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TCI AFRICA LAUNCHES TO SERVICE THE SOUTH AFRICAN LIGHTING INDUSTRY



On 16 May this year, TCI Africa welcomed the South African lighting industry with its official launch event at the symbolic Cradle of Humankind. This choice of location emphasised the company's commitment to connecting local heritage with innovative lighting solutions tailored for our unique market.

Operating in South Africa for over a year, TCI Africa has strategically focused on building reliable local stock and distribution channels to better serve the needs of local lighting manufacturers and suppliers. The launch event was an important opportunity for industry leaders, lighting professionals, and OEM partners to meet the TCI Africa team, as well as representatives from the Italian parent company, TCI Group.

The event offered practical presentations that outlined TCI Africa's clear approach: to be a dedicated component supplier servicing OEM manufacturers rather than competing with lighting fixtures. This straightforward strategy ensures local companies can rely on quality European components while focusing on their own manufacturing strengths.

Gianfranco Librandi, CEO of TCI Group, reinforced the importance of sustainable, dependable partnerships between Europe and South Africa, highlighting the Group's proven track record of delivering robust LED drivers, LED modules, and smart lighting systems globally. His message resonated well with local industry representatives, emphasising the importance of long-term collaboration over short-term gains.

TCI Africa is headquartered in Cape Town, with a warehouse for local stock, and services the industry through its established local distribution network.

The event encouraged open dialogue between TCI Africa's team and local industry professionals, laying the foundation for ongoing cooperation. Informal networking sessions, accompanied by a thoughtfully curated dinner combining Italian and South African culinary traditions, provided further opportunities for productive engagement.

TCI Africa's launch was not about lofty promises; it was about demonstrating commitment to local industry service through tangible actions, reliable service, and quality

product offerings. This clear message of service resonated strongly, indicating a promising future for partnerships across South Africa's lighting sector.

From the TCI team: "We thank everyone who participated for making it such a wonderful event."

Enquiries: a.dalton@tci-africa.co.za

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Energy in 2025: measuring smarter, supplying stronger

As South Africa and the world continue the transition into a smarter, more sustainable energy era, the importance of accurate energy measurement and consistent supply has never been clearer, according to Voltex. In 2025, we're no longer just powering homes – we're energising entire ecosystems of

smart cities, renewable grids, and connected industries. At the centre of it all is the professional armed with the right tools, supported by suppliers who understand the urgency of now.

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Whether you're managing a solar-powered plant or retrofitting an office block with energy-efficient lighting, the tools to measure and interpret energy data are critical. And in a world where every watt counts, accuracy is everything.

Reliable supply, resilient systems

As energy insecurity remains a pressing concern in 2025, the demand for stable, flexible energy systems continues to rise. Professionals in the field are seeking not just products, but solutions – components that integrate, adapt, and last. From cable and wire that can handle modern loads to motor control systems and T&D components that ensure uninterrupted flow, reliability isn't optional – it's the foundation.

Add to that the growing shift towards solar energy and battery storage, and it's clear that electricians and engineers need access to diverse, future-ready stock to meet client needs with confidence.

Tools of the trade: evolved for today's demands

The modern toolkit has changed. 2025's professionals rely on more than just pliers and screwdrivers – they need thermal imagers, clamp meters, digital analysers, and smart testing instruments that deliver real-time diagnostics. Speed, precision, safety, and connectivity are non-negotiable in an industry that's moving faster than ever.

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It's not all bad news



Ilana Koegelenberg

Reading about South Africa's updated youth unemployment numbers is nothing short of depressing. This year, sadly, saw no improvement as the number of young hopefuls finishing school without prospective jobs continues to climb. After working so hard to complete matric or university, too many find themselves becoming yet another statistic

with an uncertain future.

Yet simultaneously, I constantly hear complaints about vocational skills shortages. We simply don't have enough people who can actually do the work. Many are lured by the appeal of university education while looking down on vocational training, only to join the ranks of unemployed, overqualified graduates.

The answer seems obvious: we need to change the image of vocational occupations and encourage more youth programmes in these sectors. Perhaps even bring back vocational schools and introduce technical skills earlier in education. This could address both the skills shortage and the unemployment challenge simultaneously. If only implementation were that straightforward...

That's why it's so heartening to see industries like ours taking matters into their own hands regarding skills and training. While job creation might have stalled at the government level, industries across the board continue working hard to train the next generation of skilled workers, despite limited incentives to do so.

Each time I read about a new training programme or sponsored initiative to upskill youth or other unemployed individuals, I feel proud to be part of this industry. Such stories give me hope that we're not simply heading towards ever-increasing unemployment rates. Although individual programmes may seem too small to make a difference, they have a way of multiplying opportunities – creating a positive butterfly effect.

In this edition of **Sparks**, we feature

several such innovative training initiatives. These include Yellow Door Energy's Lumen30 project, which aims to train 30 qualified youths in solar photovoltaic technology (page 4), and Schneider Electric's local mySchneider Panel Builder Programme, designed to empower local panel builders (page 11).

This edition is packed with our industry's uplifting achievements. From product innovations to new company launches and exciting office relocations – the electrical and lighting industries are certainly not resting on their laurels. Things are happening!

So, what's new? Our cover story features the recent launch of TCI Africa, which aims to service the local lighting industry (pages 1 & 3). SWAN Electric has moved to new offices in Johannesburg (page 3), and BEKA Schröder has supplied an intelligent, energy-efficient streetlighting solution to Zimbali Lakes Resort (page 13).

That's just the tip of the iceberg. ABB has launched a new low-voltage moulded case circuit breaker (page 8), while Comtest introduced a new Fluke clamp meter (page 10). In our Lighting section, we also explore lighting solutions for the local cannabis industry (page 13) and showcase Eurolux's Urban range of spotlights (page 15).

There is clearly no shortage of innovation and vision in this

industry. But what else could we be doing to encourage the next generation to take up the torch and carry on this legacy?

If you have answers to that question, or if you're already implementing solutions, please let me know. I'm always eager to share such stories. There's enough bad news in the world, what are the good news stories?

For now, as always, I hope you enjoy this edition of **Sparks** and that you pass it on to anyone else who might find it useful or interesting.

Happy reading!

Ilana Koegelenberg

sparks@crownc.co.za

How energy storage will make or break SA's renewable transition

Energy storage is no longer an add-on, but the foundation of a reliable, resilient, and renewable energy system. As South Africa accelerates towards a greener future, storage innovation could determine the difference between progress and paralysis, writes Ezzat Sankari, channels business director for Sungrow across the Middle East, Africa, and Central Asia.

South Africa's energy system is at a crossroads, facing a worsening electricity crisis, rising demand, and ambitious decarbonisation goals. While renewable energy is rightly heralded as a key solution, it is often misunderstood as the silver bullet to enable sustainable power generation. In truth, generation alone won't solve the country's energy woes. The real missing link in South Africa's energy puzzle is storage.

Despite steady progress in solar and wind adoption, these clean energy sources are, by nature, intermittent. Solar panels don't generate power at night, and wind turbines are silent on still days. Yet our demand for electricity doesn't follow the weather, but rather daily routines, industrial activity, and seasonal fluctuations. This mismatch between supply and demand is at the heart of South Africa's ongoing energy instability.

Loadshedding is no longer just a technical inconvenience; it's a national threat to productivity, investment, and livelihoods. While adding generation capacity is part of the solution, it is only effective if that energy can be stored and dispatched when needed. Without storage, surplus power generated during peak sunlight hours is wasted, and the grid remains vulnerable to sudden demand spikes or generation failures.

Storage enables 'load-shifting', the ability to absorb excess energy and release it later, during evening peaks or grid outages. This function is not merely a convenience, but a critical buffer for grid reliability, especially as more variable renewables are added to the mix. For communities, businesses, and municipalities alike, storage means fewer disruptions, lower reliance on diesel, and greater autonomy in energy management.

Moreover, South Africa's geography and grid layout present unique challenges. Rural and coastal regions often face infrastructure deficits, harsh environmental conditions, or transmission bottlenecks that make traditional energy solutions difficult to deploy at scale. Storage offers a way to decentralise power, enabling localised microgrids that are more resilient to national grid instability.

To unlock the full potential of renewables, South Africa must prioritise investment in energy storage across all levels – utility, commercial, and residential. But that also requires robust, future-ready technology that is built for local conditions.

This is where Sungrow, a global

leader in renewable energy solutions, can contribute to the conversation. "We've seen firsthand how purpose-built energy storage systems can transform unstable grids into resilient, clean energy ecosystems," says Sankari. "Our technologies are specifically engineered to operate in the demanding South African climate, with protective features that ensure consistent performance even in high heat, humidity, or dust."

Sungrow's latest innovations include DC-coupled hybrid inverters, which seamlessly integrate solar generation with storage, reducing energy loss and increasing self-consumption. Advanced AI-powered energy management systems forecast usage patterns, optimise charging based on grid conditions and tariffs, and reduce operational costs – all critical for both businesses and homes looking to maximise their solar investments.

"South Africa's energy crisis cannot be solved with generation alone," says Sankari. "Without the ability to store and strategically deploy clean energy, even the most ambitious renewable plans will fall short. Storage is the critical enabler that turns potential into performance and instability into resilience."

According to Sankari, the message is clear: energy that isn't stored is energy that's lost. "For South Africa to realise its clean energy ambitions, it must invest not only in generation but in retention, because only then can we move from crisis response to true energy transformation."

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The impact of radial water blocking on medium-voltage XLPE cable systems

By: Donemore Torerwa, GM: Product Development and Applications, Aberdare Cables

Understanding the challenges related to the continued use of paper cables and the need to improve the life of XLPE cables, especially when used in high-water-level areas, Aberdare Cables has extended its range of products to include radially water-blocked medium-voltage cables using aluminium laminate technology. The product is available for sale in Africa and globally as well.

Looking at XLPE

High-performance cross-linked polyethylene (XLPE) is the most common insulation used in medium-voltage (MV) cables between 6.6 kV and 33 kV, primarily due to its impressive mechanical and electrical properties.

XLPE's properties are drastically impacted if exposed to water and moisture, resulting in water trees; it then becomes very important in design to ensure that the cable structure offers water ingress protection to the XLPE insulation.

The life of an XLPE cable is usually estimated to be above 30 years, but once the XLPE material is exposed to water or moisture ingress, the life of the cable is affected. Hence, it becomes essential that cable production processes are well controlled from the start of manufacturing to prevent any moisture or water ingress. (This is why cable users must consider buying their cables from reputable cable manufacturers.)

It is also important to prevent moisture ingress during cable operation by ensuring that the jointing and termination workmanship is up to standard and that the

cable will withstand the conditions under which it is installed.

Specified radial water blocking

SANS 1339 is a compulsory standard in South Africa covering MV cables with voltages rated from 6.6 kV to 33 kV. This standard specifies longitudinal and radial water blocking for MV cables when required by the cable user.

Longitudinal water blocking is the most deployed water blocking method as applied by many cable manufacturers in the local market, mainly because it is relatively easy to implement. Longitudinal water blocking alone, however, may not be enough to offer lasting water blocking capabilities of a cable in some environments, especially in areas with high water levels in the ground. Offering radial water blocking then becomes key to cables to ensure enhanced water blocking capability of MV XLPE cables at both the design and manufacturing level.

