

NUCLEAR NETWORK AFRICA

THE WORLD OF NUCLEAR

ATOMS OF AUTONOMY: SMALL MODULAR REACTORS AND THE LIBERALISATION OF NUCLEAR POWER IN INDIA RAKESH WADHWA

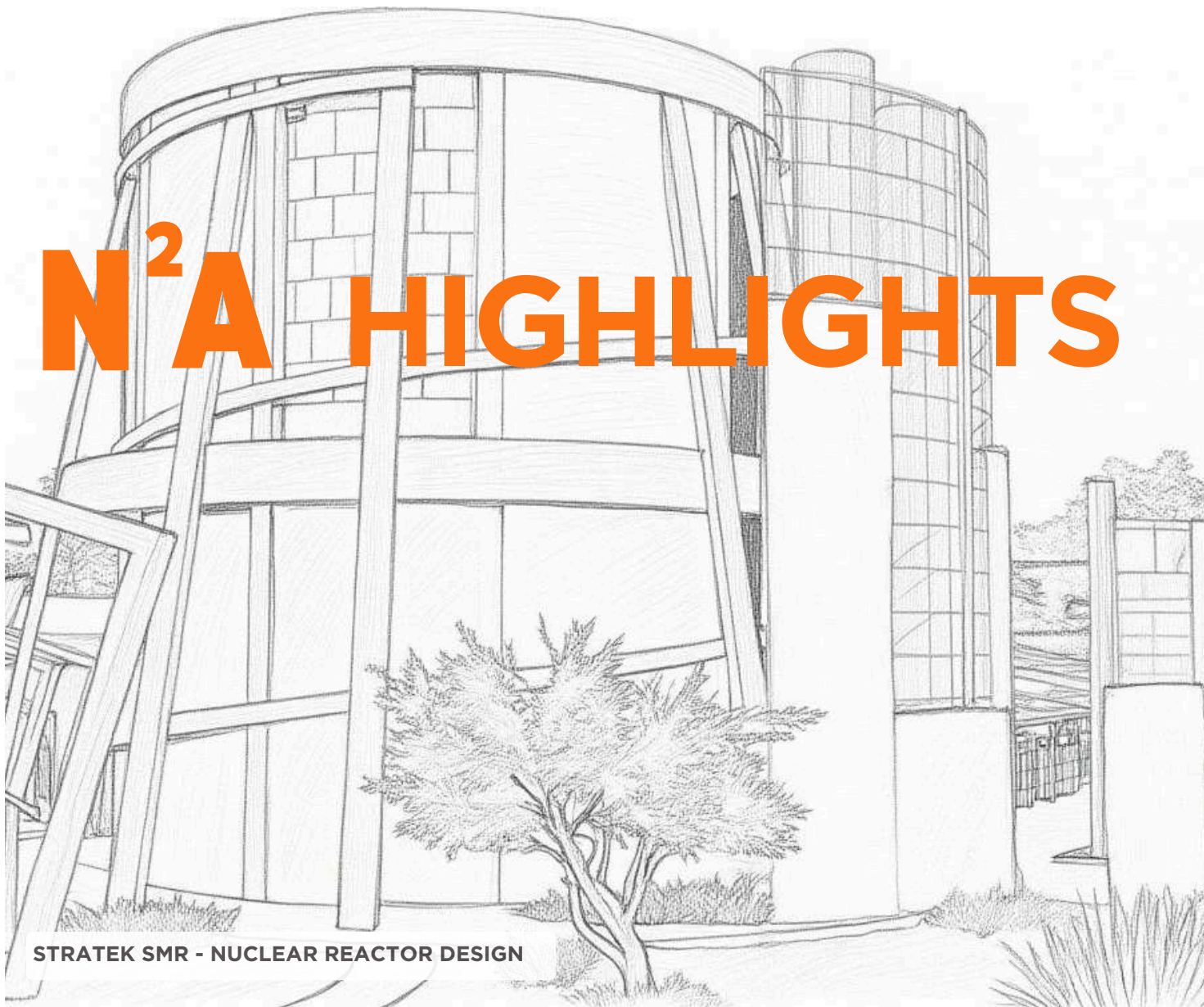
FROM WASTE TO RESOURCE - NUCLEAR “WASTE” AS AN UNSPENT ENERGY RESERVE AND THE END-OF-LIFE REALITIES OF RENEWABLES IN AFRICA

DR UGOCHUKWU UGBOR

AND MORE.....



