation) has a high probability of being present during testing.

The most common struggle facing every risk manager is available reliable statistics by which to make sound economic decisions. It is our duty as ELPA to contribute to and support the development of reliable statistical databases that help those vested property stakeholders make the best decisions for their assets and the safety of the people on their premises.

Enquiries: <https://elpasa.org.za/>

CED's new catalogue is here, prizes up for grabs

By: Ilana Koegelenberg

When I met with Richard Egenrieder, the general manager of Consolidated Electrical Distributor (CED), his enthusiasm was immediately contagious. It's clear that he's deeply passionate about the work he and his team have been doing – and he had some exciting news to share.

"After months of hard work, our much-anticipated catalogue is finally here," Egenrieder said. "It's been a real labour of love, and I've lost count of how many times I've been asked when it would be ready."

For over a decade, CED has been a

trusted name in the industry, specialising in low-voltage electrical switchgear, motor control, industrial automation, and electrical accessories. But what sets the company apart is its unwavering commitment to exceptional customer care. Egenrieder's pride in the team's dedication was evident as he described the new catalogue as a culmination of that legacy.

"This catalogue is filled with our latest products, solutions, and innovations – all designed to support and enhance our clients' businesses. We truly believe it will be a valuable resource for them and their teams," he said.

Weekly prizes to be won

It's not just the content of the catalogue that's generating buzz, though. CED is also launching an exciting competition to celebrate its release. Weekly prizes worth R25,000 are up for grabs, with the ultimate grand prize being a Samsung 55-inch Smart UHD TV.

"The competition is simple," Egenrieder explained. "Just request a catalogue by scanning the QR Code, and one of our sales engineers will personally deliver it to you. It's a great way to connect with our clients and ensure they have everything they need to succeed."

As we wrapped up our conversation, Egenrieder extended a heartfelt message of gratitude. "Thank you to all our clients for their trust and continued support. We're excited to see how this catalogue can make a difference in your operations, and we look forward to connecting with you."

If you'd like to learn more or request a copy of the catalogue, visit CED's website for all the details. "With exciting innovations and prizes awaiting, there's never been a better time to see what CED has to offer," Egenrieder concluded.

Enquiries: www.cedsa.co.za



Richard Egenrieder of CED with the new catalogue.



THE ALL-NEW CED CATALOGUE HAS ARRIVED.





Here's your chance to **win** incredible prizes worth **R25,000**, including the grand prize a Samsung 55-inch Smart UHD TV

Request your catalogue by scanning the QR code and following CED on our social media platforms to enter the prize draw.



What's in our new catalogue



-  Power Distribution
-  Motor Control and Industrial Control
-  Renewable Energy
-  Automation
-  Distribution Boxes
-  Accessories
-  Domestic Switches and Sockets

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www.cedsa.co.za

Reliable electrical connections with WAGO

WAGO's 221 Series of compact splicing connectors and the Gelbox, available locally from Shorrock Automation, are a revolutionary solution for secure, reliable electrical connections. These connectors, designed with the innovative WAGO Gelbox moisture protection system, offer a unique blend of reliability, ease of use, and long-term performance, making them ideal for both professionals and DIY enthusiasts.

WAGO has been a leader in electrical connection technology for over 50 years, known for its Cage Clamp spring connection system. The 221 Series connectors are available in 2, 3, and 5-conductor versions, supporting both 4 mm² and 6 mm² conductors. They are ideal for various



applications, from small residential installations to complex industrial and commercial wiring projects.

The connectors feature an intuitive, tool-free operation, eliminating the need for special tools or crimping, ensuring secure, reliable connections every time. The transparent housing also allows for immediate visual inspection of conductor insertion, making it particularly helpful for tight spaces or high-volume installations.

WAGO's 221 Series connectors are built for safety and durability, featuring WAGO's unique Cage Clamp spring technology, which provides gas-tight, vibration-resistant connections that require no maintenance. This makes them suitable for high-vibration environments like automotive, railway, and marine applications.

With a high current-carrying capacity of 32 A for the 4 mm² version and 41 A for the 6 mm² variant, these connectors can handle high-load applications without compromising on safety or performance. They are also rated for continuous operation at temperatures up to 105 °C, making them suitable for use in various challenging

environments.

These connectors are widely used across various industries, including automotive, power engineering, manufacturing, building technology, lighting, marine and offshore applications, residential applications, and more. Their compact design makes them ideal for situations where space is limited, such as in control panels and junction boxes.

Moisture protection with Gelbox

WAGO's Gelbox is a moisture protection system designed to enhance the performance of its 221 Series connectors. This pre-filled, silicone-free gel box provides IPX8-rated moisture protection for the connectors, preventing water ingress and preventing short circuits and other electrical hazards. The Gelbox is easy to use and reusable, allowing for quick and error-free installation. It is also label-free and safe for indefinite storage, making it ideal for industries like automotive and food.

The Gelbox is made from silicone-free gel, making it ideal for industries requiring non-hazardous materials. It is certified to meet IPX8 standards, ensuring that the

connectors are completely sealed against water, providing long-term protection even in the most demanding environments.

A perfect combination

WAGO's 221 Series compact splicing connectors and Gelbox offer an unmatched combination of ease of use, reliability, and long-term performance. These connectors deliver secure, tool-free installations in industrial, residential, or outdoor environments, ensuring your electrical systems are safe and functional. When paired with the Gelbox, they offer an additional layer of protection against moisture and environmental factors, extending the life and reliability of your connections.

WAGO's commitment to innovation and quality makes the 221 Series connectors and Gelbox the perfect choice for professionals looking for a fast, efficient, and durable solution to their electrical needs. Whether you're an electrician, contractor, or DIY enthusiast, WAGO provides the tools you need to ensure your electrical connections remain safe and secure for years to come.

Enquiries: info@shorrock.co.za

ACDC Dynamics expands offerings with new catalogue and innovative products

ACDC Dynamics' new catalogue is designed to make it easier than ever for customers to explore its diverse product offerings. This latest edition introduces several exciting updates, including new product ranges and innovative solutions to ensure that ACDC Dynamics continues to lead in the electrical industry. "We don't just sell components, we sell solutions," the company said.

EV chargers

With the rise of electric vehicles (EV), ACDC Dynamics has added a fully curated section on EV chargers for both home and industrial applications. Its catalogue

features a range of charging solutions, from residential chargers to industrial-grade stations that meet the demands of high-traffic areas. These reliable and easy-to-install chargers are built to accommodate the growing demand for electric vehicle infrastructure.

Expanding home automation solutions

A large range of home automation products are featured in this new catalogue. These smart solutions are designed to give customers greater control over their energy usage, security, and convenience. From smart plugs and energy meters to automated lighting systems, ACDC Dynamics's home

automation range offers cutting-edge technology to improve efficiency and enhance how users interact with your electrical systems.

Solar panel cleaning brushes

So many of us purchased solar equipment over the past few years of loadshedding, so we all know maintaining solar panel efficiency is essential. Therefore, ACDC Dynamics has introduced manual and motorised solar panel cleaning brushes into its range of products. These tools are designed to make the cleaning process easier and more efficient. The manual brushes are perfect for routine

maintenance, while the motorised options offer a more powerful solution for large-scale cleaning, ensuring that panels stay in top condition for optimal energy output.