Radial water blocked cables are not very common in South Africa for MV cables; they are common for high-voltage (HV) cables of 44 kV-132 kV rated cables using corrugated seamless aluminium (CSA).

How longitudinal water blocking works

Using moisture absorption barriers installed within the structure of the cable along its length, longitudinal water blocking is intended to prevent the water ingress and spread in the areas between cores, around armouring, metallic screens and insulation. Water block yarns and tapes are commonly installed in the

interstices of the multicore cables or around the bedding layers of single-core cables. If exposed to moisture, the yarns will absorb and swell, preventing further ingress of water or moisture inside the cable, hence offering protection.

As per SANS 1339 of 2020, the cable will be type tested for conformance, which becomes vital for the users to ask for these type test reports when purchasing all the cables claimed to have such features.

Radial water blocking technology

Because radial water blocking features are not very common in the industry in South Africa, the SANS 1339 standard does not go into detail in specifying the requirements for radial water blocking.

Radial water blocking technology relies on an impermeable concentric layer around the cable, preventing radial water ingress. Radial water blocking in HV cables is achieved through the CSA structure, which then offers mechanical protection, earthing, screening, and radial water blocking for the cable. For MV cables, the common radial water

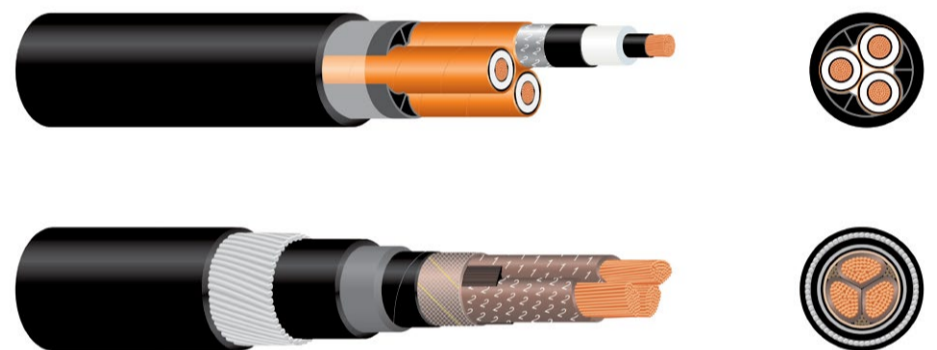
protection material globally includes lead sheathing, aluminium-laminate tape and smooth welded aluminium tape.

Applications in high-moisture environments

The cable that offers both longitudinal and radial water ingress protection has considerable use in areas with high water levels, mostly the coastal areas in South Africa, as well as any wet land. For such applications, the paper cable with lead sheath has always been the best option which is the main reason why most coastal areas still prefer MV paper lead sheathed cables as opposed to XLPE MV cables.

It is important to note that due to the thermal performances of XLPE MV cables, paper MV cables have much lower current or load rating in comparison to XLPE MV cables. Paper MV cables may also introduce environmental issues related to the impregnate oil and lead, hence XLPE is the better way to go especially if it has radial water blocking features.

Enquiries: www.aberdare.co.za



Bringing solar training to 30 youths in South Africa



Yellow Door Energy (YDE), the leading renewable energy independent power producer (IPP) for businesses in the Middle East and Africa, and Actis Acts, a charitable organisation under global sustainable infrastructure investor Actis, have officially launched Project YDE Lumen30, a corporate social responsibility (CSR) initiative in South Africa. YDE Lumen30 is a creative name developed by the Yellow Door Energy team, reflecting the initiative's focus on youth empowerment through skills development and training.

YDE Lumen30 consists of two phases. Phase 1 involves training 30 qualified youths in solar photovoltaic (PV) technology, while Phase 2 provides a solar power plant to a

community centre in Alexandra Township at no cost to the centre. The selection process for the trainees has been rigorous, and training began in April this year. The training project, managed by the Economic Development advisory firm DevRani Consult and implemented by the non-profit Unnati Training Academy, will run for three months at the ENS pro bono office in Alexandra. Afterwards, participants will undergo a comprehensive exam to assess their technical knowledge.

Forbes Padayachee, CEO of Yellow Door Energy South Africa, said, "YDE Lumen30 is our flagship CSR initiative in South Africa, and we are both honoured and humbled to have the opportunity to give back and make

a meaningful impact in communities in the jurisdictions where we operate. This project addresses the unemployment challenge facing youth in Johannesburg and tackles the energy resilience issues affecting South African townships. Today, we are proud to launch Phase 1 of the initiative alongside our esteemed partners."

Ugeshree Thakurpersad, founder and CEO of DevRani Consult, said, "As the project manager for YDE Lumen30, we are delighted to partner with Yellow Door Energy to drive meaningful socio-economic transformation through this project. This initiative is about more than training; it's about building a sustainable future and unlocking opportunities for our youth to shape the energy landscape of tomorrow."

Brian Chinappi, chairman of Actis Acts and head of Real Estate at Actis, said, "At Actis Acts, we're passionate about investing in a brighter, more sustainable future - not just through energy projects, but by empowering people. Partnering with Yellow Door Energy on the YDE Lumen30 initiative is especially exciting because it's about real impact. We're giving 30 young individuals the skills and opportunities to build a future in the

renewable energy sector, helping them take charge of their careers while contributing to the clean energy transition. It's initiatives like these that truly make a difference, and we're proud to be part of it."

Neo Pele, a trainee in the programme, shared his expectations of and excitement about the initiative: "The YDE Lumen30 initiative is helping me connect my engineering background with the energy space. I'm excited to learn, meet people in the industry, and bring those insights to my community to make a real impact."

The project is co-funded by Yellow Door Energy and Actis Acts, a foundation by Actis, which supports charitable activities that create a positive and sustainable impact on communities. Actis is a majority shareholder of Yellow Door Energy, and the project addresses the challenges of youth employment and energy security in South Africa.

At the end of YDE Lumen30, the project will connect the trainees with specialised and experienced mentors from the renewable energy industry.

Enquiries: www.yellowdoorenergy.com



This initiative is about more than training; it's about building a sustainable future and unlocking opportunities for our youth to shape the energy landscape of tomorrow.

- Ugeshree Thakurpersad, DevRani Consult



The one device standing between you and a lawsuit, or a life lost

CBi-electric: low voltage looks at why earth leakage protection is the most critical call you'll make on site.

Earth leakage protection devices (ELPDs) are mandatory in South Africa for a reason. When something goes wrong on site, it's the installer who's held accountable, not the manufacturer, supplier, or wholesaler. Lives, liability, and professional reputations all hang on a single point of failure: the device you choose to install.

"Get it wrong, and you're risking far more than a technical fault," says Dr Andrew Dickson, engineering executive at CBi-electric: low voltage. "You're putting human lives and your career on the line."

What happens when current takes an unintended path

ELPDs monitor current flow in a circuit and trip when they detect even a slight imbalance – the signal that current is leaking to ground instead of returning via the neutral conductor. Sometimes, this is through a person's body. "It doesn't take a large current to do serious harm," warns Dr Dickson. "Currents over 30 milliamps (mA) can be fatal. That's why our devices are designed to trip between 23 and 27 mA. A few milliamps, and a few milliseconds, can make the difference between life and death."

Here's how the human body responds to electrical current:

- **1 mA:** Tingling, but easy to ignore
- **5 mA:** Unpleasant shock
- **10–20 mA:** Muscle control lost, limit of being able to let go
- **30+ mA:** Breathing disrupted; heart rhythm affected
- **50+ mA:** Burns, unconsciousness, or death

This is why the safety threshold is 30 mA, and why devices must be accurate and reliable in tripping below that point.

Compliance isn't a suggestion, it's law

South African law requires that all earth leakage devices meet the National Regulator for Compulsory Specifications' (NRCS) VC 8035 specification, which sets safety and performance standards. "If you install a device that doesn't comply, you carry the legal liability," cautions Dr Dickson.

To ensure compliance and reliability, he recommends:

- Confirming SABS or equivalent certification;
- Checking that the trip level is 30 mA or less; and
- Avoiding unbranded or generic products that may fail testing.



Get it wrong, and you're risking far more than a technical fault. You're putting human lives and your career on the line.

– Dr Andrew Dickson, CBi-electric: low voltage



circuits, or equipment generating unwanted current loss."

He stresses that proper fault-finding, including measuring leakage levels and tracking variation across appliances, is essential. "Ignoring these symptoms could mean missing the early warning signs of system failure or injury risk."

The buck stops with the installer

"You can't outsource responsibility," notes Dr Dickson. "You need to know exactly what you're installing and ensure it meets the legal and technical standards. Certification, compliance, and correct specifications are non-negotiable."

CBi-electric: low voltage manufactures high-quality, NRCS-compliant ELPDs that are tested for local conditions, whether for homes, commercial buildings, or industrial applications. "We build products to protect people and your professional integrity," he concludes.

Enquiries: <https://cbi-lowvoltage.co.za/>

Nuisance tripping shouldn't be ignored

Unexpected trips are often brushed off as a nuisance, but Dr Dickson points out that they could signal bigger issues. "You might be dealing with high cumulative leakage, poor wiring, contaminated terminals, overloaded



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- A life cannot be replaced
- How much is your family worth?



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Cassava and Zindi collaborate to showcase African AI innovation

Cassava Technologies has signed a Memorandum of Understanding (MOU) with Zindi, the largest professional network for data scientists in Africa, to deliver artificial intelligence (AI) solutions and GPU-as-a-Service (GPUaaS) across the African continent.

This partnership represents a significant step in accelerating digital transformation in Africa and will see the two organisations collaborate on several initiatives. These include using Cassava's GPUaaS capabilities for Zindi's AI solution development and identifying opportunities for both organisations to leverage one another's platforms and ecosystems.

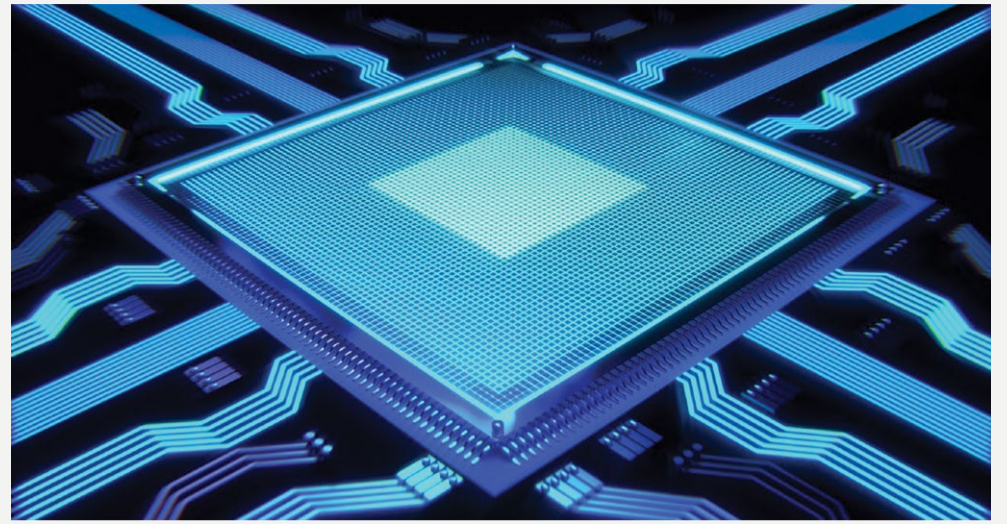
"For Africa's AI ecosystem to grow and thrive, it is essential to provide platforms and resources for the continent's developers and start-ups. Combining our data centres' advanced GPU capabilities with Zindi's innovative data science platform

creates a powerful foundation for digital advancement. Cassava is proud to support local stakeholders as they develop digital solutions to some of Africa's most pressing problems," said Hardy Pemhiwa, president and group CEO of Cassava Technologies.

