NUCLEAR NETWORK AFRICA

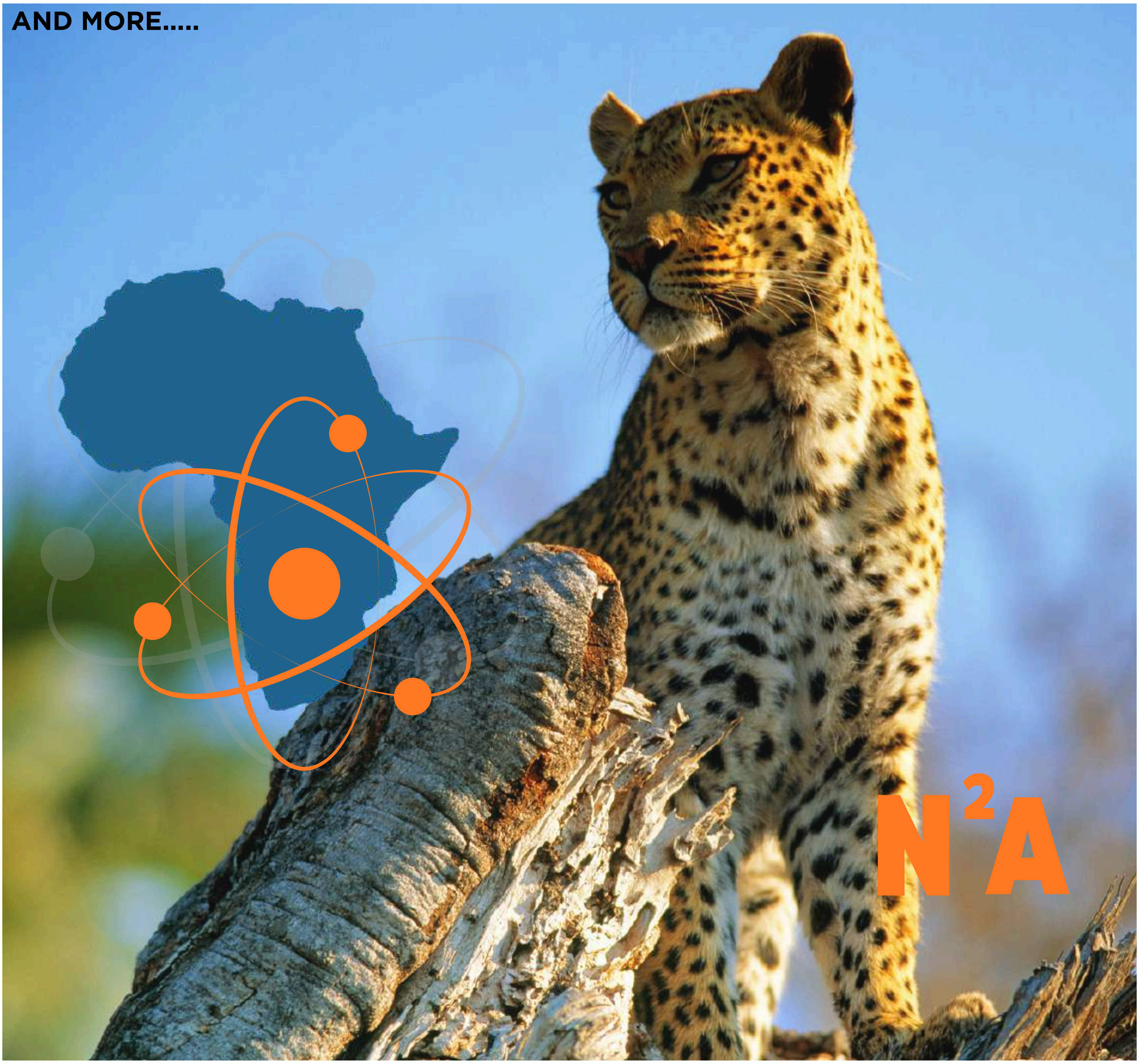
THE WORLD OF NUCLEAR

MOST RADIOACTIVE TOWN ON EARTH - IN IRAN

USE THE ATOM TO WIN THE WAR AGAINST POVERTY PROF BISMARK TYOBEKA

THE INVISIBLE PRECISION OF ENGINEERING AND NUCLEAR TSEPO MAHLABA

AND MORE.....



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N^{2}A HIGHLIGHTS

FROM THE EDITOR

Welcome to the March 2026 edition of the **N²A** (Nuclear Network Africa) digital magazine, where insight, innovation and impact converge to advance the conversation on nuclear energy across the continent.

In this issue, we explore powerful and thought-provoking perspectives that challenge perceptions and highlight opportunity. Our feature on the "Most Radioactive Town on Earth" takes readers to Ramsar, offering a compelling look at natural radiation and what it teaches us about risk, resilience and science. We are honoured to include Prof Bismark Tyobeka's bold and timely article, "Use the Atom to Win the War Against Poverty," which underscores nuclear energy's transformative potential in driving socio-economic development across Africa. Complementing this is Tsepo Mahlaba's "The Invisible Precision of Engineering and Nuclear," a deep dive into the sophistication, discipline, and innovation that underpin the industry.