N²A



STRATEK SMR - NUCLEAR REACTOR DESIGN

04 ATOMS OF AUTONOMY: SMALL MODULAR REACTORS AND THE LIBERALISATION OF NUCLEAR POWER IN INDIA

RAKESH WADHWA

06 THE NUCLEAR KNOWLEDGE DEFICIT - DEFINING TOMORROW'S ENERGY WINNERS AND LOSERS

N²A & IEPA NFP TRAINING

08 AFRICA'S NUCLEAR MOMENT AT DAVOS: FROM ENERGY DEFICIT TO GLOBAL PRIORITY



10 FROM WASTE TO RESOURCE - NUCLEAR "WASTE" AS AN UNSPENT ENERGY RESERVE AND THE END-OF-LIFE REALITIES OF RENEWABLES IN AFRICA

DR UGOCHUKWU UGBOR

13 STUPID RADIATION REGULATION HINDERS SAFE NUCLEAR POWER

ANDREW KENNY

17 CONTINENTAL ENERGY AND INFRASTRUCTURE INVESTMENT FORUM: TURNING AFRICA'S ENERGY AMBITION INTO BANKABLE REALITY

FROM THE EDITOR

Welcome to this edition of N²A – Nuclear Network Africa, where our mission is simple: **to make nuclear energy understandable, relevant, and accessible to everyone.** We know the subject can seem complicated – full of jargon, regulations, and technicalities – but here at N²A, we aim to strip all that away. Our goal is to bring clarity, spark curiosity, and show how nuclear power is not just a technical topic, but a real opportunity for Africa’s energy future.

In this edition, we bring together voices that challenge, inform, and inspire. Rakesh Wadhwa’s *Atoms of Autonomy: Small Modular Reactors and the Liberalisation of Nuclear Power in India* explores how modular nuclear technology could transform energy landscapes, offering flexibility and innovation that could redefine how we power our world. In *Africa’s Nuclear Moment at Davos: From Energy Deficit to Global Priority*, we look at how our continent is increasingly in the global spotlight, and why Africa’s energy future matters on a worldwide scale. Andrew Kenny takes a bold stand in *Stupid Radiation Regulation Hinders Safe Nuclear Power*, questioning outdated rules that slow progress and highlighting the need for common-sense regulation. Meanwhile, Dr Ugochukwu Ugbor reframes our understanding of “waste” in *From Waste to Resource: Nuclear “Waste” as an Unspent Energy Reserve and the End-of-Life Realities of Renewables in Africa*, showing us how untapped resources could become part of a sustainable energy strategy.