As Africa's pioneering AI challenge platform, Zindi, collaborates with companies, non-profit organisations, and government institutions to develop, curate, and prepare data-driven challenges. This partnership underscores their mutual commitment to nurturing AI talent and innovation throughout the continent.

"Zindi is thrilled at the opportunity to partner with Cassava Technologies to strengthen African datasets, address local problems with locally-developed solutions, and help more African AI builders access the resources they need to succeed.

Collaborating on the launch of a challenge



specifically aimed at nurturing Africa's AI talent will not only expose entrepreneurs and innovative solutions; it will help build new skills and create employment opportunities," said Zindi CEO and co-founder, Celina Lee.

With the signing of this MOU, Cassava and Zindi are set to make significant inroads in Africa's AI landscape. The partnership

supports Cassava's objective of providing world-class digital solutions and advancing responsible AI adoption, innovation, and growth in Africa. This follows its recent announcement of its plans to build Africa's first AI factory and the 2024 launch of Cassava's AI business.

Enquiries: www.cassavatechnologies.com

Teraco signs wind PPA to power data centres

Teraco has signed a power purchase agreement (PPA) with NOA, a South African-based integrated energy aggregator, to supply wind-powered renewable energy to Teraco's data centres.

Teraco, a digital realty company and provider of interconnection platforms and vendor-neutral colocation data centres, announced late last year that it had commenced construction on its own 120 MW solar photovoltaic (PV) plant in the Free State. It signed this PPA to complement its renewable energy programme with wind power. The agreement provides Teraco and NOA with the flexibility to grow renewable energy offtake as both companies evolve to meet increasing demand.

Wind is a key renewable energy resource for data centres which operate 24/7/365. In South Africa, wind generates power through the night and into the early morning, making it an excellent complementary source of power to solar, which is generated during daylight hours. The combination enables far greater levels of renewable energy coverage.

Bryce Allan, head of sustainability at Teraco, says, "The conclusion of this PPA supports our sustainable growth pathway. We appreciate NOA's unique and collaborative approach in complementing Teraco's renewable energy supply and look forward to a long partnership as we journey towards our 100% renewable energy goal."

Karel Cornelissen, CEO at NOA, says, "NOA is proud to deliver our suite of renewable energy products to support Africa's largest data centre operator's ambitious renewable energy goals. Teraco is an industry leader and continues to set the bar high for renewable energy initiatives across South Africa's data centre industry. By aggregating renewable energy from our fleet of generation facilities and third-party IPPs [independent power producers], we are well-positioned to provide tailored and flexible solutions to help companies, like Teraco, reduce their carbon footprint."

Under the terms of the deal, NOA will wheel renewable energy from various wind projects to Teraco's facilities. The renewable energy wheeled to Teraco's facilities will complement Teraco's solar programme, maximising renewable energy across Teraco's data centres. These projects will ramp up progressively over time with the first power anticipated to be wheeled in 2026.

"This is an exciting time for Teraco as we take another significant step towards meeting our 100% renewable energy ambitions and those of our clients," says Jan Hnizdo, CEO at Teraco. "We're looking forward to these new wind generation facilities coming online and adding much needed new renewable energy production to South Africa's grid."

Enquiries: <https://www.teraco.co.za/>



Vertiv launches liquid cooling services portfolio

Vertiv Liquid Cooling Services has been launched globally. This offering from Vertiv provides customers with the tools to enhance system availability, improve efficiency, and confidently navigate the evolving challenges of advanced liquid cooling systems.

Vertiv has been delivering these services for more than a year to regional early adopters, refining best practices and gaining valuable insights that have now enabled the expansion of its liquid cooling service capabilities on a global scale. This experience brings a mature and proven approach, providing data centre operators worldwide with expert support based on real-world applications and success.

AI workloads continue to reshape the data centre landscape, driving a significant increase in data centre rack densities, with 30 kW racks now becoming the standard and some reaching up to 120 kW or higher. Operators are facing increased heat loads, higher power densities, and the need for liquid cooling solutions

to maintain operational continuity, which is in high demand.

"The increasing reliance on liquid-cooled AI servers necessitates a comprehensive approach to lifecycle management," said Sean Graham, research director of cloud and data centre at IDC. "Given the complexities inherent in these cooling ecosystems, a robust support programme is not merely advisable, but a best practice to ensure both system availability and long-term operational viability."

The Vertiv Liquid Cooling Services offering is focused on providing seamless integration of liquid cooling systems with IT equipment and adjacent infrastructure. It includes expert installation and commissioning, ongoing maintenance with special attention to fluid management, cleanliness, and preventing air from entering the system, key for system reliability. Traditional maintenance practices aren't enough for the complexities of liquid cooling systems supporting critical AI applications. This offering leverages Vertiv's decades

of industry experience and provides best-practices delivery of preventive and condition-based maintenance to provide reliable and efficient system performance and to maximise availability.

Vertiv Liquid Cooling Services include a full range of solutions designed to support AI-driven and high-performance computing environments, providing seamless integration, long-term reliability, and operational continuity. Vertiv's certified technicians and field engineers provide expert support at every stage, confirming that heat rejection systems and cooling loop fluid systems function optimally.

"High-performance computing (HPC) and AI are critical to business innovation and competitive advantage, making reliability and efficiency in supporting critical digital infrastructure more important than ever," said Ryan Jarvis, vice president global services business at Vertiv. "As organisations continue to invest in AI-driven systems, they need robust liquid cooling solutions to protect their investment and to enable long-term performance."

Enquiries: <https://www.vertiv.com/en-emea/>



Switch on style: Vetí 3 and the power of design

In the world of modern interiors, details matter – and in no place is that truer than on the wall. Where once switches and sockets were purely functional afterthoughts, today they are part of the style conversation. With Vetí 3, Major Tech has elevated the humble switch to a design feature in its own right.

Elegant, versatile, and engineered with precision, Vetí 3 Modular brings together aesthetics, safety, and simplicity in one seamless solution. Whether you're a homeowner, interior designer, or electrical contractor, Vetí 3 gives you the tools to tailor your wall-mounted switches, sockets, and controls to perfectly suit your space – with the added convenience of doing it all in real time using the Vetí Studio App.

A new generation of style and safety

The Vetí brand is already known for its distinctive blend of style, elegance, and reliability. With the new Vetí 3 Modular, Major Tech takes that legacy to the next level. This latest range is both International Electrotechnical Commission (IEC) certified and South African National Standards (SANS) compliant, ensuring every piece meets strict local and international standards for safety and performance.

The modular system comes in a range of matt finishes – White, Titanium, Graphite, and Bronze – and features a slimline design that blends effortlessly with modern interiors. With its large toggle switches, Vetí 3 doesn't just look smart, it feels intuitive too. The switches are flat when off and slightly raised when on – a subtle but thoughtful touch that

combines form with function.

Even better, Vetí 3 has reimagined the way wall components are installed and updated. No more replacing entire units to change a colour. With only a screwdriver, covers and switches can be swapped out in seconds, allowing fast, safe customisation on the fly.

Designed for the installer – and the end user

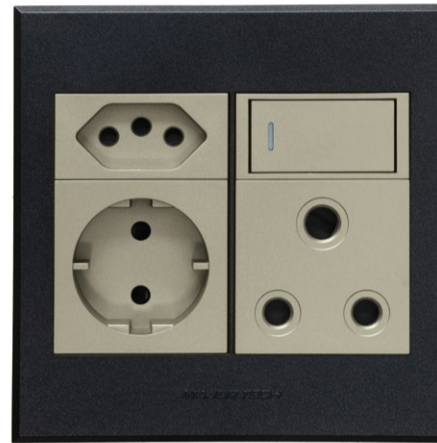
For contractors, the advantages go beyond looks. The range includes everything from 100 x 100 mm and 100 x 50 mm socket options, to a double round 16A (SANS 164-1) with double V-Slim (164-2), dual USB outlets, and even data/communication points – all modular, all stylish, all built with the installer in mind.

Time-saving internal bridging in selected multi-switch units eliminates the need to manually bridge switches, reducing labour and ensuring a safer install. With fewer parts to handle and quicker assembly, electricians can get jobs done faster – without sacrificing quality.

Visualise before you install – Vetí Studio app

The real game-changer, however, is the Vetí Studio app, which puts design and configuration directly in the user's hands. Available at no cost on Android and iOS devices, the app allows anyone – from professional specifiers to homeowners – to build, customise, and visualise their ideal setup in real time.

With a simple walkthrough tutorial, users can select specific switch types, layouts,



colours, and modules. Want to know what it will look like before committing? Just point your phone at the wall and use the Augmented Reality (AR) feature to see your design in place, adjusting as needed until it's perfect.

The app also includes built-in smart prompts. For example, it will highlight any combination that might not follow the rules or meet the required standards, like placing a power socket and a data port in the same

combination 100 x 100 mm or 100 x 50 mm. While the final choice is left to the user, the app acts as a helpful design assistant – making the planning process smarter and safer.

Once the design is finalised, the app automatically generates a bill of quantities, complete with product numbers, prices, and totals. The list can then be shared via email, WhatsApp, or other platforms, allowing installers to quickly quote or place orders with total clarity.

Design freedom meets professional precision

"Vetí 3 isn't just a product – it's a solution for the modern age," said Major Tech. "It simplifies customisation for the homeowner, empowers professionals with tools that streamline the job, and elevates the final look of any space. And with the free Vetí Studio app now part of the package, designing and installing the perfect switch or socket has never been easier – or more stylish.

Enquiries: sales@major-tech.com

The risk of Eskom's solar clampdown

Eskom's latest push to enforce registration for all grid-tied solar systems, even those that do not feed into the grid, has sent shockwaves through South Africa's solar sector. As commercial and industrial businesses increasingly turn to renewables to escape erratic power supply, these new requirements raise serious questions about legality, cost, and Eskom's role in shaping South Africa's energy future. Matthew Cruise, business development executive at Impower, delves deeper into this topic.

Eskom's registration mandate

Eskom recently intensified efforts to ensure all grid-tied solar power systems are registered, regardless of whether they feed electricity back into the grid. The power utility claims this move is primarily about safety, citing the need to maintain network integrity.

Yet, this approach has been met with criticism. Industry experts have raised questions about the legality of some of

Eskom's mandates. Eskom's insistence that solar installations require sign-off by the Engineering Council of South Africa (ECSA) registered personnel has sparked widespread backlash across the solar industry. This requirement substantially increases costs for businesses, with certification alone ranging from R10,000 to R20,000 or more, depending on the system size.