Beyond the pages of N²A, **N²A** continues to actively engage the sector. This month, we participated in the SMME Symposium hosted by Tshwane Economic Development Agency (TEDA) in partnership with South African Electrotechnical Export Council (SAEEC), where Executive Mayor of the Municipality of Tshwane, Dr Nasiphi Moya, delivered a forward-looking address on economic inclusion and industrial growth.

As part of our ongoing commitment, **N²A** is seizing every opportunity to convene and collaborate, hosting information sessions with nuclear policymakers, energy stakeholders, value chain contributors and artisans.

Through clear, accessible communication, we aim to strengthen understanding and position nuclear energy as a valuable and necessary component of a balanced energy mix, one that ensures sustainability, stability and long-term progress for Africa.

Let this edition inform, inspire and ignite meaningful dialogue.

Heather Veldhuis

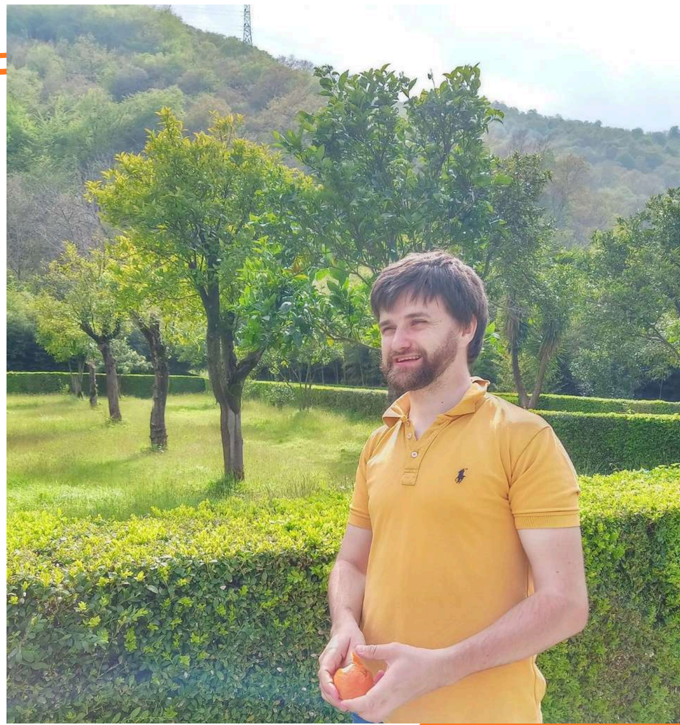
HEATHER VELDHUIS
EDITOR

Silent as a leopard, power in disguise,
Nuclear energy, unseen yet it energises,
Spotted strength, precise and fast,
Atomic force built to last,
Quiet might that shapes the future vast.

MOST RADIOACTIVE TOWN ON EARTH - IN IRAN

Recently, in the US, the nuclear regulatory principle of ALARA has been suspended and is being reviewed, to be replaced by something else. ALARA stands for As Low As Reasonably Achievable. The crunch word being 'Reasonably' because, for years, the criteria selected have been totally unreasonable. Linked to this ALARA there is another principle, and that is LNT, which is Linear No Threshold theory. That LNT is equally unreasonable. It states that there is no safe lower dose of nuclear radiation. This is just not true. A typical annual allowable dose of nuclear radiation for a radiation worker is 50mSv.

But of great interest is the town of Ramsar in Iran. Ramsar has the world's highest amount of natural background radiation. It is a small coastal town on the Caspian Sea, with a total population of around 35 000. The surrounding area has an additional population in the region of a 100 000. Some areas there exhibit annual doses of 260 mSv. This is due to natural radioactive Radium-226, which is found in the natural geology.



Hugo Kruger is enjoying a citrus fruit grown in the radioactive ground in Ramsar.

Farmer Yazdan Talishi proudly shows his citrus orchard. He is 83 years old and has lived there all his life.

These levels far exceed international standards for general public exposure. However, studies of the local population have shown no negative health effects. To compound matters, in Ramsar, this geologically naturally radioactive rock has been used for generations for the building of houses. So not only does radiation come out of the ground, it also comes out of the walls of houses. To even further compound the situation, this radiation leads to the production of a radioactive gas called Radon. The Radon levels found inside the houses are exceptionally high. So people living in Ramsar accumulate a considerable annual dose of Radiation.

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CONT.... FROM PG 4

A while ago, a South African engineer was asked, by us, to visit Ramsar to see for himself.

The engineer is a Nuclear Civil Engineer, Hugo Kruger. Hugo is working in France and was scheduled to visit Iran anyway, so we asked him to pass by Ramsar and to have a look.

We were all surprised to hear that Ramsar is lush and green. We generally had a preconceived idea of Ramsar being in an arid sort of desert area, covered with sand and with extremely little greenery.

Well, Hugo spoke to people and looked around. During his wandering, he found a local citrus farmer by the name of Yazdan Talishi. The farmer was 83 years old and said that he had lived there all his life, and was totally healthy.