New Deye products

ACDC Dynamics has expanded its range with Deye products, including advanced solar inverters, hybrid systems, and off-grid solutions. These products are designed to optimise energy efficiency for both residential and commercial applications, providing reliable performance and energy savings.

In addition to the catalogue updates, ACDC Dynamics continues to expand its product range by partnering with global suppliers who bring cutting-edge technologies to the South African market. These new additions reinforce ACDC Dynamics' commitment to providing high-quality, reliable solutions.

Conlog

ACDC Dynamics proudly introduces Conlog, a leader in prepaid metering solutions. Conlog's range of meters allows customers to track and manage their energy usage efficiently. Whether for residential, commercial, or industrial use, these smart meters provide greater flexibility and cost-effective energy management.

Kress Tools

ACDC Dynamics also offers Kress Tools, a brand known for its precision, durability, and ergonomic design. Kress tools cater to electricians and tradespeople with a range of power tools.

Orion

Additionally, ACDC Dynamics has expanded its lighting offerings with Orion, a brand that provides energy-efficient lighting solutions for a variety of environments. Orion's smart lighting systems are designed to reduce energy consumption while maintaining optimal illumination in commercial and industrial spaces, offering both cost savings



From left, Jean De Villiers, former Springboks rugby captain; Mario Maio, ACDC Dynamics CEO; and James Vos, Mayoral Committee Member for Economic Growth and Tourism.

and environmental benefits.

Smart ACDC

ACDC Dynamics is also proud to present Smart ACDC, a range of smart electrical solutions designed to integrate seamlessly into homes and businesses. From smart plugs to automated lighting systems, these devices allow users to monitor and manage their electrical systems remotely, providing greater control over energy use, security, and convenience.

SupaSol

SupaSol, a leading supplier of solar products, is now part of ACDC Dynamics' portfolio. SupaSol offers reliable and efficient energy solutions. These products help customers harness the power of solar energy effectively while reducing energy costs and contributing to sustainability.

"These exciting updates to our catalogue and product range ensure that ACDC Dynamics remains at the forefront of the electrical industry," the company says. "Explore our new catalogue today and stay ahead of the curve with ACDC Dynamics, your trusted partner for innovative electrical products."

Powering your world, powering your future.

Enquiries: <https://acdc.co.za/>

THE WAIT IS OVER... **DISCOVER THE HEART OF INNOVATION**

THE 25/26 CATALOGUE IS HERE!

ACDC Dynamics is excited to launch our updated catalogue, featuring innovative products to keep you ahead in the electrical industry.

Key updates include a new easy-to-navigate numbering system, a range of EV Chargers, expanded home automation solutions, and solar panel cleaning tools. We've also added Deye energy-efficient products, Conlog Prepaid Metering, Kress Tools for electricians, Orion Smart Switches, and SupaSol Solar Products.

Explore our new catalogue today and discover cutting-edge electrical solutions!

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ACDC DYNAMICS THINK ELECTRICAL

www.acdc.co.za



Innovative solutions: Crabtree's multi-range portfolio meets every installation need

By: Ilana Koegelenberg

Crabtree South Africa has grown to become the leading electrical accessories manufacturer in the country and a dominant regional player. It offers a wide and ever-expanding range of electrical wiring accessories, such as switches, sockets, and fittings, plus a range of domestic leads and adapters.

"Our mission is to develop world-class operational capabilities within our facilities to supply market-leading, branded products for the installers and users of low-voltage electrical infrastructure in South Africa, the United Kingdom, and SADC," says Pieter Knoetze, general manager of sales and marketing at Crabtree.

Product excellence across multiple ranges

Crabtree's comprehensive product portfolio for switches includes several distinct collections designed to meet diverse market needs:

The Classic Range represents the company's commitment to durability and reliability. Locally manufactured and SABS-approved, this range features an extensive selection of switches, sockets, USB combinations, and circuit breaker sockets. Built with steel construction, these products are designed for long-term performance.

The Diamond Range embodies stylish durability, bridging the gap between upmarket styling and classic reliability.

This collection includes innovative features such as combo sockets, cluster ranges, and modern USB/ HDMI connectivity options. It is also locally manufactured and SABS-approved.

For contemporary spaces, the Topaz Range offers a fresh, urban aesthetic that complements modern living environments. This collection includes various switches and combo sockets designed with current interior trends in mind.

Comprehensive sockets and cable management

Beyond their core ranges of switches, Crabtree also offers extensive options in domestic electrical accessories, including adapters, multi-plugs, and solid pin plugtops.

Crabtree's Cable Management System (CMS) Range provides practical solutions that are both flame and UV-resistant, featuring PVC conduit fittings, couplers, glands, wall boxes, and enclosures designed for durability.

Safety and reliability

As a trusted name in electrical accessories, Crabtree maintains high manufacturing standards with SABS approval across its product ranges.

Every product in Crabtree's portfolio undergoes

rigorous quality control to ensure safety and reliability. The brand's emphasis on providing safe electrical solutions is evident in its range.

Looking forward

With its established presence in the electrical accessories market, Crabtree continues to focus on innovation while maintaining its core values of reliability, safety, and quality. Its comprehensive product range serves residential, commercial, and industrial sectors, making it a go-to choice for electrical solutions in the local market – and beyond.

Enquiries: <https://crabtree.co.za>



Our mission is to develop world-class operational capabilities within our facilities to supply market-leading, branded products for the installers and users of low-voltage electrical infrastructure in South Africa, the United Kingdom, and SADC.

— Pieter Knoetze, general manager of sales and marketing, Crabtree

Say hello to hw+

The hw+ range of air circuit breakers (ACBs) from Hager is a leap forward in electrical safety and efficiency. Designed with the intelligent sentinel trip unit, these breakers provide reliable protection for energy circuits across all types of buildings, offering compact, flexible, and modern solutions.

All-in-one protection solution

The hw+ range is entirely Hager-made, combining advanced functionality with user-friendly design. These ACBs ensure complete protection for energy circuits through the sentinel trip unit, which delivers secure and customisable protection settings. This makes them indispensable for efficient planning and commissioning in today's electrical systems.

Compact yet versatile design

Despite their compact size, hw+ ACBs deliver exceptional performance. Available in fixed or withdrawable versions, they feature a modular design and a comprehensive accessory range, making them adaptable to diverse project needs. Their small footprint means they fit seamlessly into various applications without compromising functionality.

Intelligent features for modern demands

At the core of the hw+ range is the sentinel trip unit, designed to meet the challenges of modern electrical systems. Key features include:

- An intuitive LCD display and user-friendly navigation for clear visibility of data and settings.
- Easy configuration of protection settings, offering maximum adaptability.
- Reliable handling of overloads,

short circuits, and other fault conditions for precise protection.

- These intelligent features simplify operation, improve safety, and reduce maintenance complexity.

Reliable, safe, and smart

Industries, infrastructures, and buildings require dependable power solutions, and the hw+ range delivers. Built with decades of expertise, Hager's hw+ series blends safety and innovation to provide smart, simple-to-use solutions for demanding environments.

A comprehensive range

The hw+ series includes three frame sizes (HW1, HW2, HW4) and supports current ratings between 400 A and 4,000 A. Whether you need air circuit breakers or switch-disconnectors, this customisable range offers future-ready solutions to meet any application.