Legal and regulatory clarity

Civil rights group AfriForum has formally challenged Eskom's stance, demanding transparency about the legal grounds on which it enforces these requirements. They argue that Eskom has yet to specify the regulations that empower it to enforce mandatory registration and associated fees, implying that Eskom's current approach might lack legal enforceability.

Indeed, while Eskom has referred broadly to regulations from the National Energy Regulator of South Africa (NERSA), it has not provided specific legislative backing for the compulsory registration of solar installations with a capacity below 100 kW. This ambiguity has sparked uncertainty among businesses investing in renewable energy.

Cost concerns and practical implications

The cost burden of compliance is another significant point of contention. Eskom's registration fees, combined with the necessity of installing smart meters, have been reported to range between R30,000 and R50,000. Industry expert Professor Vally Padayachee has indicated that some

of these figures might be exaggerated, but confirmed that costs remain substantial, especially for larger commercial installations.

This has led to speculation that Eskom's registration strategy could unintentionally drive businesses away from grid connectivity entirely. If faced with high registration and compliance fees, businesses might prefer to reinvest these funds into expanding their solar and battery storage capacities, achieving complete energy independence from Eskom.

Eskom vs municipalities

A further complication lies in the inconsistent approaches between Eskom and municipal electricity suppliers. While Eskom is enforcing strict registration requirements and high compliance costs, many municipalities have opted for more pragmatic, business-friendly policies, often waiving hefty fees and reducing red tape.

This policy fragmentation is not just confusing – it's potentially damaging. A business installing solar in one part of Sandton (served by Eskom) could face R50,000 in compliance costs, while a neighbouring business down the road (served by City Power) might pay nothing at all. The result is a lopsided playing field that deters investment in Eskom areas, distorts competition, and undermines national renewable energy efforts.

Without a unified national framework, South Africa risks creating a patchwork energy economy – where access to clean, affordable power depends not on national strategy, but on municipal boundaries.

The role of professional solar installers

Amidst these regulatory uncertainties, working with experienced providers (like Impower) is no longer optional – it's essential. These kinds of companies manage the red tape so clients can focus on what really matters: energy security and ROI. They handle all aspects of solar installation, including navigating Eskom's complex registration process. By entrusting solar projects to expert installers, businesses can ensure compliance with all existing requirements, streamline processes, and mitigate risk.

Eskom's current solar registration policy is not only legally ambiguous and financially burdensome – it risks undermining the very shift to renewable energy that South Africa so urgently needs. If businesses are penalised for investing in cleaner, more reliable energy solutions, the long-term effect will be reduced confidence, stalled projects, and greater energy insecurity.

To unlock the full potential of solar, clarity, consistency, and collaboration are needed. Eskom must urgently provide a transparent legal framework for its registration requirements and revisit the cost implications for businesses. Aligning with national energy goals means making it easier, not harder, for companies to embrace renewables.

In the meantime, businesses would be wise to partner with experienced solar providers who understand the complexities of this evolving landscape. With the right support, South Africa's energy transition can still be bold, inclusive, and unstoppable.

Enquiries: <https://impower.solar/>



ABB unveils latest innovation for energy efficiency and sustainability

At the Enlit Africa 2025 event last month, ABB showcased various energy-efficient innovations, including its advanced low-voltage offering – the Tmax XT moulded case circuit breaker.

Medium-voltage solutions

Sensor and digital technologies used in conjunction with ABB's switchgear assist its customers' operations to run more efficiently, thereby reducing their carbon footprint, explains Egon Worthmann, business manager – commercial and operations in the Distribution Solutions Business at ABB. This enables African customers, in particular, to be less reliant on coal-fired power stations.

"ABB has long championed energy efficiency and sustainable operations. We have invested a huge portion of our revenue into research and development," comments Worthmann. At the Enlit event, the technology leader presented its digital substation architectures with CPC/VPAC (SSC600) to enable centralised protection and control.

"We are also using the opportunity to showcase and present our medium voltage (MV) secondary switchgear, which is SF₆ free, to assist our customers achieve their sustainability goals," adds Worthmann.

ABB's SafePlus Air 24 kV is an innovative, eco-efficient medium-voltage gas-insulated switchgear (GIS) that eliminates the use of sulphur hexafluoride (SF₆), a potent greenhouse gas. Instead, it utilises dry air as the insulation medium, offering a sustainable alternative for secondary distribution networks.

By replacing SF₆ with dry air, SafePlus Air significantly reduces environmental impact. Dry air has a Global Warming Potential (GWP) of zero, compared to a GWP of 25,200 for SF₆. The switchgear complies with International Electrotechnical Commission (IEC) standards and the EU F-gas regulation (EU) 2024/573, aligning



Our goal is not only limited to the sustainable production of circuit breakers, but also to ensure that the end users of our products in Africa get access to technologies that help reduce energy consumption.

- Veron Maharaj, ABB

with global efforts to phase out SF₆ in electrical equipment.

Low-voltage solutions

Building on the sustainable innovations demonstrated in its MV portfolio, ABB is also advancing low-voltage (LV) solutions with the same focus on energy efficiency and environmental responsibility. This highlights ABB's holistic approach to reducing emissions and improving operational efficiency across the power distribution value chain.

At Enlit Africa, ABB spotlighted the Tmax XT moulded case circuit breaker (MCCB), designed to complement MV innovations like SafePlus Air in achieving customers' broader sustainability goals. The Tmax XT MCCBs feature a range of integrated technologies that contribute meaningfully to energy efficiency and environmental responsibility.

Its features include the Ekip power controller, which facilitates dynamic load management and peak shaving. This capability can reduce energy consumption by up to 20%, helping users avoid penalties for surpassing contracted limits and managing peak demand more cost-effectively. The Tmax XT also delivers high-precision metering with 1% energy measurement accuracy, enabling detailed monitoring and optimisation of energy use.

Through ABB Ability connectivity, the MCCBs allow for real-time data analysis and remote energy management via the cloud. Their Ekip Touch trip units support comprehensive power quality assessments, including voltage, energy, power and harmonics, allowing for more proactive maintenance and system optimisation.

In line with global green building

initiatives, the Tmax XT supports compliance with environmental certification standards such as Green Mark Platinum, thanks to its precise energy monitoring and reporting capabilities. Its modular and upgradeable design ensures that customers can easily enhance system functionality without complete hardware replacement, reducing electronic waste and lowering lifecycle environmental impact.

In addition, safety and reliability have been enhanced with features such as arc fault protection and adaptive protections, which reduce the risk of system failures and maintenance interventions, further contributing to operational sustainability.

"ABB has been driving sustainability across the entire value chain of its circuit breaker product line. Our goal is not only limited to the sustainable production of circuit breakers, but also to ensure that the end users of our products in Africa get access to technologies that help reduce energy consumption," explains Veron Maharaj, product marketing specialist in the Smart Buildings Division at ABB.

He adds that circuit breakers, once used purely as protective devices, have now evolved into multifunctional tools thanks to ABB's innovation. The Tmax XT MCCBs have been engineered to reduce power losses over their operational lifespan, lowering the total cost of ownership. With integrated digital communication across eight industrial network protocols, the devices offer seamless data sharing and control within complex electrical systems.

Enlit Africa 2025

ABB exhibited at Enlit Africa 2025 from 20 to 22 May at the Cape Town International Convention Centre. The event connected energy industry professionals and organisations to information and each other in a carefully curated live and online environment. It featured over 200 speakers and a comprehensive programme to empower businesses to implement integrated energy and water strategies.

Enquiries: www.abb.co.za

Trinasolar develops world's first 800 W+ tandem module

Trinasolar has developed the world's first industrial-standard solar PV module delivering over 800 W of maximum power. The 3.1 m² module, produced with 210 mm x 105 mm perovskite/silicon tandem solar cells, has achieved peak power output of 808 W, certified by the global testing, inspection and certifying body TÜV SÜD.

"This is a monumental breakthrough for perovskite/silicon tandem solar modules and a key milestone in PV technology," said Gao Jifan, chairman and CEO of Trinasolar.

"The successful development of the world's first 808 W perovskite/silicon tandem solar module with a 210 mm industrial-standard size is a significant step toward the industrialisation of tandem modules. This achievement also reinforces Trinasolar's leadership in PV innovation."

As conventional silicon-based solar cell efficiency nears its theoretical limit, high-efficiency tandem cells have attracted increasing attention. Perovskite tandem technology has the potential to exceed these limitations, with theoretical efficiencies reaching up to 43%. As a transformative solution for next-generation solar energy, perovskite/silicon tandem technology is

poised to become the new industry standard, signalling a historic shift from silicon-based solar cells to tandem solar cells and ushering in a new era of sustainable development.

Trinasolar invests substantially in research and development, and over ten years, has been a pioneer in perovskite tandem cell technology. In collaboration with universities, including Nanjing University, Jiangsu Province, and the Chinese Academy of Sciences, the company has led numerous national research projects in this domain. The company has filed 331 patents related to tandem technology and has significantly improved conversion efficiency through advances in perovskite bulk doping, interface engineering and composite layer design. This work has laid the foundation for the industrialisation of perovskite/silicon tandem modules.

Trinasolar, committed to its mission of "Solar Energy for All", will continue to drive energy transition through technological innovation, contributing to a more sustainable and net-zero future, the company said.

Enquiries: www.trinasolar.com



This is a monumental breakthrough for perovskite/silicon tandem solar modules and a key milestone in PV technology," said Gao Jifan, chairman and CEO of Trinasolar.

- Gao Jifan, Trinasolar



ACTOM unveils localised inverter-integrated transformer solution

ACTOM, South Africa's largest manufacturer, repairer, and distributor of electro-mechanical equipment, debuted a breakthrough in renewable energy integration at the recent Enlit Africa 2025 event, with its localised inverter-integrated transformer.

Developed in strategic collaboration with global inverter leader Sungrow, the solution is a fully integrated, factory-tested solution designed to meet the growing demand for utility-scale solar photovoltaic (PV) projects. It combines a transformer, inverter, Ring Main Unit (RMU), and LV combiner box into a single, skid-based, plug-and-play system. This not

only reduces on-site complexity but also significantly cuts installation time, project risk, and lifecycle costs.

"This is more than a product launch, it's a step-change in how we localise global innovation to empower Africa's energy future," says Lee Mbenge, divisional CEO of ACTOM Distribution Transformers. "By bringing together international technology with local manufacturing, we are accelerating clean energy adoption while building South African skills and industrial capacity."

A proudly South African solution
ACTOM's partnership with Sungrow

brings world-class inverter technology, complemented by locally designed and assembled components. This integrated approach leverages ACTOM's in-house manufacturing expertise, ensuring seamless production, rigorous quality standards, and dedicated after-sales support tailored to African market needs.

"ACTOM's strength lies in our end-to-end local capabilities," says Mbenge. "Apart from the inverter, every element is produced within our business units, allowing us to deliver efficient, high-quality solutions that are suited to the African context."