Hugo toured around the farmer's plantation, and all the trees not only looked totally healthy but were thriving. Hugo went further and ate some of the fruit, no doubt becoming one of the very few non-Iranian people in the world to eat fruit growing in Ramsar, in highly radioactive ground.

Being a nuclear-trained fellow, Hugo knew very well not to be concerned about the possibility of the fruit containing any harmful radiation.

mSv is milliSievert, which is a measure of the amount of ionizing radiation absorbed.

AFRICA'S NUCLEAR POWER LANDSCAPE.

TOP HIGHLIGHTS MARCH 2026

South Africa Advances New Nuclear Procurement Plans

South Africa is progressing plans to procure new nuclear capacity, reinforcing its strategy to secure reliable baseload power and reduce dependence on coal-fired generation.

Ghana Moves Closer to First Nuclear Power Plant

Ghana continues preparatory work for its first nuclear power station, strengthening regulatory frameworks and partnerships as it positions nuclear energy within its long-term energy mix.

Kenya Accelerates Nuclear Energy Programme

Kenya is advancing site selection and infrastructure planning for its first nuclear plant, aiming to meet rising electricity demand and support sustainable industrial growth.

Rwanda Explores Small Modular Reactor Deployment

Rwanda is actively exploring Small Modular Reactor (SMR) technology, positioning itself as an emerging player in innovative, scalable nuclear solutions for future energy needs.

Egypt's El Dabaa Nuclear Project Progresses

Construction at Egypt's El Dabaa Nuclear Power Plant continues steadily, marking a major milestone in Africa's largest nuclear project and a significant step towards energy security.

Nigeria Expands Nuclear Power Ambitions

Nigeria is strengthening collaborations with international partners to develop nuclear power, aiming to diversify its energy mix and address persistent electricity supply challenges.

Africa Strengthens Nuclear Collaboration

A new agreement between the African Union, AFCONE and the OECD NEA aims to accelerate nuclear development, focusing on skills, policy frameworks and peaceful applications across the continent.

USE THE ATOM TO WIN THE WAR AGAINST POVERTY

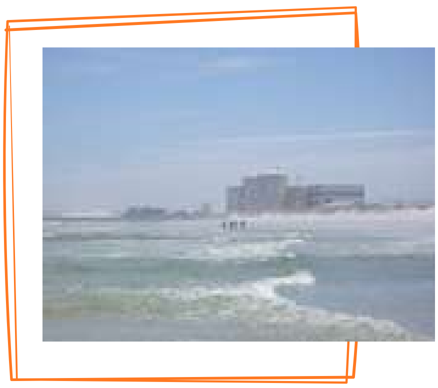
PROF BISMARK TYOBEKA

South Africa cannot industrialise without reliable electricity. Yet for decades, the country has struggled with energy shortages that have constrained economic growth and undermined investor confidence. It is time that we face the facts. If we are serious about rebuilding our economy, nuclear energy must form part of the cure.

The government's Integrated Resource Plan (IRP) already proposes adding 5.2 gigawatts (GW) of nuclear capacity by 2039. I believe this goal is not only achievable but essential, if the nation is to secure long-term energy stability and industrial growth.
South Africa stands at an energy crossroads. When we look back one day, we must be able to say we chose the right route. That is why we have a joint responsibility to support the IRP.

Before we continue, I want to put the figure of 5.2 GW in real terms. What does it mean? The country has about 18 million households, and 5.2 GW is enough to power more than four million homes, or a city the size of Johannesburg. This is a critical need. Let us get working on it.

What I propose is a twin-track nuclear development strategy designed not only to stabilise the country's electricity supply, but also to drive industrialisation, skills development, and long-term energy sovereignty. Nuclear power currently contributes roughly 4% of national electricity generation, primarily through the Koeberg Nuclear Power Station.



Koeberg Nuclear Power Station.

Professor Bismark Tyobeka is Vice-Chancellor of North West University (NWU) and a global nuclear expert. Holding a PhD from Penn State, he formerly led the National Nuclear Regulator. Recently, he was awarded France's prestigious National Order of Merit for his exceptional international leadership in nuclear safety and governance.

In March 2026 Eskom announced that Koeberg Nuclear Power Station's Unit 2 had on Monday 9 March 2026, successfully operated for 365 consecutive days, at an average of 99.4% Energy Availability Factor (EAF), since major upgrades were completed. This means that Unit 2 continuously delivered about 946MW of reliable electricity to the national grid, over the past year.

The Eskom Group Executive for Generation, Bheki Nxumalo, said, "This milestone follows major upgrades to Unit 2, which returned to the grid on 30 December 2024 and has operated continuously since 9 March 2025. It showcases the strength of South Africa's nuclear skills base. The successful installation of the new steam generators highlights the skill and dedication of the Koeberg team, engineers, technicians, operators, and support staff, who have worked tirelessly to ensure the unit runs safely and efficiently."

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A twin-track nuclear strategy

The first track focuses on large Generation III+ pressurised water reactors located along the country's coastline. More than 85% of the proposed capacity would be built at two established nuclear sites: Duynefontein, near Koeberg in the Western Cape, and Thyspunt in the Eastern Cape.