Hager's hw+ range of ACBs, powered by the sentinel trip unit, redefines safety and efficiency with a compact design, advanced features, and user-friendly operation.

Discover how the hw+ range can take your installations to the next level – visit the EM website, contact them today, or scan the QR code to learn more.

Enquiries: www.em.co.za



Say hello to hw+

Explore the new innovative, easy-to-install ACB range from Hager.

A new era in protection

Introducing Hager's new hw+ range of compact and reliable Air Circuit Breakers and Switch Disconnectors.

- Ideal for residential, commercial and industrial applications, the range offers robust protection against overloads, short circuits and ground faults
- Flexible connection options and a comprehensive set of accessories ensure seamless integration into your electrical system

Experience smart, safe, and simple power protection with Hager

Features

- Easy commissioning via software
- Easy and safe mounting of accessories
- Plug & play rating plug
- Simple locking and interlocking
- Output alarm contacts
- Warnings and trip alarms
- Secure & easy-to-use trip units
- Compact dimensions

:hager

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ABB Electrification's major 2024 milestones

The Electrification Products division of ABB achieved numerous milestones across different business areas in 2024, reports Graham Abrahams, senior vice president. A highlight was securing the first OneFit order manufactured locally at ABB South Africa, which was successfully installed at a customer site.

ABB's OneFit is a retrofit solution designed for medium-voltage switchgear. It features a hard-bus retrofit design concept that allows for the easy connection of new circuit breakers to a wide range of existing panels, regardless of their age, design, or brand.

"The Service business performed exceptionally well, marking a standout year in terms of growth and customer engagement. The Products business maintained strong momentum throughout the year, demonstrating its robustness and reliability," says Abrahams.

The Projects business expanded into new segments and effectively executed

its projects, showcasing its capability to innovate and adapt to market demands. Electrification also reached Gate 5 in the CSS/ LVS technology transfer, enabling local manufacturing. "This is a significant step towards enhancing our regional production capabilities," adds Abrahams.

Engineered to Outrun

The year ended on a high note, with news of ABB's 'Engineered to Outrun' rebranding. "It reflects our commitment to innovation, efficiency, and sustainability, and will be prominently rolled out within the Electrification division. Both our medium-voltage and low-voltage businesses are emphasising digitalisation, which aligns with our goals for reducing the carbon footprint," explains Abrahams.

In today's landscape, companies globally are setting ambitious carbon neutrality and sustainability targets. ABB supports these goals by providing efficient, low-impact

solutions that directly contribute to reducing emissions and energy usage. By using ABB's products, customers can run their plants more efficiently, achieving faster progress toward their carbon neutrality targets and supporting a greener, more sustainable future.

"ABB is at the forefront of driving sustainability and efficiency, aligning perfectly with Africa's push towards sustainable and resource-efficient industries. We have set ambitious targets to achieve carbon neutrality in all our manufacturing facilities by 2030. Through the use of our own technologies and solutions, we have already met this target, placing us four to six years ahead of schedule," says Abrahams.

ABB's strategy for continued innovation and leadership in the electrification and automation fields revolves around maintaining its technological edge, fostering sustainability, and investing in research and development (R&D).

Looking ahead

To stay ahead, ABB will continue to invest heavily in R&D, ensuring that it develops and delivers the most advanced, efficient, and reliable solutions. By focusing on innovation and sustainability, it aims to not only maintain its leadership in electrification and automation but also assist its customers to achieve their own sustainability and efficiency goals.



Graham Abrahams, senior vice president of ABB South Africa.

Looking ahead to 2025, the Electrification Products division's outlook is focused on continuing to drive digital solutions within the business and for customers. "Digitalisation is key to enhancing efficiency, sustainability, and operational performance. We remain dedicated to integrating these solutions across all aspects of our operations," says Abrahams.

"We are also committed to supporting the growing renewable sector, which is rapidly ramping up in response to global sustainability demands. By providing innovative technologies and solutions, we aim to help accelerate the transition to renewable energy, enabling customers to meet their sustainability targets," concludes Abrahams.

Enquiries: www.abb.com



Battery trends in South Africa

As the country slides into 2025 and South Africans continue to pinch themselves in disbelief that loadshedding has been suspended since before the national elections last year, it is important to recognise the impact renewable energy and batteries have had on the current situation, says Revov managing director Lance Dickerson.

Looking back at 2024, the following trends were observed...

Big increase in high-voltage (HV) batteries

There was a significant increase in demand for high-voltage battery systems (or battery energy storage systems/ BESS, as they are more commonly known) by commercial and industrial businesses in 2024.

Weak demand from the low-voltage (LV) market

Dickerson says the dip in the LV market, which primarily serves the residential sector, put a strain on the entire sector. "Some businesses that hadn't diversified

were put under immense strain, many even closing their doors." This was caused by a few factors, including what can best be described as dumping Chinese batteries in the market at very low prices – of course, without the support – and the residential sector reaching a point where most of those who could afford to build backup power solutions for their homes had done so.

"The straw that broke the camel's back has been the long period of no loadshedding because loadshedding tends to drive up consumer demand," explains Dickerson.

Local assembly and support

Dickerson says 2024 saw an understanding emerge in the market about the importance of local support. "Battery systems are feats of engineering, nowhere more so than in a high-voltage installation. Businesses quickly realised that relying on on-site international support from China means exceedingly long delays. This is not only costly but also dangerous. On the other hand, local support and responsiveness anywhere in the country, means issues can be addressed almost immediately," he says.

Looking at 2025 and beyond

Dickerson says that he expects these trends to continue throughout 2025, where industries continue to build their own resilience against an unreliable energy grid and also to offset the rising costs of procuring electricity from Eskom. Looking ahead, he says there is great potential for innovation, and he won't be surprised to see mini-grids emerge in the private sector, especially in housing complexes and business parks.

The future: mini-grids

"It will be interesting to see how this plays out, but there is a significant opportunity in community developments, such as housing or business complexes. The rapid expansion of high-density living and working environments are putting a strain on the existing power distribution infrastructure, leading to frequent outages and reliability issues," says Dickerson.

The opportunity, he says, lies in developers partnering with solar and battery backup specialists to build community-based mini-grids. "Let's consider a housing complex that is designed with this in mind. The entire complex would have a shared solar power generation system, with the solar panels installed on the common property. Rooftops are common property. The generated solar power would then be stored in a centralised battery system, also owned and managed by the complex," he explains.

"The electricity generated and stored in the battery system would be distributed to the individual units within the complex rather than relying solely on the grid. This would allow the complex to become more self-sufficient and less dependent on the unreliable grid power supplied by Eskom. The complex would still maintain a connection to the Eskom grid, but it would be used as a backup or supplementary power source," he says.

Dickerson says that systems such as these would need to be scalable. "We should not be surprised if developers move into this space as they would have a distinct competitive advantage when it comes time to find buyers or tenants," says Dickerson.

Enquiries: <https://revov.co.za/>



Solar and energy storage for business: take control of your energy costs

Businesses of all sizes are recognising the potential of renewable energy – not just as an eco-friendly alternative but also as a means to save on energy costs. This trend is expected to continue as the cost of renewable energy technologies continues to decrease.

As businesses face increasing pressure to reduce operational costs and embrace sustainability, solar and energy storage solutions represent an invaluable investment. This is especially true in South Africa amidst ongoing power outages and repairs.