Supporting solar's rapid rise

With solar PV now the dominant focus of public and private energy investment across the continent, this launch couldn't come at a better time. The integrated solution directly supports the development of solar farms, particularly by Engineering, Procurement and Construction (EPC) contractors who benefit from pre-tested, factory-assembled systems that minimise on-site challenges and accelerate project commissioning.

"By delivering a fully assembled and factory-tested system, we eliminate the complexity of on-site integration," Mbenge explains. "For EPCs, that means faster

commissioning, improved quality control, and fewer delays."

Innovation that builds local capacity

The partnership with Sungrow brings global technological expertise into the country while facilitating local skills development and job creation. ACTOM's team is actively building technical capacity around installation, support, and long-term maintenance to create a foundation for future innovation.

"This isn't just about this one project. It's about laying the groundwork for future self-reliance," says Mbenge. "We're growing the skills base, hiring more talent, and showing that South Africa can lead in delivering world-class clean energy solutions."

Future-focused and scalable

While initially developed for solar farms, the inverter-integrated transformer is equally suited to broader energy applications such as Battery Energy Storage Systems (BESS), where it can help stabilise grids, support off-grid setups, and address generation shortfalls during peak demand or load shedding.

"This technology offers a scalable pathway to expand Africa's renewable energy capacity while reducing our carbon footprint," Mbenge concludes. "It's a practical solution with the potential to reshape how we power the continent."

Enquiries: www.actom.co.za



Seven tips to ensure backup batteries work when needed

With the recent return to loadshedding, accompanied by the almost weekly prolonged power cuts across many municipalities, homes and businesses are often left scratching their heads as to why their power backup is not working. Lance Dickerson, managing director at Revov, explores how to maximise the benefits of backup batteries.

During the height of the loadshedding crisis, there was a mad rush to invest in solar and uninterrupted power backup solutions. Payments were made, installations were completed, and households and businesses believed they were protected against unpredictable and unreliable power supply.

Fast forward to 2025. Some provinces are enduring uncharacteristically wet and overcast conditions for this time of the year. It's not uncommon to overhear the following complaint, or versions of it: "Why does the power always have to go out when it is overcast?"

Of course, we all know what this means. It means that the person making the comment had relied on their solar installation, complete with its battery backup, to protect them against being powerless. They expected the system to

last. This is not an absurd expectation when considering that many of these systems are only a year or two old.

The solar panels should be generating power when the sun is shining, and the batteries should be storing that power that is not used. When things don't work as they should, you get two scenarios: one where there is support, and the other where you are left in the dark for inexplicably long periods of time.

The same can be said for home uninterruptible power supply (UPS) systems, whether these are properly installed automatic systems or plug-and-play variations. The first consideration is safety – electricity is dangerous when things are done incorrectly – and the second is that poorly configured setups simply do not prolong the life of batteries; they shorten them. Similarly, poor advice and no service mean many people are left with something akin to useless decor rather than a backup system.

What, then, should people know about prolonging the life of their power backup systems? There are a few non-negotiables if you want to ensure your system performs as intended when you need it to.

Always work with reputable suppliers and installers

When it comes to battery brands, look for those that have withstood the test of time and offer full local support in case something goes wrong. Any brand that has been around for less than three years arrived during the peak of loadshedding and is likely not in the business for the long haul. Additionally, consider a local geographical footprint to ensure prompt support.

It's all in the chemistry

By now, most people should have a clear understanding that lithium-iron-phosphate (LiFePO4) batteries are superior to the less expensive lead-acid and other lithium-ion chemistry batteries. What many people may not know is that 2nd LiFe lithium iron phosphate batteries come with an added advantage. Because the cells are repurposed from electric vehicle batteries, they have had to pass far more stringent performance and safety tests than batteries made exclusively for storage. In harsh African conditions, this is a compelling advantage.

Ensure battery charging is optimal

Avoid fast charging whenever possible to prolong a battery's life. Secondly, avoid allowing a battery to drain completely. Even though it's lead acid, think about the time your car's battery drained completely – it was never the same again. The optimal state of charge for batteries is between 20% and 80%, but a full charge to 100% regularly is crucial to maintain maximum capacity and correct state of charge parameters. This is how to prolong battery life and enjoy the best performance.

Batteries perform best at room temperature

Extreme hot or cold can damage battery

cells and reduce their lifespan, which means the ideal battery location is an enclosed, cool space. However, this is not always possible, which is why the harder, proven resilience of cells in 2nd LiFe batteries, which have endured extremely hot temperatures and rapid charge and discharge rates in their life in an electric vehicle, is often preferred.

Long-term storage requires some preparation

If you are going to store batteries for a long time, there is a procedure you need to follow to ensure the best health for your batteries. Charge the battery to 50% and then store it. After six months, run your battery through one full cycle, then recharge to 50% and store it again.

Avoid battery overuse

Ensure that you have the correct numbers and configurations of batteries for your demand. Do not overload your system, and whenever possible, prioritise essential loads. The best way to ensure this is done correctly is to work with approved installers who have the support of local battery supply teams. Always listen to, and never ignore, system alarms and warnings.

A little exercise is needed

Your own body operates better when it is exercised, and so do batteries. Discharge and charge your system by 25% every seven days to prevent long-term degradation. For UPS systems, ensure they remain plugged into the power source to maintain optimal battery charge and protect against unexpected power outages. Avoid micro-cycling, a situation where the battery is discharged by less than 5% and recharged multiple times per day.

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





The perfect connection: why Cembre tools and lugs are the preferred choice for South African contractors

In electrical contracting, the right tools are more than just equipment, they are the key to working smarter, faster, and safer. With tight deadlines, shrinking margins, and increasing demands for quality, South African contractors need tools that boost productivity without compromising reliability or safety. That's where Cembre comes in.

Available through ElectroMechanica, Cembre's cutting-edge range of cutting, crimping, punching, printing tools, and lugs is designed to help you deliver top results every time. Whether in the workshop or on-site, Cembre solutions are built to perform.

Tools built for South African job sites

For over 50 years, Cembre, an Italian leader renowned in Europe for precision engineering and durable tools, has earned a trusted reputation. Now, South African contractors can benefit from the same reliability.

Cembre's tools and components are engineered with ergonomic design, long-term durability, and precision operation, perfect for the demanding conditions of local projects.

Here's how Cembre keeps users productive and protected:

1. Crimping done right, every time

A failed crimp doesn't just slow you down, it creates risks you can't afford. Cembre's hydraulic and battery-operated crimpers are engineered for precision and repeatability, even in demanding environments. With compact designs and optional rotating heads, they help installers achieve reliable results whether on the bench or in space-constrained panels.

2. Heavy-duty cutting tools

Clean, fast cable cutting is essential to save time and avoid costly errors. Cembre's hydraulic cutting tools are designed for copper and aluminium cables, ensuring smooth cuts, minimal strand loss, and perfect terminal fits. The result? Faster terminations and fewer reworks on-site.

3. Effortless panel punching

On-site panel modifications don't have to be a hassle. Cembre's battery-operated punching

tools feature rotating heads and pre-sized dies, making it easy to punch accurate holes with minimal effort. Less strain, more precision, that's the Cembre way.

4. Labelling that stays put

Clear, durable labels are critical for smooth commissioning and maintenance. Cembre's MG4 thermal transfer printer produces smudge-proof labels for cables, terminals, and distribution boards. It's fast, reliable, and eliminates delays caused by unclear labelling.

5. Lugs that complete the system

Under-crimped or incorrectly installed lugs are a common source of electrical failure, often leading to localised heating or "hot spots" that compromise both safety and system reliability. Cembre offers a fully matched system of crimp lugs, tools, and dies, ensuring every connection is both electrically and mechanically sound.

The A-M range of copper tube lugs is annealed to provide optimal ductility, a key property for secure and consistent deformation during crimping. Each lug is

also stamped with a die reference, clearly indicating the correct tool and die pairing for that specific size and conductor type. This not only simplifies installation but adds a layer of built-in quality control on-site.

By using a matched system from a single manufacturer, contractors eliminate uncertainty and the risks that come with it.

Backed by ElectroMechanica's local support

Cembre tools and accessories are available across South Africa through ElectroMechanica, offering full-service support, training, and a wide range of stock. Whether you're upgrading your tools, streamlining your panel-building process, or ensuring safe, efficient cable terminations, Cembre provides the consistency and quality you need – backed by a trusted local distributor.



Enquiries: www.em.co.za

How cable management enhances workplace safety and efficiency

In today's technology-driven workspaces, ranging from bustling offices to high-performance industrial plants, cable management is no longer optional; it's essential. Poorly managed cables can create safety hazards, reduce operational efficiency, and lead to costly downtime. Effective cable management, on the other hand, ensures a safer, cleaner, and more productive environment.

Three-D Agencies, a trusted supplier of world-class cable accessories and protection solutions in South Africa, offers a comprehensive range of cable management products designed to meet the demands of modern work

environments across industries.

Safer workspaces through smart cable routing

Loose or exposed cables on the floor, hanging from machinery, or running across walkways are among the leading causes of workplace trips and falls. In high-traffic environments, such as factories, warehouses, and even offices, these risks can lead to serious injuries and legal consequences.

Solutions such as cable trays, conduits, trunking, and floor cable protectors, readily available through Three-D Agencies, help route and secure cables out of harm's way.

These systems not only reduce physical hazards but also protect cables from abrasion, moisture, and mechanical damage, helping to prevent short circuits and equipment failure.

Streamlined operations and reduced downtime

Proper cable management doesn't just protect people; it also saves time and money. When cables are neatly routed, clearly labelled, and securely fastened, technicians can easily identify and access the correct lines during maintenance or upgrades.

Three-D Agencies supplies labelling kits, patch panels, cable ties, and other accessories that support organised, professional installations. These tools help reduce diagnostic errors, speed up repairs, and allow for seamless scalability as systems evolve.



Fire prevention and compliance with safety standards

Another vital reason for proper cable management is fire prevention. When cables are bundled tightly without ventilation or when damaged insulation goes unnoticed, the risk of overheating and sparking increases. In industrial settings where heavy machinery draws a lot of power, this can be particularly dangerous.

Using fire-resistant conduits and spacing systems ensures that cables are not overloaded and have enough ventilation. Three-D Agencies provides fire-rated cable ducts and protective housing designed to reduce these risks. These products help keep workplaces safer and protect valuable equipment from heat damage.

Furthermore, good cable management supports compliance with national safety standards, which require that electrical systems be installed and maintained with care. By following recommended practices and using certified cable protection products, businesses avoid penalties and ensure a safer work environment for everyone.

Simplified troubleshooting with clear cable identification

Labelling and identifying cables may seem like a small task, but it can make a significant difference. When cables are clearly marked with labels or colour codes, it becomes much easier to perform maintenance or track down problems. This is especially important in settings where many cables are routed through the same space, such as server rooms, control

panels, or automated machinery.

Three-D Agencies supplies various cable identification tools, including heat-shrink labels, markers, and colour-coded ties. These simple tools help reduce confusion, avoid mistakes, and ensure that systems run smoothly, even during upgrades or repairs.

Well-labelled cables also support staff training and handovers. When systems are clearly marked, new team members can understand layouts more quickly and work safely without needing constant supervision.