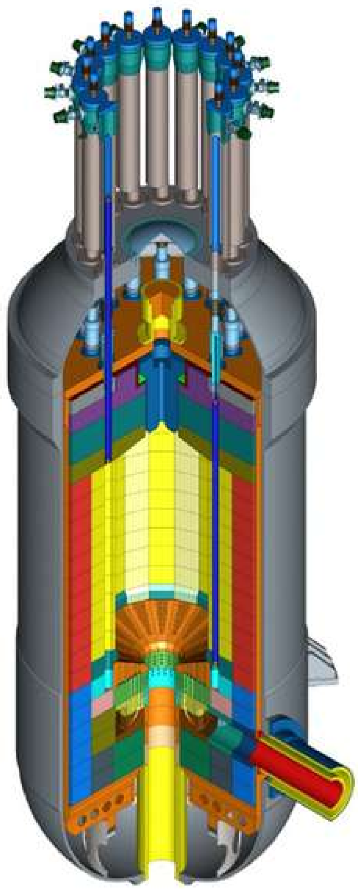
Developing these coastal sites offers several advantages. Duynefontein can leverage existing nuclear infrastructure and regulatory experience, while Thyspunt could stimulate a new industrial corridor in the Eastern Cape, a province that has long sought large-scale economic anchors.

The second track focuses on Small Modular Reactors (SMRs) deployed inland. These reactors would account for roughly 15% of the new capacity and would primarily be located at retiring coal power stations in Mpumalanga.

The concept is known as "coal-to-nuclear" repurposing. Sites such as Camden and Hendrina already have transmission infrastructure and skilled workforces. By installing SMRs at these locations, the country could save up to 30% on grid infrastructure costs while protecting jobs in communities historically dependent on coal.

In a water-scarce country, the technology choice is also strategic. The proposal emphasises non-water-cooled high-temperature gas reactors, similar to the technology previously explored under South Africa's Pebble Bed Modular Reactor(PBMR) programme. These reactors would require significantly less water than traditional designs.

Thyspunt nuclear site, inlet and outlet area. In the Eastern Cape.



Graphical representation of the Small Modular Reactor - HTMR100. 100MW thermal energy and 30MW Electrical energy output.

A nuclear Fuel Element for Koeberg Nuclear Power Station, completely fabricated at the Pelindaba site of Necsa some years ago, before the activity was forced to close due to international political pressure.

CONTINUED ON PG 09

Professor Bismark Tyobeka speaking at the Nuclear Forum

Uranium for export being processed near Johannesburg, This form is known as Yellowcake and is a Uranium Oxide.

A five-year launch roadmap

I propose a five-year rollout plan to move the programme from concept to construction.

In the first year, the government would launch a request for proposals from international vendors, revive the PBMR programme from its current "care and maintenance" status, and begin rebuilding the national nuclear skills pipeline.

The revival of South Africa's Pebble Bed Modular Reactor (PBMR) programme should also be understood in the correct context. Lifting the PBMR out of "care and maintenance" and transferring it to the Nuclear Energy Corporation of South Africa (Necsa) would allow local scientists and engineers to resume research and development on this uniquely South African technology. However, the PBMR will not form part of the proposed 5.2 GW nuclear deployment, as the technology would first need to progress through a demonstration phase before it can be commercialised.

For the inland component of the nuclear expansion programme, preference would instead be given to high-temperature gas-cooled reactor designs that are already operating or are close to commercial maturity. Examples include China's HTR-PM reactor, which is already producing electricity in Shandong Province, and the X-energy design in the United States, and the South African-developed HTMR-100. The long-term objective of reviving the PBMR programme is to eventually develop a locally owned reactor technology that South Africa could deploy, and potentially export, particularly for applications such as desalination and industrial process heat, in Africa and the Middle East. If successfully demonstrated, this technology could position South Africa as a developer and exporter of advanced nuclear solutions tailored to the needs of emerging economies.

Year two would focus on vendor selection, licensing processes and environmental impact assessments, particularly for the Thyspunt site.

By year three, the programme aims to reach contract negotiations and financial close, followed by the first concrete pour at Duynefontein in year four. CONTINUED ON PG 09

 CONT.... FROM PG 08

The fifth year would see the commissioning of local fuel production at Pelindaba, alongside the start of heavy manufacturing for long-lead nuclear components.

After the first five years, construction would continue at Duynefontein, taking into account a typical 60-month reactor build period. This would allow the first unit to be completed and begin producing electricity around 2036, in line with the Integrated Resource Plan. In parallel, development at Thyspunt in the Eastern Cape would have gathered momentum, with licensing and construction progressing so that both units there could come online by around 2039. By sequencing the programme in this way, electricity generated from the first reactors at Duynefontein could begin generating revenue 18 to 24 months before the Thyspunt units are completed, helping to support financing for the later stages of the programme.