These solutions are increasingly more affordable and accessible, with financing solutions such as Power Purchase Agreements (PPAs), fully funded solutions, and rent-to-own options bridging the gap, says Frank Rovelli, group CEO of Probe Corporation. "Businesses that embrace renewable energy can reap significant savings and return on investment."

Battery experts for over 60 years, diversified air, power and energy solutions group Probe has developed a specialist division, Probenenergy, focused on alternative energy solutions in response to escalating customer demand. "Alternative energy has rapidly become a major focus for the business," says Rovelli. "Our comprehensive range of solutions, harnessing the best global technology and engineered for maximum efficiency, provide businesses with a way to take control of their energy expenditures and ensure stable power supply."

Efficient energy storage

Rovelli says while grid-tied solar can save costs, the key to energy independence lies in efficient energy storage. "Advanced battery storage solutions allow businesses to store the surplus energy produced during sunlight hours for use during peak demand periods or power outages. This not only ensures a consistent power supply but also helps avoid costly peak demand charges."

Flexible containerised solutions save costs

With efficient battery storage in place, containerised solutions are part of Probenenergy's approach to adaptable and robust renewable systems. "These self-contained units are designed for mobility and ease of installation, offering a cost-effective plug-and-play solution that can be readily deployed in a variety of settings, from remote industrial sites to urban commercial locations. We're able to ensure a reliable and uninterrupted power supply that can withstand challenging environments," explains Rovelli.

Time running out on tax incentives

In addition to direct savings on energy costs, businesses that invest in renewable energy can also take advantage of various government incentives. These include tax credits, grants, and loans, which can help offset the initial investment in renewable energy infrastructure.

South Africa offers significant tax incentives

for businesses investing in renewable energy solutions. Businesses can claim an upfront deduction of 125% of the cost incurred to acquire qualifying assets (including supporting structures) used in electricity generation from renewable energy sources in the first year.

This incentive is designed to encourage businesses to invest in renewable energy by significantly reducing their taxable income in the year the investment is made. Extended until 28 February 2025, this initiative aligns with the government's broader commitment to increase the uptake of clean energy and foster a more sustainable economy. Additionally, businesses may be eligible for further deductions through the allowance for energy efficiency savings, which promotes the adoption of more efficient energy practices.

Eligibility for renewable incentive schemes often includes assets used to generate electricity, including the structures they're mounted on. However, Rovelli says there's been some confusion regarding storage and conversion assets, like batteries and inverters. "If they're part of a system generating electricity, they should qualify. However, if they're used simply to store power from the grid, they most likely wouldn't qualify as this is not aligned with the government policy objective of encouraging more generation capacity. It's best to go for the full solar system," he explains. "Decisions are made by SARS on a case-by-case basis."

Probenenergy offers an attractive rent-to-own model that makes solar energy affordable for residential, commercial, and industrial solutions. There are a few flexible financing solutions available, including subscription agreements, PPAs and funding solutions through Probe's financial partners. "At Probenenergy, we understand that financing a solar solution may be the best way to maximise returns sustainably," says Rovelli. "We've worked closely with funders to ensure customers don't need to take shortcuts on the systems they need."

Getting started

The first step to embracing solar energy is a site inspection and energy audit, says Rovelli. "Our certified installers conduct a thorough inspection to understand your needs and refine the quoting process. The energy audit measures your energy usage over a week, providing valuable data for an optimum design. We can help you become as energy efficient as possible."

Solar energy with effective energy storage offers businesses a way to take control of their energy costs, ensure reliable power supply, and maximise their return on investment, Rovelli concludes. "We're committed to redefining energy storage and empowering individuals, businesses, and industries to transition to renewable energy sources with turnkey solutions and effective financing. Ensuring a good return on investment is key."

Enquiries: www.probenenergy.co.za

PV circuit performance best practices



Regardless of the test method, it's important to know the plane of array irradiance and cell temperature to evaluate PV circuit performance. Pay attention to environmental conditions to interpret I-V curves accurately, as rapid changes in the irradiance or cell temperature can introduce errors to I-V curve tests. Proper sensor types and test methods, like the Fluke Solmetric PVA 15i-V curve tracer, should be used for reliable results.

Environmental conditions for testing

Optimal performance tests are conducted under stable weather conditions with irradiance above 700 W/m². This is particularly crucial when establishing a performance baseline at commissioning or recommissioning and relevant for troubleshooting. The standard test condition irradiance is 1,000 W/m², and the closer the field test conditions are to standard test conditions, the more accurate the interpretation of I-V curves will be. Good test conditions will most likely occur during the four-hour window around solar noon.

Irradiance measurements and their impact

Irradiance measurement errors can significantly affect photovoltaic performance testing. For instance, a small error margin in irradiance can overshadow the accuracy of even high-quality I-V curve tracers like the Fluke Solmetric PVA-1500. Fast-moving clouds near the sun and high-elevation cirrus clouds are particularly problematic.

One of the benefits of using I-V curve tracers for performance test measurements is that you can save critical environmental data along with the I-V data. This eliminates manual data entry errors that can cause trouble later and minimises the opportunity for errors associated with rapid changes in test conditions.

Choice of sensors

True pyranometers are not a good choice for I-V curve testing, as they have a wide, flat spectral response that differs from that of crystalline and thin-film module technologies. Hand-held irradiance

sensors are also not a good choice, as it can be challenging to orient them reliably and repeatedly in the plane of the array.

Hand-held irradiance sensors may also have an angular response that differs substantially from fielded PV modules. Angular response is significant early and late in the day and on days when cloud cover scatters a significant amount of sunlight. Under these test conditions, the array and sensor must have an equally wide sky view.

Reflective light influence

Irradiance sensors must not be influenced by strong optical reflections, as this can lead to inaccurate readings. If the irradiance sensor picks up significantly more reflected light than the PV modules under test, the model will overpredict I_{sc}, and the module will appear to be underperforming.

Under certain circumstances, sunlight reflected from metal surfaces can greatly exaggerate the irradiance reading. This can usually be remedied by changing the sensor mounting location.

Temperature measurements in PV systems

While PV module performance is less sensitive to temperature variations than irradiance, it's still a significant factor. Light-gauge thermocouples are preferred for measuring cell temperature under varying conditions. Positioning the thermocouple correctly is vital for accurate readings.

Since array and module edges tend to run cool, position the thermocouple between the corner and the centre of a module located away from the cooler array perimeter. This practice aims to select a sensor attachment point that approximates the average backside temperature. The tip of the thermocouple must make good contact with the back of the PV module, as air gaps interrupt heat transfer, resulting in low-temperature readings. When moving the thermocouple between identical array sections, place it at the same relative location each time to avoid introducing artificial temperature shifts.

Enquiries: www.comtest.co.za



South Africa's solar industry powers forward to 2025

Marked by gradual growth, notable achievements, and key lessons, 2024 has set the stage for a brighter, greener future for the local solar industry, according to the association. The South African Photovoltaic Industry Association (SAPVIA) reflects on the year that was.

Growth milestones

By October 2024, South Africa had added 961 MW of private-sector solar PV capacity, a testament to the sector's resilience despite challenges. The country's total solar PV capacity surged to 8.97 GW, an 11.9% increase compared to 2023. This includes 2.8 GW from public procurement programs like the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) and 6.1 GW from private-sector contributions.