A long-term investment in productivity and safety

Effective cable management is a smart investment in the longevity, performance, and safety of any business environment. It prevents workplace injuries, protects expensive equipment, supports maintenance efforts, and ensures regulatory compliance.

With over 45 years of industry experience, Three-D Agencies is at the forefront of providing high-quality cable protection solutions to industries across South Africa. Their extensive product range and commitment to quality make them the go-to partner for businesses looking to create safer, more efficient, and future-ready workspaces.

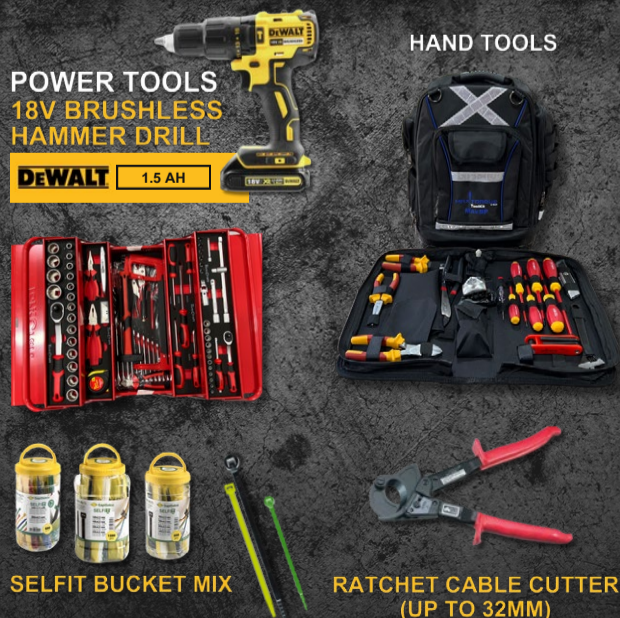
Invest in a smarter, safer workspace

Partner with Three-D Agencies today and discover the difference professional cable management can make.

Enquiries: <https://www.three-d.co.za/>

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Panel Builder Programme empowers local builders for growth

The continuing success of the mySchneider Panel Builder Programme in South Africa reflects the company's firm commitment to empowering local panel builders. By simplifying operations, fostering growth, and embracing innovation, the programme helps panel builders remain competitive in an ever-evolving market.

The programme is a global initiative launched by Schneider Electric in South Africa in 2021. It is an interactive and intuitive platform that provides panel builders with certifications and specialised training, tailored to the industry segments they specialise in, ensuring relevance and value.

Empowering local partners

"Our primary goal is to equip panel builders with the right competencies and expertise to position themselves as specialised partners in their target markets. This helps them stay top-of-mind with end-users," says Patsy Mboumba, channel marketing specialist at Schneider Electric South Africa.

She explains that the overall objective of the Panel Builder Programme is not just to grow Schneider Electric's business, but also to assist the panel builders to grow their businesses by becoming specialised, competitive partners.

She notes that the programme has been recognised globally with a five-star rating for partner success, which illustrates that it is working well and achieving its goals of helping to enrich Schneider Electric's partners.

Digitisation and innovation

Mboumba adds that the digitisation aspect of the mySchneider Panel Builder Programme is designed to support panel builders to become more than just hardware providers, but also data and analytics partners for their customers.

By leveraging connected solutions, panel builders can integrate panel data with software to deliver actionable insights to their customers.

"This ability to transform raw data into valuable insights allows panel builders to offer a comprehensive value proposition," says Mboumba.

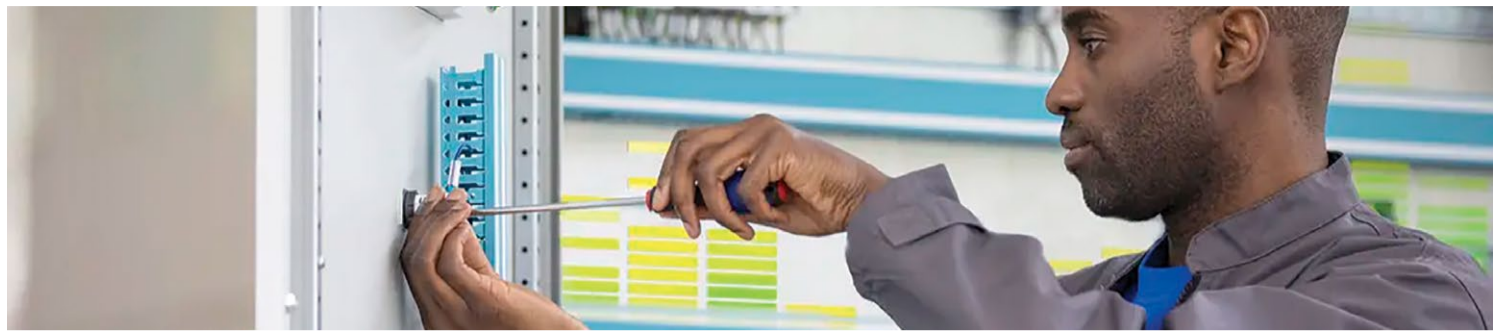
Expanding services

In addition to the focus on digitisation, Schneider Electric is also expanding its Panel Builder Programme to include a services component. This will see the introduction of the 'Power Upgrade' badge to the programme, which will enable panel builder partners to enter the services business.

"This services aspect goes beyond merely building the panels and includes maintenance and ongoing services for the units as well. By adding this service component, panel builders can position themselves as full-service providers," says Mboumba.

"Since the launch of the Panel Builder Programme in South Africa, it has grown significantly, and we currently have more than 100 panel builders participating in this initiative. The introduction of the service component is yet another key part of the programme's evolution," Mboumba concludes.

Enquiries: <https://www.se.com/za/en/>



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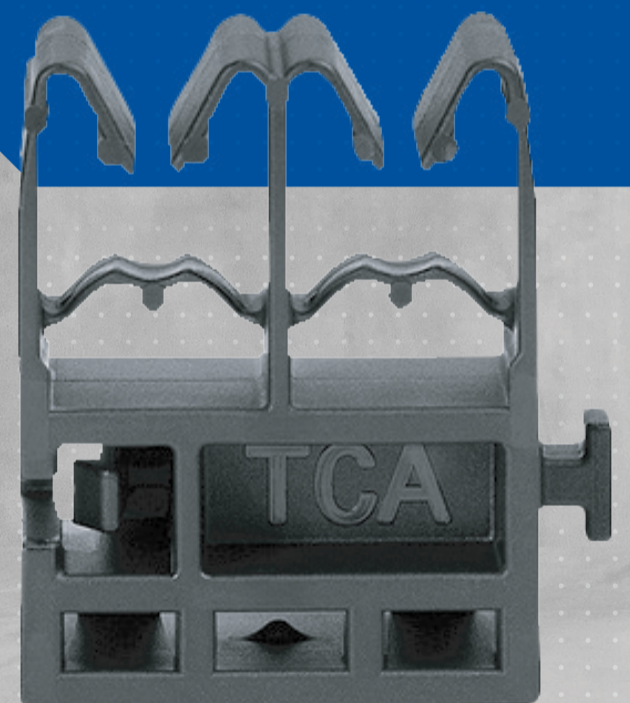
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Say goodbye to cable hassles and hello to efficiency with **QWICGRIP**



Smarter energy management with Aurora Lighting Africa: maximising LED luminaire efficiency using microwave sensors

As energy prices soar and sustainability becomes a top priority, businesses across Africa are looking for smart ways to cut operating costs. Aurora Lighting Africa is answering that call with high-performance LED luminaires, including LED linears, highbays, and battens, that are even more efficient when integrated with microwave sensors for occupancy and dimming control.

Intelligent occupancy control: savings without compromise

Microwave sensors detect motion using high-frequency waves, enabling lights to turn on or brighten only when needed. These sensors offer higher sensitivity than traditional Passive Infrared (PIR) sensors, detecting even minor movements in large, open, or enclosed areas. When installed with Aurora's LED luminaires, this creates an automated, low-maintenance lighting system that can reduce energy consumption by up to 80%, especially in places like warehouses, stairwells, and carparks.

For example, the Aurora Cosmos+ AA-HBB170 highbay supports sensor integration, enabling dimming down to 10% or complete switch-off during inactivity. This significantly

cuts electricity use while ensuring instant full brightness when movement is detected.

Dimming: adaptive light for smarter energy use

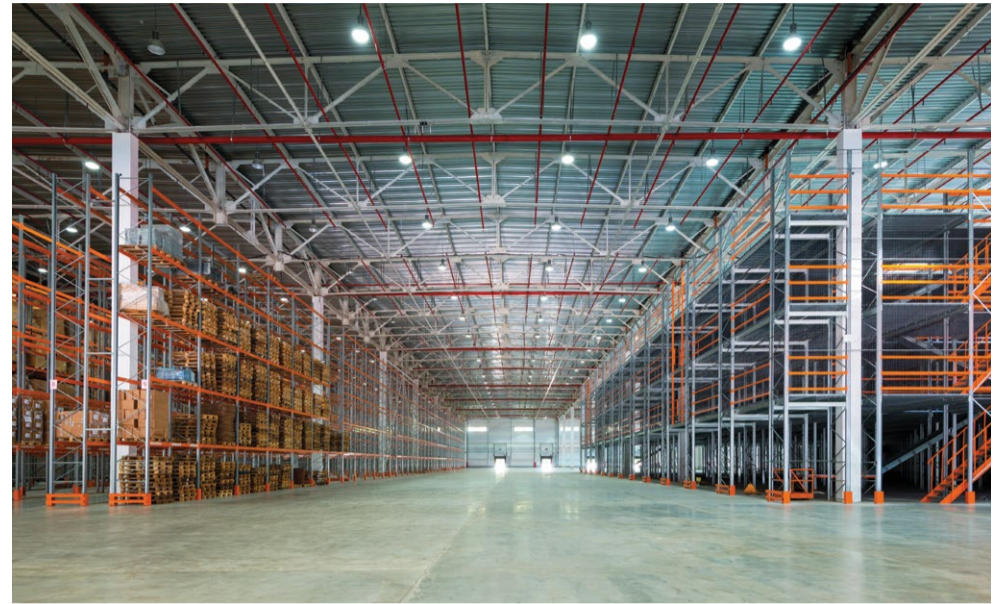
Aurora's LinearPac+ anti-corrosives are ideal for indoor spaces such as carparks, corridors, utility rooms, and storage areas where occupancy is sporadic. With built-in microwave sensors that adjust output based on real-time occupancy and daylight levels, it maximises both energy efficiency and user comfort.

Reduced energy use also prolongs LED and driver lifespan, meaning lower maintenance costs and less frequent replacements.

Small investment, big return

Adding microwave sensors increases the upfront cost of a luminaire by just 5-10%, yet the impact on energy savings and maintenance reduction is substantial. Aurora's Cosmos+ highbay and LinearPac+ anti-corrosive are especially effective in commercial and industrial spaces where lighting is often left running unnecessarily.

Beyond financial savings, these systems help facilities align with Environmental, Social, and Governance (ESG) goals, reduce



emissions, and future-proof their operations.