Strategic global partnerships

Another cornerstone of the plan is a multi-vendor international partnership model. Large coastal reactors could involve collaboration with global nuclear suppliers such as France's EDF, Russia's Rosatom, South Korea's KEPCO, or Chinese nuclear firms, each offering different strengths in financing, speed of construction and technological maturity. SMR development could involve partnerships with the United States or China, particularly for advanced gas-cooled reactor technologies suitable for inland coal sites. The strategy positions the nation as a "middle power" capable of cooperating with both BRICS and G7 partners, avoiding geopolitical alignment with any single bloc while securing the best technology and financing options.

Financing the programme

Given the scale of nuclear infrastructure investment, the proposal emphasises hybrid financing models rather than relying solely on government borrowing. Potential mechanisms include export credit agency loans from vendor nations, financing through the BRICS, New Development Bank, and the use of green taxonomy frameworks to attract private institutional investors seeking low-carbon infrastructure projects.

Building a domestic nuclear industry

Beyond electricity generation, we must aim to rebuild a complete nuclear industrial ecosystem.

This includes restoring elements of the nuclear fuel cycle, expanding domestic manufacturing capacity for reactor components, and developing a long-term human capital pipeline for engineers, welders, and specialised technicians.

I propose an 85% localisation target for civil works, maintenance, and related supply chain activities, ensuring that nuclear investment drives significant domestic economic activity and builds a strong local industrial base.

It is also essential that we position nuclear technology as a catalyst for broader industrial applications. These include the continued production of medical radioisotopes, the use of high-temperature reactors for industrial heat in sectors such as steel and cement, and the generation of clean hydrogen for the emerging hydrogen economy.

A nuclear programme rooted in peaceful development

The country's nuclear ambitions are framed within its longstanding commitment to peaceful nuclear use. South Africa remains the only state to have voluntarily dismantled its nuclear weapons programme, and is a key signatory to the Pelindaba Treaty, which establishes Africa as a nuclear-weapon-free zone. My proposed expansion, therefore, is positioned as a model of civilian nuclear development aimed at economic growth, energy security, and technological advancement.

We can win the war against poverty, and we can win it using the peaceful atom.

Nuclear technicians at Necsa loading nuclear medicine for export. The yellow glass is thick radiation-proof glass.

EU HEAD ADMITS THEY MADE A MAJOR MISTAKE WITH NUCLEAR POLICY

At the opening of a nuclear energy summit near Paris, European Commission President Ursula von der Leyen said in March that Europe's turn away from nuclear power had been a "strategic mistake." She proposed deploying Small Modular Reactors across Europe by 2030.

Von der Leyen said, "This reduction in the share of nuclear was a choice. I believe that it was a strategic mistake for Europe to turn its back on a reliable, affordable source of low-emissions power."
French President Emmanuel Macron, who also attended the summit, said: "Nuclear power is key to reconciling both independence, and thus energy sovereignty, with decarbonization, and thus carbon neutrality."

Both Von der Leyen and Macron pointed out that nuclear power provided energy independence.

A major guarantee fund to encourage private investment in European nuclear innovation was announced by von der Leyen, who said, "while in 1990, one-third of Europe's electricity came from nuclear, today it's only close to 15%."

At the summit, it was pointed out that Germany had aggressively wound down its nuclear generation while its neighbour, France, had continued to rely on nuclear, which now accounts for 70% of its electricity production. This demonstration of energy policy by side-by-side countries has clearly shown how wrong German energy policy has turned out to be.

Von der Leyen announced a goal of rolling out Small Modular Reactors (SMRs) across the EU by 2030 and harmonizing regulations between member states.

Macron proposed standardising reactor designs across Europe, a move which was clearly aimed at acquiring French exports since the rest of Europe has fallen out of the nuclear construction scene.

Quite predictably, at the start of the summit, two Greenpeace activists very rudely stormed the stage, interrupting Macron and International Atomic Energy Agency head, Rafael Grossi, as they were greeting heads of state. The continued antics of the likes of Greenpeace shows the degree to which such uninformed activists have influenced world opinion over the last couple of decades.

The South African Oryx Design of an SMR, designed at the request of Namibia. This is a single reactor system capable of being expanded to ten reactors.
The South African system does not need water for system cooling.

South Africa was the first country in the world to start developing a commercial Small Modular Reactor.

THE INVISIBLE PRECISION OF ENGINEERING AND NUCLEAR

WHY YOUR WORLD WORKS DOWN TO A FRACTION OF A MILLIMETRE

TSEPO MAHLABA

If you have ever tried to assemble flat-pack furniture and ended up with three mysterious screws left over, you may have wondered: Why can't things just fit easily? The answer lies in a concept that engineers live by every day - precision.

Engineering exists in a world that most people never see, a world measured not in metres or centimetres, but in fractions of a millimetre. To the public, a millimetre already sounds very small - To an engineer, however, a millimetre is enormous. Engineers routinely design and manufacture components accurate to hundredths, or even thousandths, of a millimetre - thinner than the width of a human hair.

And yet most people go through life completely unaware that their daily comfort depends on this extraordinary level of accuracy.

Let's take a short tour through the hidden world of engineering precision.