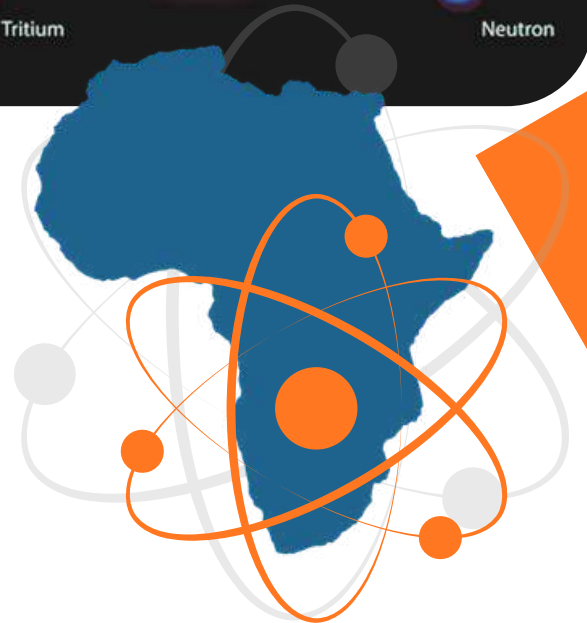
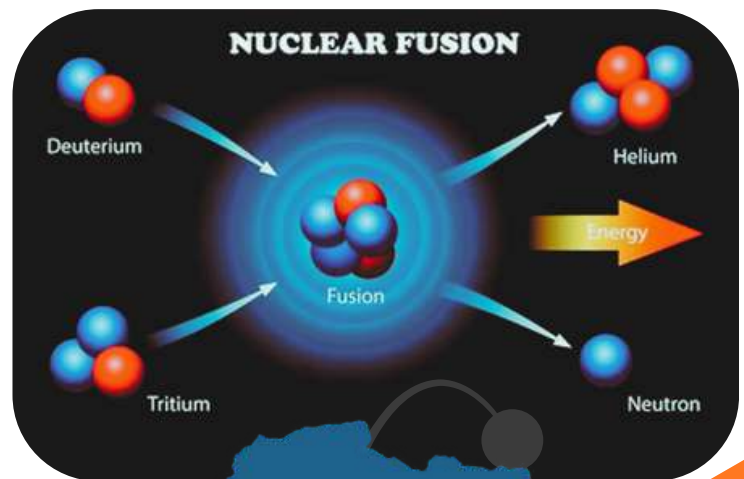
Heather Veldhuis

HEATHER VELDHUIS
EDITOR



This edition reflects what N²A is all about: taking what seems complicated and making it clear, relevant, and actionable. We invite you to read, reflect, and engage. Nuclear power doesn’t have to be intimidating; it can be a solution, a conversation starter, and a key driver for Africa’s growth.

Together, let’s explore the ideas, challenges, and opportunities that will shape the energy landscape of our continent for decades to come.



***Atoms spin, a quiet might,
Turning darkness into light.
Complex? No – the truth is clear,
Power simple, safe, and near.
Energy for now, for here!***

04 ATOMS OF AUTONOMY: SMALL MODULAR REACTORS AND THE LIBERALISATION OF NUCLEAR POWER IN INDIA

RAKESH WADHWA

India is entering an important new phase in its energy journey. In December 2025, the Indian parliament passed landmark new legislation which allows private companies to participate in nuclear power generation for the first time. Until now, nuclear energy in India had been entirely controlled by the State.

This change comes at a critical moment. India is trying to meet its fast-growing electricity demand, while also reducing carbon emissions. The country has committed to reaching 500 gigawatts of non-fossil electricity capacity by 2030. While solar and wind power are expanding quickly, they cannot always provide electricity when it is needed. Nuclear power, which runs day and night, is once again becoming essential.

What makes this moment different is the growing role of Small Modular Reactors, or SMRs.

From Large Reactors to Smaller, Flexible Units

Traditional nuclear power plants are huge. They take many years to plan and build, cost billions of dollars, and usually need to be located near the coast, because they require large amounts of cooling water. While these plants can generate massive amounts of electricity, they are difficult to deploy quickly, and are not suitable for every location.

SMRs are different. They are much smaller, typically producing up to 300 megawatts of electricity per unit. Instead of being built entirely on site, many SMRs are designed to be manufactured in factories and then transported by road or rail for installation. This approach reduces construction time and cost risk.

Because of their size, extra SMRs can be added step by step as demand grows. This makes them well suited to India's needs, where electricity demand is rising unevenly across regions and industries.



Rakesh Wadhwa is a chartered accountant and economist with a law degree from the University of Delhi. He is a former member of the Mont Pelerin Society and a recipient of the Frederick Bastiat Prize which is awarded to writers who eloquently explain the importance of free markets and individual liberty. Rakesh is an entrepreneur and business owner. He is also an investor columnist and author who writes on markets, policy, and economic freedom. His work has appeared in leading newspapers and business magazines across India, Nepal, Sri Lanka, and the United States. He has authored both fiction and non-fiction, with a focus on promoting the ideas of capitalism and free markets.

Why SMRs Matter for India

India's industrial centres, mines, data centres, and refineries, are often located far from the coast and major hydroelectric sources. Supplying these regions with reliable electricity places heavy pressure on the national grid, and leads to transmission losses.