Efficiency that pays for itself

Aurora Lighting Africa's sensor-integrated LED solutions offer a compelling value proposition: lower electricity bills, fast payback, and intelligent control with minimal capital outlay. For facility managers, developers, and contractors seeking a smart upgrade, the message is clear: lighting should work only when it's needed, and Aurora makes that possible.

Scylagh Clunnie, managing director of Aurora Lighting Africa, puts it succinctly: "We design our solutions to deliver real, measurable savings. Integrating microwave sensors into our high-efficiency luminaires is one of the smartest, lowest-cost investments a facility can make. The result is not just lower energy bills – it's a more intelligent, sustainable way of lighting the spaces where people work and live."

Enquiries: info@aurora-africa.com

Understanding hazardous lighting

Lighting plays a crucial role in safety and productivity across various industries, but it becomes a matter of life and death in hazardous environments, explains the Illumination Engineering Society of South Africa (IESSA).

Hazardous lighting refers to illumination systems designed to operate safely in areas where explosive gases, dust, or vapours may be present. Ensuring proper lighting solutions in these environments is essential for explosion prevention, worker safety, and regulatory compliance.

What makes an area hazardous?

Hazardous locations are defined as areas where flammable substances, such as gases, vapours, or combustible dust, exist in sufficient quantities to create an explosion risk. Industries such as mining, oil and gas, chemical manufacturing, and grain processing commonly encounter these risks.

In these environments, the risk of explosions is a constant and significant concern. Explosion-proof lighting emerges as a vital solution here, designed to prevent ignition and ensure safety.

Explosion prevention and protection measures

To mitigate the risks associated with hazardous environments, specialised lighting systems are employed. These include:

- **Explosion-proof lighting:** Designed to contain sparks or flames within the fixture, preventing ignition of surrounding gases or dust.
- **Intrinsically safe lighting:** Operates at low energy levels to prevent sparks or high temperatures from causing ignition.
- **Ingress protection (IP) ratings:** Ensures fixtures are sealed against dust and moisture, reducing the likelihood of electrical malfunctions.

- **Zoning classifications:** Hazardous areas are classified into zones (Zone 0, 1, 2 for gases and Zone 20, 21, 22 for dust) based on the frequency and duration of hazardous substances' presence. Selecting lighting solutions appropriate for these zones is crucial for safety.

Safety concepts in hazardous lighting

Beyond explosion-proof designs, the following safety principles are key to hazardous lighting applications:

- **Temperature classification:** Ensuring fixtures operate within a safe temperature range to avoid igniting surrounding materials.
- **Material durability:** Utilising corrosion-resistant and impact-resistant materials to withstand harsh environmental conditions.
- **Emergency lighting:** Providing backup illumination in case of power failure to maintain safe exit routes.

Benefits of enhancing safety with explosion-proof lighting

Incorporating explosion-proof lighting into safety strategies not only protects workers and assets but also enhances the overall operational resilience of an organisation. By investing in high-quality, compliant lighting solutions and adhering to best practices, companies can create safer, more efficient, and more productive work environments. The peace of mind that comes with knowing that safety measures are in place to prevent catastrophic incidents is invaluable, making explosion-proof lighting an essential component of any comprehensive safety strategy in hazardous industries.

Stay ahead with IESSA's online hazardous lighting course

Understanding and implementing safe hazardous lighting solutions requires specialised knowledge and expertise. To help lighting professionals stay informed, IESSA offers an Online Hazardous Lighting Course designed to provide in-depth insights into explosion prevention, lighting classifications, and compliance with safety regulations.

The course shares:

- Expert-led insights into hazardous lighting safety;
- Understanding of explosion-proof and intrinsically safe lighting systems;
- Knowledge of South African and international safety standards; and
- Practical applications to improve workplace safety.

Enquiries: www.iessa.org.za





Intelligent streetlighting for Zimbali Lakes Resort



BEKA Schröder has supplied an intelligent, energy-efficient streetlighting solution to Zimbali Lakes Resort in KwaZulu-Natal, South Africa.

Zimbali Lakes Resort is a premier luxury residential and resort development located near Ballito – an affluent coastal town located about 40 kilometres north of Durban. Spanning approximately 300 hectares, the estate harmoniously integrates modern living with the region's natural beauty, offering residents a wide array of amenities and lifestyle options.

The Zimbali Lakes development has been in progress for over 15 years and is now gaining momentum, reflecting a strong demand for luxury living on South Africa's North Coast. Overall, Zimbali Lakes Resort represents a blend of luxury, sustainability,

and modern convenience, making it a sought-after destination for discerning homeowners and investors alike.

BEKA Schröder has provided an intelligent LED streetlighting solution for the resort, consisting of the South African-designed and manufactured LEDLUME XP 2 streetlight with Optidim functionality, pre-programmed to dim to 50% light output at night. The installation is complemented by BEKA Schröder's locally manufactured non-corrosive glass fibre reinforced polyester (GRP) poles, designed to seamlessly blend into the breathtaking KwaZulu-Natal landscape.

This solution not only enhances the aesthetic appeal of the surroundings but also optimises energy efficiency while ensuring sufficient illumination for the

safety and comfort of all users within the development.

Streetlighting solution

The LEDLUME XP offers optimised photometric performance with a minimum total cost of ownership, enabling energy savings, improved lighting levels and reduced maintenance costs. The great variety of high-performance optics optimises the photometric distribution for each specific application to achieve minimum energy consumption.

The LEDLUME XP range takes advantage of the latest photometric innovations. It uses the LensoFlex 4 photometric engine, which has been developed around the ideas of performance, compactness, versatility and standardisation.

The LEDLUME XP offers flexible combinations of LED modules, a choice of currents and dimming options to further maximise energy savings and provide the most cost-effective solution.

Optidim functionality

The luminaires have been supplied with the Optidim dimming option, pre-programmed to dim to 50% light output at night.

Intelligent luminaire drivers can be programmed with complex dimming profiles. Up to five combinations of time intervals and light levels are possible. This feature does not require any extra wiring. The period between switching on and switching off is used to activate the preset dimming profile. The customised dimming system generates maximum energy savings

while respecting the required lighting levels and uniformity throughout the night.

GRP pole range

The LEDLUME XP streetlights have been installed on South African-manufactured glass fibre-reinforced polyester (GRP) poles, also known as the BEKAPOLE.

The BEKAPOLE has virtually unlimited applications. It can be manufactured to any requirement relating to the number and configuration of luminaires to be mounted, inclusive of any special colour. Furthermore, the low mass of the GRP poles saves handling, transport and erection costs during installation:

Low handling costs: No extra equipment is needed to load or offload the poles.

Low transport costs: Save on transport costs due to the poles' low weight and the higher stacking height on road freight.

Low installation costs: No extra equipment is needed to erect the poles.

About BEKA Schröder

BEKA Schröder develops and manufactures energy-efficient and sustainable lighting products in South Africa, designed and suitable for local conditions.

"We are very proud to be associated with Zimbali Lakes Resort, JCF Engineers and Stols Electrical Services, Craft of Architecture (COA) and Uys & White in providing a successful streetlighting solution for this prestigious project," the company said.

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

Lighting the way in cannabis cultivation: South African innovation behind the grow lights

On 18 September 2018, South Africa's Constitutional Court made history. In a landmark judgment, it decriminalised the private cultivation and use of cannabis – a decision that not only altered legal and cultural norms but also sparked the rapid emergence of a new industry.

Since that pivotal ruling, South Africa's cannabis sector has grown by an estimated 500%, now encompassing more than 90 licensed producers (LPs) and attracting billions of rands in infrastructure investment. At the heart of this burgeoning industry is a blend of pharmaceutical precision, agricultural innovation, and entrepreneurial energy.

One of the standout examples of this synergy is the partnership between Rascal Medicinal Cannabis and the Earth Horticultural Lighting portfolio – a collaboration that's helping define best practices in high-tech cultivation environments.

From seed potatoes to medicinal cannabis

Rascal, a North-West-based agricultural pioneer, has deep roots in South Africa's controlled-environment farming landscape.

Founded in 1993, the company was the first private enterprise in the country to produce certified disease-free minitubers. Today, Rascal is the largest producer of generation-zero minitubers on the continent, with an annual output exceeding seven million units.

Now, the company is bringing that same rigour to the cannabis space. Recognising the central role of lighting in plant health, yield, and consistency, Rascal turned to Earth Horticultural Lighting to develop a custom lighting solution capable of meeting the exacting standards of pharmaceutical cultivation.

The Earth portfolio: engineering precision in light

Earth Horticultural Lighting is the result of a collaboration between EnergyWise Systems and AgriSmart Engineering – two South African firms that have joined forces to address the unique challenges of high-value crop production in controlled environments.

Their approach is far from one-size-fits-all. Instead, the team emphasises site-specific, data-driven design, crafting bespoke lighting solutions that consider everything from historical weather patterns and facility layout to microclimates within each cultivation zone.

"We don't sell off-the-shelf fittings," one Earth engineer explains. "Every greenhouse is different, and each one needs a system that works with – not against – the local environment. Precision and adaptability are key."

A scientific approach to light

Using advanced photometric laboratories and tools like spectrophotometers, Earth's team simulates and models



optimal light distribution for each client. They then design and manufacture LED fixtures tailored to these findings, complete with site-specific electrical layouts and sophisticated monitoring and control systems.

These systems not only measure real-time conditions such as solar radiation, temperature, humidity, and CO₂ but also dynamically adjust the LED output to ensure every plant receives uniform light energy, regardless of its position in the facility or the time of year.

The result is a cultivation environment where light levels are tuned to the micromole – delivering the energy plants need for photosynthesis while also optimising energy efficiency. Through smart interfaces accessible from any device, growers can monitor system performance, track savings, and maintain consistency across growing cycles.

Built for Africa

Beyond precision, durability is another hallmark of Earth's product design. Engineered with African conditions in mind,

the fittings carry IP65 and IK08 ratings and boast an L90 B10 lifespan exceeding 60,000 hours. Built in ISO-accredited, South African Bureau of Standards (SABS) approved facilities with high-grade European components, the fittings are rugged, reliable, and ready for the long haul.

With local support teams and a deep understanding of the continent's agricultural realities, Earth is positioning itself as a key enabler of Africa's cannabis future.

Growing the industry, sustainably

As South Africa's cannabis sector matures, the demand for reliable, efficient, and scalable technology will only increase. The Rascal-Earth partnership offers a compelling case study in how local innovation, grounded in scientific rigour and practical experience, can help the industry flourish.

And in a market increasingly shaped by compliance, quality, and consistency, it may just be the edge that helps South African producers compete on the global stage.

Enquiries: www.energywise.co.za



Sustainable, secure, and smart: why motion occupancy sensors make sense

In an age where energy efficiency and intelligent automation are no longer luxuries but necessities, motion occupancy sensors are proving to be a cost-effective upgrade for both residential and commercial projects. Radiant Lighting's sensor solutions offer smart, streamlined performance for everyday applications, delivering long-term value with minimal complexity.