Nuclear Engineering: Precision at the Highest Level
Perhaps nowhere is engineering precision more critical than in nuclear engineering. Nuclear power plants and research reactors are designed with some of the strictest tolerances and procedures in the world.
Fuel assemblies inside a nuclear reactor must be manufactured with extremely tight dimensional accuracy, so that coolant flows correctly and heat is removed safely. Control rods, which regulate the nuclear reaction, must move with exact positioning and timing. Even small deviations in alignment, materials, or measurements, could affect reactor performance or safety. As a result, nuclear components are manufactured, inspected, and tested with extraordinary care. Multiple verification steps, redundant safety systems, and rigorous quality controls ensure that every part performs exactly as designed.

The irony, however, is that the same philosophy of precision used in nuclear facilities is also applied, in slightly less dramatic form, to everyday engineering products.

Tsepo Mahlaba, PR.Eng, B.Sc Eng (Elec) (Natal), Post Grad TLP (Stratek), Dipl (Stock Market) (SMC), is a South African technopreneur and professional electrical engineer with over 36 years' experience in EPCM, high-voltage power systems, digital transformation, and energy innovation. Registered with ECSA since 1997, he founded IGODA Projects and led its partnership with Fluor to build a leading multidisciplinary EPCM firm. A pioneer in mobile digital services, he co-founded WASPA and developed early fintech platforms. His work continues to shape the convergence of energy, mobility, and technology across Africa.

The reason is simple: good engineering always demands accuracy, whether one is designing a nuclear reactor, a power station, or a household appliance.

Your Car: A Symphony of Exact Measurements
When you start your car in the morning, hundreds of mechanical parts begin working together instantly. Pistons move up and down thousands of times per minute inside cylinders. Bearings rotate, valves open and close, gears mesh and spin.
If the gap between a piston and the cylinder wall is wrong, by even a few hundredths of a millimetre, the engine may lose efficiency, overheat, or even seize completely. Without this precision, your daily commute would involve far more walking.

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Automotive parts are therefore machined to incredibly tight tolerances. In fact, the accuracy used to manufacture many everyday automotive components is comparable to that used in aerospace or nuclear engineering.

Engineers do this not because they enjoy endless calculations, although some secretly might, but because precision ensures reliability.

The Phone in Your Pocket

Now consider the smartphone in your pocket. Inside that slim device are microchips with structures measured in nanometres, which are millionths of a millimetre.

The camera lenses, connectors, circuit boards and sensors must all align perfectly. Even a slight deviation can cause problems: the camera might blur, the charging port may fail to connect properly, or the processor might overheat.

Engineers and manufacturers, therefore, control production with astonishing accuracy.
So the next time your phone battery runs out before the end of the day, remember: the engineers who built it with microscopic precision. It is probably your social media usage that requires recalibration.

Bridges That Stay Standing

Precision engineering also keeps our infrastructure safe. Bridges, buildings, power stations, and railways all depend on careful measurements. Steel beams must be fabricated to exact lengths. Bolt holes must align perfectly. Concrete foundations must be level within tight tolerances. Even a deviation of a few millimetres across a large structure can introduce stresses that affect performance over time. In everyday language, it becomes "Why is the bridge making that strange noise?" In engineering, this is simply called a "tolerance issue."

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Electricity: Precision You Cannot See

Electrical engineering also relies heavily on precision. Voltage levels, protection systems, transformer performance, and grid stability are all based on exact calculations and settings. In a power substation, for example, protective relays must respond to electrical faults within milliseconds and at precisely defined current levels. If those settings are slightly incorrect, the system may trip unnecessarily or fail to protect critical equipment.

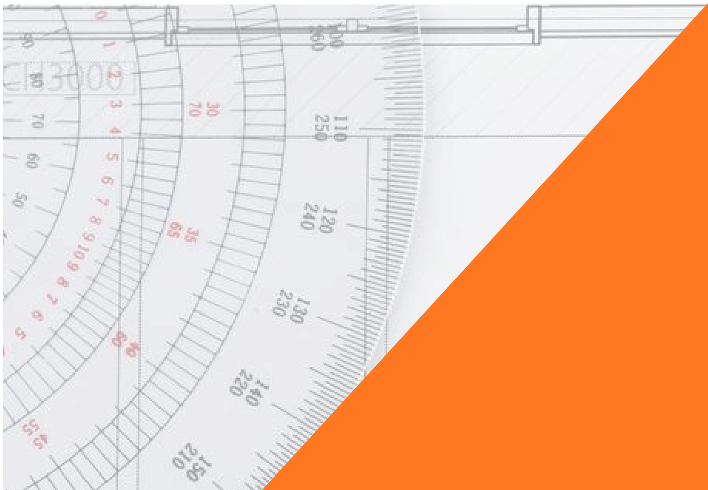
So while electricity might appear to be simply "power flowing through a wire," - engineers know it is actually "a carefully coordinated dance of electrons". And like any dance, if one step is wrong, the performance quickly falls apart.

The Engineer's Daily Mindset

Because engineers spend their careers working with such tight tolerances, they develop certain habits. They measure things carefully. They check alignment. They debate whether something is 0.5 millimetres out of specification.