"With almost 500 MW of utility-scale projects under construction and 375 MW scheduled to come online in 2025, the future of solar in South Africa looks incredibly promising," says Dr Rethabile Melamu, the CEO of SAPVIA.

SAPVIA's efforts in policy advocacy, such as its contributions to the Integrated Resource Plan (IRP) draft 2023 and ongoing engagements, have played a pivotal role in this growth. Initiatives like the South African Wholesale Electricity Market (SAWEM)

advocacy have further paved the way for increased solar PV deployment.

Economic impact and community contributions

The solar industry has become a significant economic driver by creating jobs and spearheading skills development initiatives. A standout example is SAPVIA's partnership with the National Business Initiative (NBI) and Absa, which trained 100 installation companies to meet growing demand. "Members like SOLA have made significant strides in advancing private-sector renewable energy projects," Melamu says.

Overcoming challenges

While the industry celebrated successes, 2024 was not without obstacles. "Regulatory delays, grid connection backlogs, and limited financing options for SMEs posed significant hurdles," says Melamu.

SAPVIA responded by advocating for streamlined processes with the Department of Mineral Resources and Energy (DMRE) and the National Energy Regulator of South Africa (NERSA).

"We also launched a financing access initiative to connect SMEs with funding opportunities and foster partnerships with larger companies to share resources and expertise."



How do we shape the future

"Looking ahead, SAPVIA predicts significant developments in the energy storage sector, with growing interest in solar-plus-storage systems to address intermittency issues," Melamu says. "Additionally, microgrids will become increasingly popular, particularly in rural and remote areas where grid access remains limited. The adoption of rooftop solar for residential and commercial buildings will continue to grow as electricity prices rise and consumers seek ways to reduce dependence on the grid. SAPVIA is collaborating with stakeholders to develop a comprehensive grid upgrade plan that includes smart grids and energy storage integration to support renewable energy expansion."

The role of solar in energy independence

In 2024, solar energy contributed significantly to South Africa's 300 days of uninterrupted electricity, reducing reliance on fossil fuels and cutting carbon emissions.

"Solar PV systems supplied 5.2 TWh of energy, displacing approximately 4,260 tons of CO₂. As we look ahead, solar energy will not only shape South Africa's energy future but also position the country as a global leader in renewable energy innovation," Melamu concludes. Solar energy is not just about powering homes and businesses; it's about shaping a sustainable future for all South Africans. "SAPVIA remains committed to driving this vision every South African has access to affordable, reliable, and clean energy."

Enquiries: www.sapvia.co.za

Are solar subscriptions the best financial decision?

Before entering into any solar rental or subscription agreement, it is crucial that users fully understand what they are signing up for and what the alternatives are. Teresa Kok, director of One Energy, delves deeper into the risks of not reading the Ts and Cs.

Solar power has emerged as the top choice for homeowners looking to reduce their grid electricity costs. However, the method one chooses to fund your solar purchase can significantly impact the financial benefits.

Solar subscriptions have been punted as a seemingly hassle-free way to access solar energy without the upfront costs or ongoing maintenance costs. While this might sound appealing, solar subscriptions can prove to be very costly decisions if you don't read the fine print.

One Energy created a list of reasons why solar subscriptions might not be the best financial option:

1. No ownership and no equity

When you opt for a solar subscription or rental, you do not own the solar system installed on your property, ever. Instead, the solar company retains ownership, and you essentially subscribe to a certain amount of power per month. This arrangement means that any potential increase in your property value due to the solar installation does not benefit you. Unlike buying solar panels, where you can build equity, renting leaves you without an asset at the end of the lease term.

2. Long-term contracts and escalating costs

While solar rentals/subscriptions may avoid the upfront cost of purchasing a solar system, they typically become more expensive in the long run. Monthly payments usually accumulate to a higher

total cost over the lease period, which typically spans anywhere from five years to more. Additionally, rental agreements mostly include annual escalation clauses, further eroding the expected savings and making it difficult to predict the true financial benefit over the lease term.

3. Early cancellation penalties and hefty 'buy-out' clauses

If you need to cancel your rental agreement early for whatever reason or want to exercise your option to buy out the system, you may face hefty penalties and buy-out fees over and above what you have already paid. Interrogate all the terms and conditions before signing up.

4. Transfer complications

Selling a home with a solar rental agreement can be complicated. Prospective buyers must be willing to take over the lease terms, which might not always be appealing. This can limit your pool of potential buyers or force you to buy out the lease at a significant penalty cost to facilitate the sale. In contrast, an owned quality solar system – which generally has a 15-20-year productive lifespan – can significantly increase a home's market value and appeal.

5. Maintenance and performance

While the solar rental company typically handles maintenance under a rental agreement, renters may face challenges if the service is subpar. Performance issues or delays in maintenance can result in higher energy bills, reducing the anticipated financial benefits.

Furthermore, some subscription options limit the level of battery power you can access (the depth of discharge) in a bid to protect the battery life for future usage in other rentals, which further reduces your



savings and pushes up your costs.

6. Limited financial incentives

If you're on a solar subscription, the solar subscription company owns the equipment and not the homeowner, so any benefit on rebates and tax incentives goes back to the equipment owner, and not to you.

Solar finance alternatives to consider

If the upfront cost of purchasing solar panels is a concern, there are alternatives to consider:

Solar finance: This allows you to finance the purchase of your solar system in much the same way as you would finance a vehicle, providing the benefits of ownership without the full upfront cost. In many instances, the monthly payments are significantly offset by the savings on your current electricity bill, leading to immediate savings.

Rent-to-own: This is another option for individuals and businesses, but with a caveat – not all rent-to-own contract terms and conditions are the same. Check that there is no annual escalation clause, and that you fully own your system at the end of the contract term, ideally with one single

additional monthly rental instalment only rather than hefty buy-out fees, and that there are no penalties if you want to settle your rent-to-own term earlier.

Bond: If you have surplus cash in your home loan/ bond, this is a good option, but not if you're going to extend the bond to pay it off over 20 years, as the interest on your solar purchase over an extended period makes this a costly financial decision.

The bottom line

While solar subscriptions may seem like a convenient and cost-effective way to go green, they often fall short financially compared to purchasing or other financing options. By owning your solar system, you can take full advantage of financial incentives, increase your property's value, and enjoy more predictable savings on your energy bills.

As with any significant financial decision, it is crucial to carefully evaluate all options and consider long-term implications to ensure you make the best choice for your circumstances.

Enquiries: www.oneenergy.co.za



Radiant work lights: versatile, compact, and powerful solutions for every workspace



site, workshop, or home project, these work lights provide dependable lighting solutions for every application.

With a focus on innovation and practicality, Radiant work lights address the key pain points of professionals and hobbyists. Their combination of power, portability, and advanced features sets

them apart as essential tools for anyone who requires reliable lighting solutions.

Discover the new Radiant work light range today and see the difference that high-performance lighting can make in your workspace.

Enquiries: www.radiant.co.za

Radiant has introduced its latest range of high-quality work lights, designed to deliver exceptional illumination while ensuring ease of use. Built for professionals and DIY enthusiasts alike, these work lights combine power, durability, and thoughtful engineering to tackle the demands of various work environments.