SMRs offer a practical solution. Many designs require much less cooling water than large reactors, and some can even be air-cooled. This allows them to be built inland and closer to where the electricity is actually used. **CONTINUED ON PG 05**



CONT.... FROM PG 4

In the future, an industrial facility could potentially host its own SMR, providing stable electricity directly on site. This reduces dependence on long transmission lines, and improves reliability for critical operations.

Grid Stability and Decarbonisation

One of the biggest challenges facing modern electricity systems is intermittency. Solar panels cannot produce power at night, and wind turbines stop when the wind is weak. To keep the grid stable, a continuous source of electricity is always needed.

Today, that role is often filled by coal. But if India wants to reduce emissions without slowing economic growth, it needs a clean alternative that can operate 24 hours a day.

SMRs provide steady baseload power, without carbon emissions or the large land requirements of solar farms. They allow renewable energy and nuclear power to work together in a balanced energy system.

Safety and Public Confidence

Safety is central to modern SMR design. Many SMRs use passive safety systems that rely on basic physical principles, such as gravity and natural circulation, rather than needing complex mechanical systems or human intervention.

Since SMRs contain much smaller amounts of nuclear fuel than traditional plants, the potential impact of accidents is reduced. In many designs, emergency planning zones are much smaller, thereby making SMRs more suitable for locations near industrial areas.

Clear regulation, strong oversight, and transparent communication will remain essential to building public trust, as India expands its nuclear power capacity.

A Landmark Policy Shift

By opening nuclear power to private participation, India is making a strategic policy shift. Private involvement can bring additional capital, faster execution, and innovation, while the State continues to play a critical role in regulation and safety.

If implemented carefully, this new framework could make India a global leader in SMR deployment. It also offers a model for other countries facing similar challenges of growth, decarbonisation, and grid stability.

Small Modular Reactors, combined with policy reform, give India a powerful new tool to build a cleaner, more reliable, and more resilient energy future.



THE NUCLEAR KNOWLEDGE DEFICIT - DEFINING TOMORROW'S ENERGY WINNERS AND LOSERS

As South Africa, Africa and the global economy accelerate towards a more electrified, digital and low-carbon future, one reality is becoming increasingly clear: energy literacy is no longer the responsibility of engineers and utilities alone. Today, energy decisions are shaping economic growth, environmental outcomes, national resilience and technological competitiveness. Within this evolving landscape, nuclear power training is becoming essential across a wide range of sectors, from technical specialists to executives and policy leaders.

The renewed global focus on nuclear energy is being driven by several converging pressures. These include rapid industrialisation, growing electricity demand, decarbonisation commitments and the urgent need for reliable, scalable baseload power. Understanding nuclear power fundamentals is therefore no longer optional. It is a strategic capability that enables informed decision-making and long-term planning.

Who needs to be informed, and why

Engineers, technicians and energy professionals

must remain up to date with modern nuclear technologies, safety principles, fuel cycles and system integration. As advanced reactors and small modular reactors (SMRs) move closer to deployment, professionals with a solid grounding in nuclear fundamentals will be better equipped to design, operate and integrate these systems alongside renewables and energy storage.

Policy makers and energy planners require a clear, evidence-based understanding of nuclear power to develop realistic national energy strategies. In the South African context, where energy security, grid stability and economic development are closely linked, informed nuclear decision making is critical in avoiding short-term solutions that undermine long-term resilience.

Environmental and sustainability managers are increasingly responsible for balancing decarbonisation targets with operational reliability. Nuclear energy offers low lifecycle emissions, a small land footprint and dependable baseload generation. These attributes make it a powerful enabler of credible net-zero and just energy transition strategies, provided its role is properly understood.

Communicators, educators and journalists in the energy sector play a crucial role in shaping public understanding. Accurate, well-informed communication around nuclear safety, waste management and environmental impact is essential to counter misinformation and support constructive public dialogue.

Industry stakeholders and investors must assess nuclear energy from a commercial, regulatory, and risk perspective. As global capital increasingly flows towards clean and dependable power solutions, informed investors are better positioned to evaluate nuclear opportunities, timelines and long-term value.