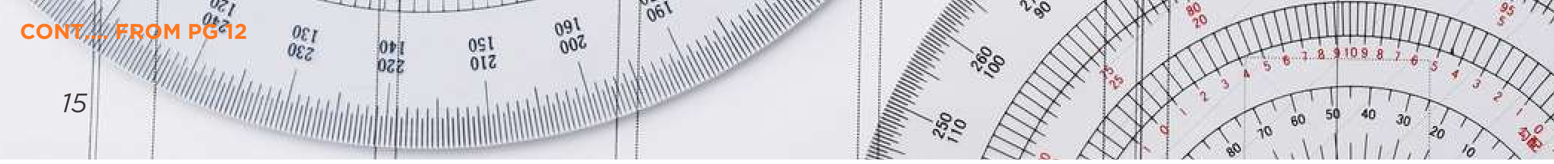
To someone outside the profession, this may seem excessive. After all, what difference can half a millimetre really make? To an engineer, half a millimetre can mean the difference between a perfect fit and an expensive failure.

This is why engineers tend to become slightly uncomfortable when someone says, "Ah, that's close enough." In engineering, "close enough" is often translated as "we will be discussing this problem in next year's failure investigation report."



Heather, N²A Editor, standing next to a laser system manufactured at the CSIR and exported worldwide

CONT.... FROM PG 12



Precision Without Recognition

Despite the extraordinary level of accuracy involved in modern engineering, most of it remains invisible to the public. People notice when things go wrong; when roads crack, machines stop working, or infrastructure needs repair, but they rarely notice the countless engineered systems, which quietly perform perfectly every day.

Aircraft cross oceans safely. Electric grids deliver reliable power. Water systems provide clean drinking water. Computers process billions of calculations every second. All of this works because engineers insist on precision at every stage: design, manufacturing, testing, and operation.

The Quiet Guardians of Accuracy

Engineers rarely receive applause for precision. When everything works as it should, nobody notices. But that is exactly the goal.

Precision engineering is a bit like a well-timed joke. When it works, the audience only sees the result, and not the careful preparation behind it. So the next time you drive your car, cross a bridge, charge your phone, or switch on a light, remember that behind that simple action lies a world of engineers, all measuring, calculating, and verifying things down to fractions of a millimetre.

They do it quietly. They do it carefully. And most importantly, they do it so the rest of us can live comfortably without ever needing to worry about micrometres, tolerances, or the most frightening phrase in engineering: “That should be close enough.”

An industrial fan fabricated at a factory near Pretoria. The dimensions and measurements need to be extremely accurate.

15 YEARS AGO

On 11 March, exactly 15 years ago, the Fukushima nuclear incident occurred in Japan.

The largest tsunami on record struck the Fukushima nuclear power plant and disabled the nuclear reactors. People often talk about; 'the lessons learned from Fukushima'...so what were they?
The answer is; Nuclear is far safer than anyone imagined.

A massive amount of nuclear energy was struck by a wall of water, which wiped out much of the surrounding neighbourhood. There were no emergency services available. The roads were blocked, and more important, those that were available were attending to other serious damage, and trying to save lives from the severe flooding.

However, from a nuclear point of view, Fukushima was actually a non-issue.
Zero people were killed by nuclear radiation.
Zero people were harmed by nuclear radiation.
Zero private property was harmed by nuclear radiation.
Zero longer term human genetic effects from nuclear radiation have been detected.

But nevertheless the Japanese government received such a fright from the international reaction that they closed their nuclear power plants down.

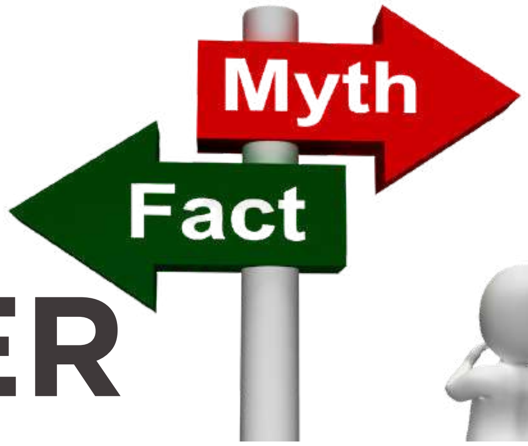
The Kashiwazaki-Kariwa Nuclear power plant located in Niigata Prefecture, sits on Japan's northern coast, facing the Sea of Japan. When all of its seven reactors are running, it is the largest nuclear power station in the world, with a capacity of 8 212 MW, but for the last 15 years it has been sitting idle. Instead, Japan turned to using fossil fuels for its electricity production.

Recently in Japan there has been debate as to whether to return to nuclear power in a big way. It would seem obvious that that is what Japan should do.

Efforts to restart operations at Kashiwazaki-Kariwa, particularly units 6 and 7, are underway as of 2026, despite ongoing local concerns.

Picture: Kashiwazaki-Kariwa nuclear power station. Pic TEPCO

The plant, Kashiwazaki-Kariwa, is owned by the Japanese nuclear power company TEPCO. TEPCO management says: TEPCO's engineers have been preparing diligently for the day when the reactors can be brought back into service. The plant's mission is more important than ever, as Japan aims to become carbon neutral by 2050.
Kashiwazaki-Kariwa and other nuclear power stations can help meet growing demand for electricity stimulated by the spread of data centres and other digital-age infrastructure. Operating 24 hours a day, seven days a week, nuclear plants enhance the stability of the entire electricity grid, providing base-load power.