- The new range includes three models, each tailored to specific needs:
 - **RFS92 (30 W LED):** Compact and efficient, providing 3,000 lumens of brightness, perfect for smaller tasks or confined spaces.
 - **RFS93 (50 W LED):** A versatile mid-range option delivering 5,000 lumens, ideal for medium-sized projects.
 - **RFS94 (100 W LED):** The powerhouse of the range, with 10,000 lumens, designed for illuminating large areas with ease.
- All models feature a wide 120° beam angle to maximise light coverage, ensuring no corner is left in the dark.

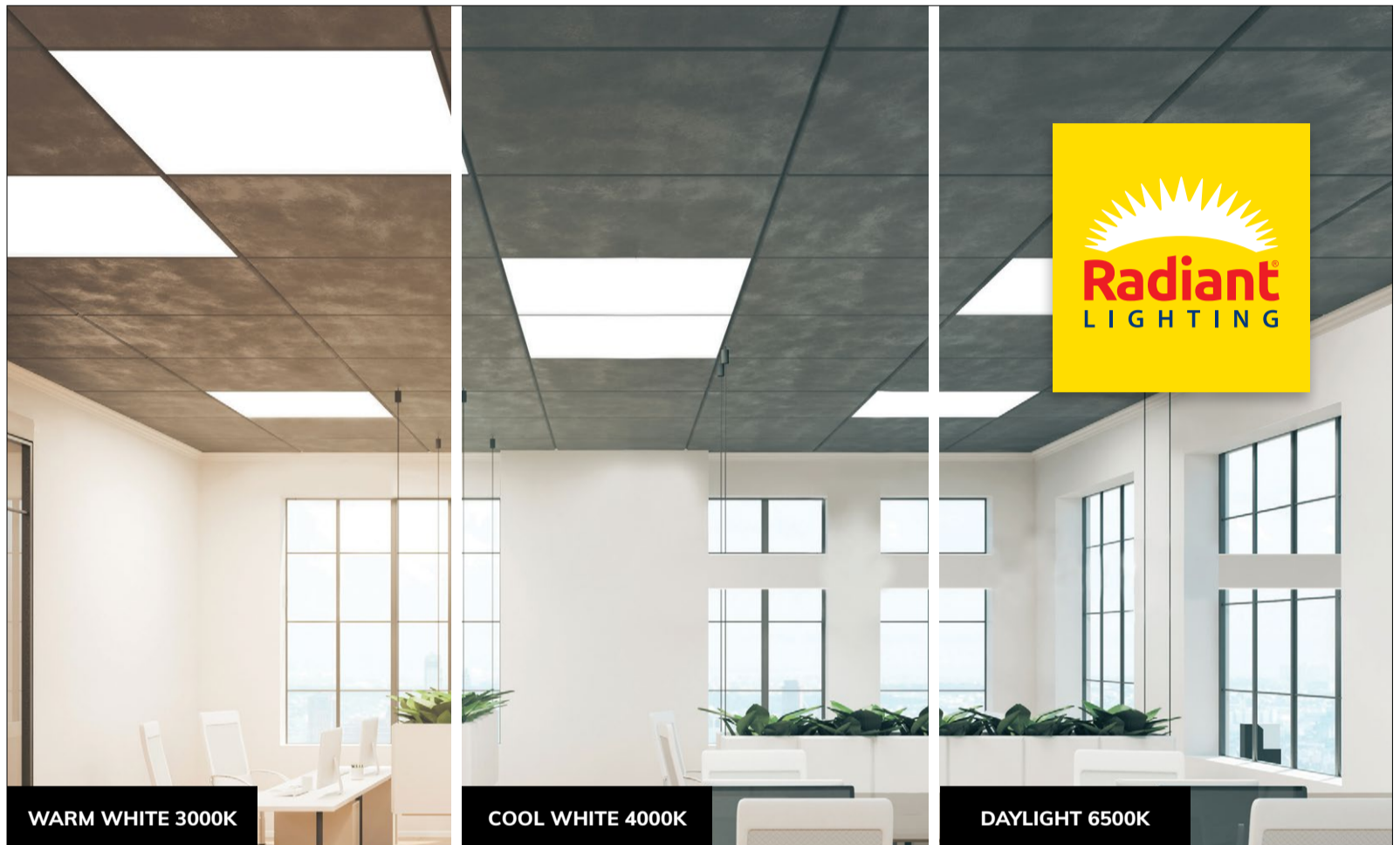
Key features

- **Compact and lightweight design:** These work lights are easy to handle, transport, and set up, making them the perfect companion for jobs on the move.
- **Breather valve technology:** A unique breather valve prevents the lamp lens from misting up, ensuring clear and consistent light output in all conditions.
- **Robust build:** Constructed with durable aluminium fittings, these work lights are built to withstand tough environments.
- **IP65-rated:** Offering protection against dust and water, these lights are ready for indoor and outdoor use.
- **Optimal cable length:** A 1,500 mm cable with a three-pin plug top ensures flexibility in placement while maintaining a secure power connection.
- **Colour temperature:** Operating at 6,500 K, these work lights emit crisp daylight illumination to reduce eye strain and enhance visibility.
- **Surge protection:** With up to 4 kV surge protection, the range ensures reliable performance even in challenging power conditions.

Why lumens matter

When evaluating lighting products, it is important to focus on the lumen output over and above the wattage. Lumens measure the total amount of visible light emitted, providing a direct indication of brightness. While wattage reflects energy consumption, it does not always correlate with light output, especially with energy-efficient LED technology. Choosing products based on lumens ensures you get the brightness you need for your specific tasks, maximising efficiency and performance.

Radiant's commitment to quality is backed by a three-year warranty on all models, offering peace of mind and confidence in their longevity. Whether it's a construction



WARM WHITE 3000K

COOL WHITE 4000K

DAYLIGHT 6500K

COLOUR CHANGING TECHNOLOGY BACKLIT LED PANEL LIGHTS

The three-colour changing technology on our new LED panel lights means you can select from Warm White, Cool White or Daylight settings through a CCT in-line switch. These ceiling lights are flicker-free and available in 3 sizes. All are covered by a 3 year warranty. Radiant Lighting offers an extensive product range to meet your architectural and building project requirements. Visit www.radiant.co.za and let us take your project to the next level.



RPR360

3CCT LED BACKLIT PANEL

Colour Temp: 3000K, 4000K & 6500K
Lumens: 4000lm
Wattage: 40W
Size: 600mm(w) x 600mm(h)



RPR361

3CCT LED BACKLIT PANEL

Colour Temp: 3000K, 4000K & 6500K
Lumens: 4000lm
Wattage: 40W
Size: 300mm(w) x 1200mm(h)



RPR362

3CCT LED BACKLIT PANEL

Colour Temp: 3000K, 4000K & 6500K
Lumens: 6000lm
Wattage: 60W
Size: 600mm(w) x 1200mm(h)



Inline Switch

JHB 011 386 0000

CPT 021 521 2500



BEKA's solar highmast lighting solution for Sutherland health centre

BEKA Schröder supplied the solar highmast lighting solution at the Sutherland Community Health Centre in the Northern Cape province, complying with regulations as defined in the Government Gazette regarding lighting within the Sutherland Central Astronomy Advantage Area.