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Data centres, AI and the energy inflection point

One of the most significant drivers behind renewed interest in nuclear power is the rapid growth of data centres and artificial intelligence. AI workloads, cloud computing and digital infrastructure require a continuous, high-density electricity supply. Unlike intermittent energy sources, nuclear power delivers consistent baseload generation with minimal carbon emissions, making it particularly well-suited to supporting the digital economy.

Leading global technology companies are already exploring partnerships with nuclear operators to secure long-term electricity supply for data centres. This trend has important implications for South Africa and the broader African continent. Every sector that depends on digital systems, from banking and healthcare to mining, manufacturing and logistics, is now directly affected by long-term energy availability and reliability.

Nuclear fundamentals are a matter for strategic decision-making

A sound understanding of nuclear power fundamentals allows leaders to move beyond polarised debates and focus on practical, future-focused solutions. It supports stronger risk assessment, more resilient energy planning and better-informed investment decisions. Industries such as technology, mining, heavy industry, transport, and advanced research are already taking the lead by investing in nuclear education to future-proof their operations.

As energy systems become more complex, organisations that lack nuclear literacy risk falling behind both strategically and competitively.



Yolanda de Lange, Executive Director and Lydia Marais Manager: Marketing and Business Development. Institute of Energy Professionals Africa NPC.

NUCLEAR FUNDAMENTALS TRAINING



Building capability through partnership and training

Recognising the growing need for accessible and credible nuclear education, N²A (Nuclear Network Africa) has partnered with the Institute of Energy Professionals Africa (IEPA) to provide nuclear power fundamentals training.

This programme is designed to equip professionals, decision makers and industry leaders with the knowledge required to engage confidently with nuclear energy, in policy, planning, and business environments.

Now is the time for organisations to invest in energy knowledge before decisions become urgent and options are limited.

Enrol relevant teams and decision makers to stay ahead of the energy curve and reposition for a resilient, competitive and low-carbon future. Learn more and enrol in the **Nuclear Fundamentals Training via IEPA: <https://www.iepa.org.za>**

In an era defined by energy security and digital growth, informed leadership will set organisations apart. Nuclear literacy is no longer optional. It is strategic.



AFRICA'S NUCLEAR MOMENT AT DAVOS: FROM ENERGY DEFICIT TO GLOBAL PRIORITY

At the 2026 gathering of the World Economic Forum in Davos, a notable milestone was reached for the African energy sector. For the first time, a dedicated panel focused on nuclear energy in Africa took centre stage. In a global forum traditionally dominated by macroeconomics and geopolitics, this shift signals that Africa's power future is no longer peripheral. It is central.

Rafael Mariano Grossi, Director General of the International Atomic Energy Agency, highlighted the urgency of the moment. Energy demand across the continent is accelerating, while more than 600 million Africans still lack access to electricity. Against this backdrop, nuclear energy is increasingly being viewed not as an abstract ambition, but as a practical component of long-term energy planning.

Progress is already visible. Egypt is constructing its first nuclear power plant. South Africa has extended the life of its existing reactors by 20 years while preparing for future capacity. More than a dozen additional African countries are actively exploring nuclear options. Importantly, Africa holds approximately 14 percent of global uranium resources, positioning the continent not only as a potential consumer, but as a strategic participant in the full nuclear value chain.

Grossi also underscored growing cooperation between the IAEA and international financial institutions, including the World Bank, to unlock financing mechanisms for nuclear new-build projects. This marks a meaningful evolution in the conversation. Historically, nuclear has faced funding constraints. Today, that narrative is beginning to shift.

The presence of African policymakers, representatives from the African Union, financial leaders, and global industry bodies, including the World Nuclear Association, reflects a maturing ecosystem. The dialogue is no longer theoretical. It is strategic, coordinated and increasingly pragmatic.

For Africa, this moment is significant. The inclusion of nuclear energy at Davos affirms that reliable baseload power is essential to industrialisation, economic resilience and energy security. The conversation has moved from whether Africa should consider nuclear to how it will responsibly and sustainably implement it.