MYTH BUSTER

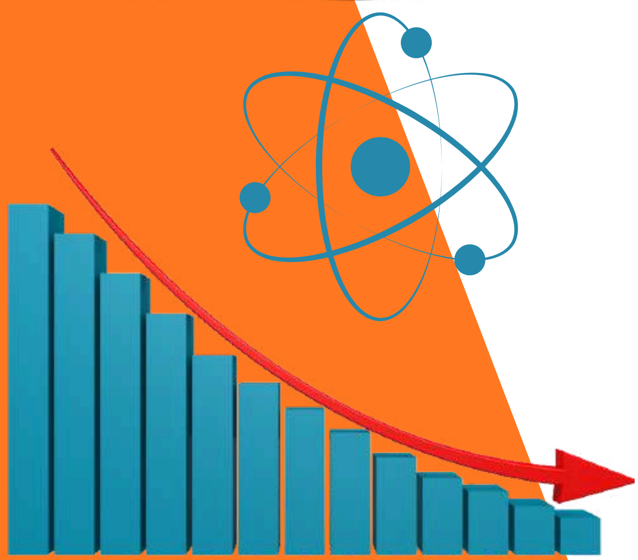
MYTH:
The "It Takes Too Long to Matter" Claim

"Nuclear takes too long to build." As if meaningful infrastructure should happen overnight like instant noodles.

FACT:

Nuclear projects are long-term investments that deliver decades of reliable, low-carbon power. New technologies like SMRs are also reducing construction timelines.

Real solutions are built to last, not to trend.



MYTH:
The "Too Expensive" Excuse

"Nuclear is too expensive." Because apparently electricity checks your wallet before showing up.

FACT:

While upfront costs are significant, nuclear delivers decades of low-cost, reliable power. When spread over time, it's often cheaper than the hidden price of blackouts or fossil fuel volatility.

Expensive today, priceless tomorrow.

N²A AT THE SMME SYMPOSIUM: ADVANCING ECONOMIC INCLUSION THROUGH ENERGY INNOVATION

This month, **N²A** (Nuclear Network Africa) had the privilege of participating in the SMME Symposium hosted by Tshwane Economic Development Agency (TEDA) in partnership with South African Electrotechnical Export Council (SAEEC), an event that showcased the transformative potential of small, medium, and micro enterprises in shaping South Africa's industrial future. The symposium brought together innovators, entrepreneurs, policymakers, and energy stakeholders to explore practical solutions for inclusive economic growth, with a particular focus on technology-driven sectors.

A highlight of the day was the address by the Executive Mayor of Pretoria, Dr Nasiphi Moya. Mayor Moya delivered a forward-looking and inspiring vision for economic inclusion, emphasising the critical role of entrepreneurship and small businesses in driving industrial growth and local job creation. She highlighted that strategic partnerships between government, industry, and communities are essential to ensure that emerging technologies, including nuclear and advanced energy systems, are leveraged to create opportunities for all citizens. Her address resonated strongly with **N²A**'s mission to promote awareness and understanding of nuclear energy's contribution to sustainable development.

Left: Deputy Mayor Pretoria, Eugene Modise.

Below: Executive Mayor of Pretoria, Dr Nasiphi Moya

For **N²A**, the symposium was not only an opportunity to observe thought leadership but also a platform to engage directly with the value chain, from artisans and service providers to high-level policymakers. We used this occasion to introduce our vision for information-sharing sessions with stakeholders across the nuclear energy ecosystem. By facilitating dialogue and providing accessible insights into nuclear power, **N²A** aims to ensure that knowledge reaches the individuals and enterprises that can contribute most effectively to the sector's growth and the country's energy security.

The event reinforced a key message: energy innovation, industrial development, and economic inclusion are interconnected. Small and medium enterprises play a critical role in translating high-level energy policy into tangible local impact.

As the continent explores diversified energy solutions, including nuclear, there is an immense opportunity for local enterprises to participate meaningfully in these sectors, adding value through skills development, supply chain participation, and community engagement.

N²A remains committed to championing these linkages. We will continue to convene workshops, information sessions, and stakeholder engagements, ensuring that nuclear energy is understood, appreciated, and integrated into Africa's broader economic and industrial growth strategies. Our presence at the SMME Symposium is just one step in this ongoing effort to create an informed, inclusive, and empowered nuclear value chain for the future.

NUCLEAR NETWORK AFRICA

THE WORLD OF NUCLEAR

Any person who has influence and a role to play in representing any Nuclear-Related Developments to advance nuclear power in Africa. or in any international entity, which can contribute to the development of Africa's nuclear energy capability is encouraged to be part of this great journey.

Any company, ranging in capability from a nut and bolt to the most sophisticated piece of equipment, should join the journey now.

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Submit your article or topic for consideration in our next N²A edition.
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