The Sutherland Community Health Centre required an area lighting solution to enhance safety for both staff and patients visiting the clinic. Solar lighting was selected to avoid adding strain to the existing electrical infrastructure, and it also proved to be the most cost-effective option over time compared to a grid-connected installation. Additionally, a solar-powered lighting system aligns with sustainability goals, reducing carbon emissions and advancing green technology initiatives.

BEKA Schröder was the sole provider able to fulfil the unique requirements of the Sutherland Central Astronomy Advantage Area lighting standards. The South African designed and manufactured SOLARFLOOD solar highmast lighting solution with Amber LEDs, raked at 0° and dimmed to 30% to comply with regulations, was supplied.

Sutherland Central Astronomy Advantage Area

The Sutherland Central Astronomy Advantage Area (AAA) is a designated region in the Northern Cape Province of South Africa, established to protect the quality of the night sky for astronomical observations. This area surrounds the Southern African Large Telescope (SALT), one of the largest optical telescopes in the southern hemisphere.

The Sutherland Central AAA spans an annulus with an inner radius of 3 km and an outer radius of 75 km, centred on the SALT dome. The primary goal of this designation is to minimise light pollution and other environmental factors that could interfere with astronomical research and observations.

The below requirements for an outdoor lighting installation need to be met:

- **LEDs must be narrow-band amber (NBA)**
 - A narrow-band amber LED has a peak wavelength between 585 and 595 nm and a full width at 50% radiant power no greater than 15 nm. This type of LED is often used in applications where minimising light pollution and reducing the impact on wildlife is important.
 - A phosphor-converted amber (PCA) is an LED where the LED blue light is converted to yellow (amber) light, thereby having the highest efficiency at low wavelengths (around 600 nm)
- **Full light cut-off:**
 - It must be shielded so that the illumination angle from the 0-degree raked fitting must not exceed the 10-degree angle from the horizontal plane.
 - Fully shielded lighting – the light fixtures had to be constructed and mounted so that all light emitted by the fixture (either directly from the lamp or a diffusing element or indirectly by reflection or refraction from any part of the fixture) is projected below the horizontal.
- **DIMM profile of 30%:**
 - The lighting solution must be set so that the total light output throughout the night should only be 30%, no more and no less.

BEKA Schröder was able to meet the above lighting requirements with the SOLARFLOOD.

About the SOLARFLOOD

BEKA Schröder's solar lighting highmast solution for outdoor open areas and rural applications provides a high-performing, robust option for off-grid solar lighting requirements.

The SOLARFLOOD provides a reliable



lighting solution with a high Ingress Protection level (IP 66) that withstands high ambient temperatures. The SOLARFLOOD is a sustainable off-grid performer with a superior Lumen/Watt ratio. The high-performing optics allow for mounting of up to 20 m, providing high-quality light where it is needed.

The photovoltaic energy conversion is optimised by highly efficient Monocrystalline solar module technology. This, in conjunction with our Maximum Power Point Tracking (MPPT) charging system and our lithium energy storage technology, provides a state-of-the-art quality system, offering the required system autonomy and providing a long-lasting solution to operate in harsh environmental conditions.

Further advantages include:

- Designed and manufactured in South Africa;
- Specifically engineered for various geographical locations in Africa;
- It has sufficient autonomy to cater for up to two continuous overcast or rainy days, to continue its reliable night operation at an average 11-hour period;

- Long-life lithium (LifePO4) energy storage technology, offering up to eight years' battery lifetime;
- Designed to withstand wind speeds of up to 144 km/h and highly corrosion resistant;
- Uses latest photometric light distributions and highest efficient LED technology to provide maximum light levels and spacing between masts; and
- Has a warranty of up to five years (terms and conditions apply).

Locally manufactured

BEKA Schröder develops and manufactures a wide range of energy-efficient LED lighting products in South Africa – designed and suitable for local conditions.

In association with the Department of Roads and Public Works Northern Cape, the Department of Health Northern Cape, and MVD Kalahari Consulting Civil and Structural Engineers Kimberley, BEKA Schröder provided a successful LED solar lighting solution for this project.

Enquiries: northern@beka-schreder.co.za.

The positive environmental impacts of LED lighting

As global awareness of environmental issues continues to rise, businesses and individuals alike are seeking ways to reduce their ecological footprint. One of the most effective strategies available today is the transition to LED lighting, which



has emerged as a game-changer not only for energy efficiency but also for fostering a sustainable future. Aurora Lighting Africa explores this topic in more depth.

Light-Emitting Diode (LED) lighting technology has been at the forefront of the lighting revolution, offering remarkable benefits for both businesses and the environment. Firstly, LEDs consume significantly less energy than traditional incandescent and fluorescent lights. On average, LED lights use 75-80% less energy than their incandescent counterparts. This reduction in energy consumption directly translates to a decrease in greenhouse gas emissions from power plants, helping to combat climate change.

Moreover, LED lighting has a longer lifespan, lasting up to 100,000 hours, compared to 1,200 hours for incandescent bulbs and other traditional lighting sources. This longevity means fewer replacements, resulting in less waste and lower demand for raw materials used in manufacturing light sources. Businesses can substantially reduce their landfill contributions by choosing LEDs, promoting responsible waste management practices and reducing their overall environmental footprint.

Another noteworthy aspect of LED technology is its versatility. LEDs are available in a variety of colour temperatures and designs, which allows for effective and aesthetically pleasing lighting solutions tailored to different environments, from retail spaces to offices. Furthermore, LEDs produce very little heat compared to traditional lighting, reducing the need for additional cooling, thus further saving on energy.

Within recent years, the South African government has gazetted requirements relating to energy efficiency for commercial buildings. It outlines new regulations mandating that all commercial buildings in South Africa have an energy rating. This policy aims to improve energy efficiency across the country and incentivises businesses to adopt sustainable practices. By aligning with these regulations and transitioning to LED lighting, companies can not only ensure compliance but also bolster their reputation as environmentally responsible entities.

The message is clear: the longer businesses wait to upgrade their lighting to LED, the more it will cost them in the future. Delaying this transition can lead to escalating energy costs and maintenance expenses associated with outdated lighting systems. As energy rates continue to rise, the savings potential associated with LEDs becomes increasingly pronounced.

Businesses that implement LED lighting solutions can now benefit from significant operational cost savings and enhanced profitability.

Furthermore, upgrading to LED lighting is often an upfront investment that delivers rapid returns. Government incentives and rebates for energy-efficient upgrades can further ease the financial burden, making this an opportune time for businesses to act.

In conclusion, LED lighting stands at the forefront of a sustainable lighting solution, offering a myriad of environmental benefits, including reduced energy consumption, minimal waste, and compliance with evolving regulations. By embracing this technology, businesses not only contribute positively to the environment but also position themselves for long-term financial savings and success. The future is bright, but only for those who choose to illuminate it wisely with LEDs.