From an N²A perspective, this is an encouraging trajectory. Africa's energy future must be diverse, stable and investment-ready. Davos 2026 made one thing clear: nuclear energy is now firmly part of that future.



Dr Rafael Grossi, Director General of the International Atomic Energy Agency, together Dr Sama Bilbao y Leon, Director General of the World Nuclear Association, running a seminar on Nuclear for Africa.

AFRICA'S NUCLEAR POWER LANDSCAPE.

TOP HIGHLIGHTS FEB 2026



Landmark African Nuclear Energy MoU Signed at AU Summit

A strategic Memorandum of Understanding between the African Union, AFCONE and OECD's Nuclear Energy Agency sets a continent-wide cooperation framework for nuclear research, regulation, innovation and infrastructure growth.

IAEA Completes Safety Review of South Africa's Historic SAFARI-1 Reactor

IAEA experts conclude a thorough safety and ageing management review of South Africa's SAFARI-1 research reactor, highlighting strengths and recommending improvements for sustainable long-term operation.

Southern Africa Nuclear Podcast Explores Regional Energy Futures

Industry leaders discuss South Africa's operational nuclear experience and Namibia's resource role, examining regulatory, commercial and geopolitical implications for regional nuclear growth.

Nuclear Energy Insights Report: Signals Renewed African Focus

Latest industry analysis underscores nuclear energy's rising role in African power strategies, highlighting growing interest in low-carbon baseload options to complement renewables.

10 FROM WASTE TO RESOURCE - NUCLEAR “WASTE” AS AN UNSPENT ENERGY RESERVE, AND THE END-OF-LIFE REALITIES OF RENEWABLES IN AFRICA

DR UGOCHUKWU UGBOR

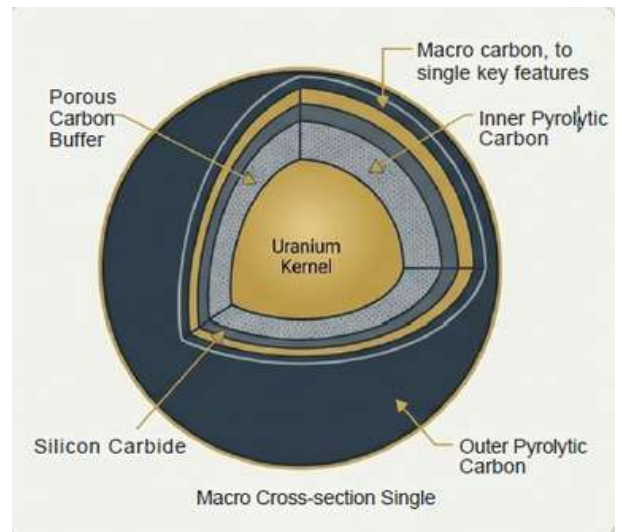
Africa stands at a critical energy crossroads. With surging demand for reliable, affordable power, to drive industrialisation, combat poverty, and meet climate goals, the continent must make wise choices. Renewables like solar and wind have expanded rapidly, delivering vital off-grid access to millions who now have lights, phone charging, and basic appliances, as outlined in the International Atomic Energy Agency's 2025 publication entitled: Outlook for Nuclear Energy in Africa. Yet, their end-of-life management reveals a hidden crisis: persistent, non-decaying toxic waste flooding unregulated landfills and informal dumpsites. In contrast, nuclear power's so-called “waste,” which would be better termed “an unspent energy reserve”, is tightly regulated, decays over time, and holds vast untapped potential for future energy generation.

The designation “nuclear waste” is a misnomer. Spent nuclear fuel retains 90–95% of its original energy potential, primarily in unused Uranium-238 and Plutonium isotopes. For example, a single uranium fuel pellet, comparable in size to one's thumb, contains as much energy as a ton of coal. After reactor use, most of this energy remains in the spent fuel. Countries such as France reprocess spent fuel to recover up to 96% of reusable material (95% Uranium and 1% Plutonium), thereby transforming apparent “waste” into new reactor fuel, significantly reducing final waste volume and extending resource availability, as detailed by Orano in their overview entitled: Recovery and Recycling of Nuclear Fuels. The residual waste material, after reprocessing, constitutes only a small fraction of the original volume. Rather than being a liability, spent fuel represents a strategic resource.