Whether for new builds or retrofits, integrating motion sensors can significantly lower lighting costs. Passive Infrared (PIR) sensors detect body heat, making them ideal for enclosed indoor areas, while microwave sensors use high-frequency waves to detect movement – even through glass or thin partitions – offering greater sensitivity in larger or more complex spaces. Both types automatically switch



lights on when movement is detected and off when the area is unoccupied, eliminating energy waste without relying on manual switches.

The result? Substantial energy savings over time, reduced wear on fittings, and improved sustainability, all of which contribute to a stronger return on investment.

Key benefits

- **Energy efficiency:** Lights stay off when areas are unoccupied, reducing unnecessary consumption – ideal for corridors, stairwells, storerooms, and shared zones.
- **Hands-free operation:** No switches needed. Great for high-traffic or hygiene-sensitive areas where ease of use matters.
- **Added security:** Automatically lighting up dark or low-traffic areas adds safety and peace of mind, especially after hours.
- **Quick integration:** These sensors are built for straightforward setup and compatibility with common lighting systems.

Where they work best

These work best in:

- Passageways, bathrooms, and entrances;
- Garages, parking areas, and stairwells;
- Back-of-house service areas and storerooms;
- Outdoor walkways, perimeters, or entrances; and
- Multi-use indoor spaces, like meeting rooms or consultation rooms.

A few great examples of Radiant sensors

- **RE343 – flush ceiling mount:** Compact and ideal for dropped ceilings or recessed applications with a 360° PIR detection range.
- **RE344 – wall mount sensor:** A surface-mounted PIR that's ideal for passageways and entrances with lateral coverage.
- **RE345 – wide-angle ceiling mount:** Offering a greater range and sensitivity, this microwave sensor is suitable for large areas requiring broader coverage.

Efficiency, made simple

From energy savings to safer spaces, sensor-driven lighting offers long-term benefits with minimal effort.

Enquiries: info@radiant.co.za



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Lamp: Integrated 30W LED
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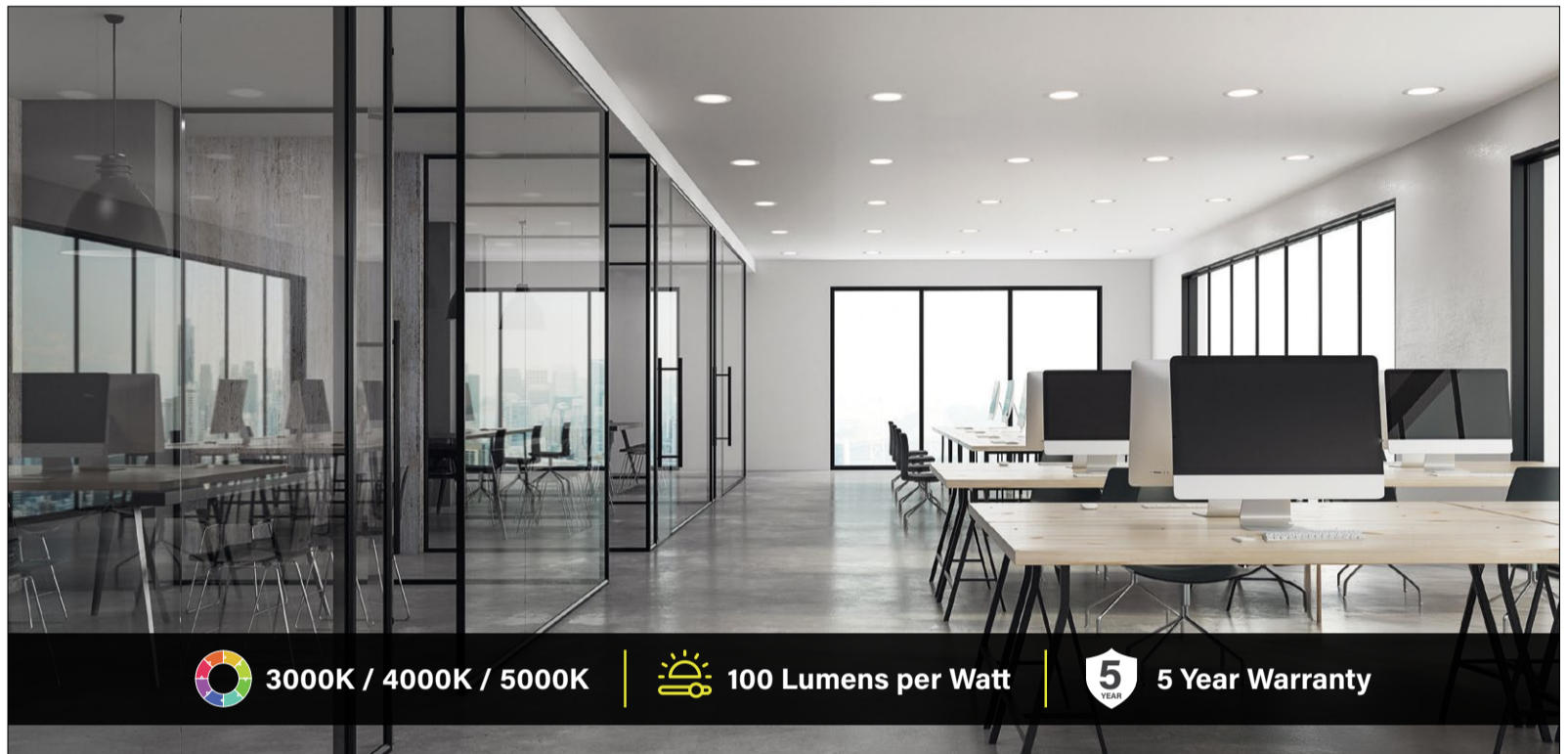


Eurolux Urban spots: practical precision for every project



Affordable, low-maintenance, and built for flexibility, Eurolux Urban spotlights make it easy to deliver smart lighting outcomes on time and on budget.

- Eurolux



3000K / 4000K / 5000K



100 Lumens per Watt



5 Year Warranty

Project-Ready Downlighters

Versatile, Efficient, Built to Perform



PR250
Lumens: 900lm
Diameter: 114mm

PR251
Lumens: 1200lm
Diameter: 136mm

PR252
Lumens: 2000lm
Diameter: 175mm

PR253
Lumens: 2400lm
Diameter: 196mm

PR254
Lumens: 3000lm
Diameter: 230mm

Engineered for performance and designed with flexibility in mind, the Eurolux Urban range of spotlights is a reliable choice for contractors and electricians working across residential, commercial, or hospitality installations.

Available in a selection of configurations, including 2, 3, or 4-light in-line bars, a compact 3-light round plate, and single spotlights – the Urban range is designed to adapt to a variety of ceiling plans, task zones, or feature areas. Whether you're lighting up a kitchen island, hallway, office nook, or retail display, these fittings offer targeted 5 W GU10 illumination, giving the flexibility for use with warm white, cool white or daylight lamps, for ambient, accent or task-oriented lighting applications.

Made from durable steel with a sleek black or white finish, these fittings are both robust and easy to install, reducing time on site. The GU10 lamp holder allows for simple globe replacement and compatibility with a range of beam angles and wattages.

With their clean lines and minimal aesthetic, Urban spots are not only visually appealing but also practical to mix, match, and standardise across multiple rooms or units – ideal for bulk residential developments or upgrade projects.

Affordable, low-maintenance, and built for flexibility, Eurolux Urban spotlights make it easy to deliver smart lighting outcomes on time and on budget.

Brilliant spaces begin with the right lighting! With adjustable CCT settings (3000K, 4000K, 5000K), multiple size options, and dimmable & non-dimmable choices, Eurolux's project downlighters offer solutions for multiple business and home applications.

These downlighters are flexible and energy-efficient, delivering high-quality illumination. Plus, with a 5-year warranty, you can rely on long-term performance. Whether for large-scale projects or intimate settings, Eurolux has the lighting solution for you.

Find your perfect fit today at www.eurolux.co.za.

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From architecture to illuminating engineering: meet Thibault Faÿ

By: Ilana Koegelenberg



Thibault Faÿ blends architectural expertise with specialist lighting design to create harmonious spaces that transform how we experience buildings.

From Paris to Johannesburg

Born in Paris but raised in other cities, Thibault Faÿ returned to the French capital only for his architectural studies at *Ecole Spéciale d'Architecture (ESA)*. It was here that illumination engineering first captured his imagination.

"During my studies, I took illumination engineering lessons, which fascinated me," explains Faÿ. "While practising architecture, I often felt curious about this science and the need to expand my knowledge of lighting to master it in my future projects."

After completing his master's degree, Faÿ worked at various architectural firms throughout France, gaining experience across a diverse portfolio of projects including residential buildings, offices, high-end resort hotels, urban design, interior

design, and laboratories. Each project type presented unique lighting challenges, further fuelling his interest in specialised illumination solutions.

A significant career shift occurred when Faÿ relocated to South Africa over a decade ago to join an engineering and architecture firm. A chance attendance at a lighting design lecture in Johannesburg, presented by Philip Hammond from BHA School of Lighting, proved transformative.

"This sparked my interest, and I began following his webinars. Eventually, I enrolled in the BHA School of Lighting for an advanced illumination engineering diploma," Faÿ recalls.

Faÿ recently graduated from the comprehensive two-year programme and now offers specialised lighting design services alongside his architectural practice.

The art of collaborative creation

When asked about his proudest career achievement, Faÿ emphasises his commitment to every project.

"I believe that architecture is a collaborative effort involving site constraints, the client's vision, the architect's concept, and the builder's practicalities."

Nevertheless, Faÿ describes a particularly noteworthy interior design project encompassing high-end hospitality, a wellness centre, offices, and a conference facility. This project allowed him to work with exquisite natural materials, including marble, granite, wood, and brass.

The lighting concept he developed demonstrated his integrated approach:

indirect ambient lighting combined with direct task lighting and accent illumination for artworks and architectural features. Implemented throughout different buildings and controlled by an automation system, the design delivered exceptional flexibility for both lighting scenarios and occupants.

Guidance for the next generation

Drawing on his experience, Faÿ offers three key pieces of advice for young professionals entering the architecture and lighting design industries:

- **"Work diligently:** Architecture and lighting design blend science with artistic expression. There is no single solution to a problem, so invest time in exploring various options to find the most suitable one for your project."
- **"Be authentic:** Discover your own motivation and channel it into something uniquely yours."
- **"Continue exploring:** Cultivate curiosity about past achievements, gain knowledge of iconic buildings, and stay informed about current trends and technologies."

Vision for the future

Looking ahead, Faÿ envisions establishing a boutique architecture and lighting design practice. His ideal workplace would foster constructive debate and take on international projects, drawing inspiration from global cultural diversity.

"I enjoy engaging in debates on a variety of topics. I believe that conversing with diverse individuals enhances my understanding of the world and contributes to my personal growth," he says. "I am fascinated by different cultures and the lifestyles of people from various regions."

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Design:
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Publisher:
Wilhelm du Plessis

Published monthly by:

Crown Publications (Pty) Ltd
P O Box 140
Bedfordview, 2008
Tel: (011) 622-4770
Fax: (011) 615-6108

e-mail: sparks@crown.co.za
Website: www.crown.co.za

Printed by: Tandy Print

The views expressed in this publication are not necessarily those of the editor or the publisher.



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