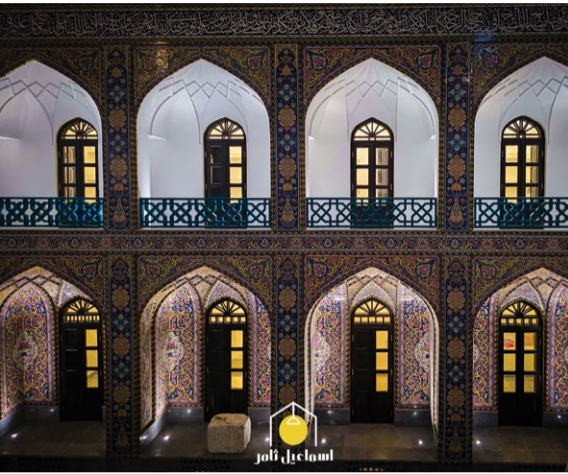
"At Aurora Lighting Africa, we believe by upgrading to LED technology, businesses can dramatically reduce their ecological footprint while also reaping significant cost savings. The longer we wait to embrace this transition, the greater the costs we incur, not just financially, but environmentally. It's time to lead the charge towards a sustainable future." – Scylagh Clunnie, managing director, Aurora Lighting Africa.

Enquiries: info@aurora-africa.com



Lighting Islamic Architecture

By: Ismael Thamer, lighting designer and BHA School of Lighting Advanced Diploma in Illumination Engineering student



When tasked with illuminating the 120-year-old Al-Akhund Middle School in Najaf, Iraq, I faced unique challenges in preserving its Islamic architectural heritage while implementing modern lighting solutions. Drawing from this recent installation, I'll share key strategies for lighting historic structures.

Exploring Islamic architecture

Islamic architecture has a historical extension that Muslims used to create their own identity. This architecture originated in the areas that Muslims reached from the Arabian Peninsula and other areas of East Asia, Turkey, and even North Africa, such as Morocco – plus Andalusia (Spain).

One of the most important models of Islamic architecture is the religious schools. These were distinguished by their unique designs, and we see this through the design of the blocks, where the arches are more receptive to the viewer.

Islamic architecture was also influenced in many areas around the world by the weather, as it often contains open areas (courtyards), and the halls are distributed around the open area, which is an engineering model that allows air and natural light to enter the basements.

Middle Scientific School as a case study

One of the most important models of Islamic architecture is the religious schools, such as the Middle Scientific School (Al-Akhund Middle School in Najaf, Iraq). It is more than 120 years old.

This school is distinguished by its unique design and the open courtyard method. The symmetry of the arches in the entrances to the classrooms has an amazing visual effect that amazes one with the precision and art of mastering this symmetry. Karbala tiles (a material made of cement with water, marble and polishable stones) are used as finishes for the entrances.

Vision in lighting the school

Pendant lanterns were the ideal way to light this type of building at night. I was assigned the task of lighting this edifice, so I decided to make it a prominent edifice that embodies the spirit of architecture and the magic of the effect of the materials used. Since the place currently has a religious heritage character, I used lighting devices in-ground that do not

affect the basic heritage structure of the building.

After analysing the building, I found that the matching arches are the basic architectural feature of the place, so my thoughts turned towards illuminating these entrances and arches as the basic idea for the school. I used recessed lighting devices with an appropriate distribution so as not to affect the entry

and exit of people into the rooms.

Choosing the colour temperature for the lighting of these materials was another challenge. My focus was on illuminating the colours of the Karbala tiles in their true dazzling colours to cheer the soul and achieve the ultimate impression for visitors to the heritage school.

The advantages of LED and modern lighting devices and high-purity lenses

are that they can achieve the desired appropriate lighting intensity and uniform distribution at carefully chosen beam angles to achieve these results.

I am proud of my first heritage project and that I could successfully renew and illuminate the features as a member of a distinguished team.

Enquiries: www.bhaschooloflighting.co.za



EFFICIENT LIGHTING ON AN INDUSTRIAL SCALE

6500K DAYLIGHT

220° BEAM ANGLE

E40 BASE

3 YEAR WARRANTY



Diameter: 189.5mm
Height: 270mm

RLL400

HIGH POWERED LED 120W - 12614 LUMENS



Diameter: 238mm
Height: 282mm

RLL401

HIGH POWERED LED 160W - 16500 LUMENS

Give your facility's lighting an upgrade with our 120W and 160W E40-base LED solutions, each offering a wide 220° illuminating range for maximum coverage. From large-scale warehouses and manufacturing plants to open-concept offices and equipment yards, these high-efficiency options help you streamline operations while cutting costs. Enjoy uniform brightness across every corner, lower your energy bills without skimping on quality, and count on a setup that adapts to any environment. Radiant's RLL400 and RLL401 lamps are designed primarily for indoor use but are also compatible with fixtures rated IP54 and higher. They're best suited to replace traditional high bays (including HID or mercury vapour once the existing control gear is removed and the live and neutral wires are connected directly to the lamp holder). They can also work in classic post-top fixtures of suitable housing size and IP rating.

Head over to www.radiant.co.za for more info and discover how you can transform your facility with powerful, cost-effective LED lighting.

JHB 011 386 0000

CPT 021 521 2500



Thatho Mbhele: Defying the odds at LESCO Manufacturing

In 2022, in partnership with DeafSA, Thatho Mbhele joined LESCO Manufacturing as the company's first deaf line worker. At 34, he is breaking down barriers when it comes to his disability.

DeafSA is a nonprofit that provides South African Sign Language (SASL) interpreting services. Within a short time, Mbhele quickly proved that his limitations were not a barrier to his success, earning the trust of colleagues and supervisors.

"I saw Thatho's potential right away," says

Vincent Chidi, a production supervisor at LESCO. "He is a strong worker, and I helped him become a line leader."

For Mbhele, this role is more than just a job – it's a chance to show that his deafness doesn't limit his potential. He knows how to set up several presses and now manages a production line of up to 16 people, a leadership role he takes on with pride.

But Mbhele's journey hasn't been easy. Born deaf, he was raised in a challenging environment. He lives with his sister and his

father, who suffered a stroke and can no longer speak. His mother passed away some years ago, leaving Mbhele with the responsibility of supporting his family. "Life is hard at home," he says. "Because my father can't speak, there's a lot of pressure to care for my family."

Despite these personal struggles, the job has helped him develop new skills and fuelled his growth in ways he hadn't imagined. "Before I started, my family encouraged me to focus on the job. They said, 'Focus, focus, focus – this is important for your future,'" he recalls. Their support has been key to his determination to succeed.

Chidi is impressed with Mbhele's rapid adaptation to the job's demands. "He's learning



Thatho Mbhele of LESCO Manufacturing.

to operate the press machines and other production equipment. In a short time, he's gained management skills and become a leader on the line. He's an example to everyone here."

Mbhele is paving the way for others to follow and is not about to slow down. Within the next two years, he dreams of becoming a production supervisor like Chidi.

Looking ahead, Chidi is optimistic about Mbhele's growth. "He's on track to take on even more responsibility. In one year, I see him becoming an expert in machine setup of all our product ranges and, eventually, helping other workers develop their skills. He's already proving he's ready for that."

Mbhele's story is about resilience, hard work, and breaking barriers. As he grows at LESCO, there's no telling just how far he will go.

When he's not at work, Mbhele enjoys playing soccer; his position is a defender.

Enquiries: <https://lescosk.com/>

MARCH 2025 FEATURES

- Tools of the trade
- Energy measurement and supply
- Lighting

APRIL 2025 FEATURES

- MCCs and motor protection
- Cables and cable accessories
- Lighting

Editor:
Ilana Koegelenberg
061 049 4164
sparks@crown.co.za

Advertising:
Carin Hannay
072 142 5330
carinh@crown.co.za

Design:
Ano Shumba


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2 Theunis Street
Cnr Sovereign Street
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