Stringent, internationally enforced regulations control spent fuel. Under IAEA safeguards, the Joint Convention on the Safety of Spent Fuel Management and Radioactive Waste, and frameworks like South Africa's National Radioactive Waste Disposal Institute Act, the handling of spent fuel is professional, secure, and transparent.



**Dr Ugochukwu Ugbor, Executive Chairman, STELLA
Advanced Energy. Vienna Austria**



**TRISO (TRISTRUCTURAL ISOTROPIC) PEBBLE FUEL IS
DEVELOPED AND PRODUCED IN PRETORIA, SOUTH
AFRICA.**



CONTINUED ON PG 11

CONT.... FROM PG 10

Contrast with renewables

A totally contrasting scenario is presented by the management of waste from renewable energy technologies. Solar panels, particularly those utilizing cadmium telluride, and wind turbine blades, contain hazardous substances such as cadmium (a known carcinogen), lead (a neurotoxin), and PFAS, which are persistent chemicals associated with cancer and immune disorders. These materials do not degrade and can persist indefinitely in the environment, leaching into soil, groundwater, and food chains.

In Africa, waste from renewable energy technologies remains largely unregulated. Off-grid solar systems, which are essential for rural electrification, frequently utilize short-lived lead-acid batteries, typically with lifespans under four years. Waste volumes are increasing rapidly.

A 2025 study by *W Liu et al*, published in *Environmental Science & Technology*, entitled; *Solar Photovoltaic Development in West Africa Will Face Million-Ton Waste Challenges, and Off-Grid Systems Will Dominate*, estimates that West Africa alone could generate between 2.3 and 7.8 million tons of cumulative solar photovoltaic waste by 2050, with approximately 70% originating from off-grid systems that predominate in rural areas. This waste is non-degradable and requires active management to prevent environmental contamination, yet most of it is disposed of in informal dumps or openly burned.

In Zambia, research indicates that over one million solar panels, sold between 2018 and 2022, have already failed. In the absence of policies or safe disposal facilities, communities dismantle these panels, burn plastic coatings, releasing dioxins and heavy metals into the atmosphere, then bury them in pits or dispose of them in latrines. Some broken panels are repurposed as makeshift toys or battery chargers, directly exposing children and families to toxic dust. Improper disposal practices can result in fires and explosions, and the lack of repair

infrastructure or public awareness exacerbates risks in rural areas, already facing significant socioeconomic challenges, as detailed in the University of Reading's 2025 news article, entitled, *Zambia's solar success comes with toxic waste risk*.

Lead-acid batteries present an even more immediate hazard. In Malawi, informal recycling of batteries from off-grid solar systems releases 3.5 to 4.7 kilograms of lead pollution per battery, which is more than 100 times the lethal oral dose for an adult. This lead contaminates densely populated villages, as dust, debris, or open waste, resulting in elevated blood lead levels. Comparable trends in other countries reveal that workers at informal battery recycling sites can experience dangerously high lead exposure, transforming a purportedly clean energy solution into a significant public health crisis, as explained in the Pure Earth and University of Manchester research brief (2024–2025) entitled; *How Are Malawi's Rural Solar Energy Systems and Lead Poisoning Connected?* (published in *Applied Energy*).

The issue is further exacerbated by imports of poor-quality or second-hand panels, which enter markets without end-of-life oversight. **CONTINUED ON PG 12**



So-called First World 'Green Aid'

The United Nations and international frameworks contribute to waste management, but their effectiveness is inconsistent. The Bamako Convention prohibits hazardous waste imports, including certain toxins from renewables, yet enforcement gaps permit continued dumping. Renewables waste often evades regulation and is exported from wealthier nations as so-called "green" aid, as explained in a 2024 Forbes Africa article by Tamsin Mackay entitled "After Solar, Comes Lead: Why Africa Can't Afford To Become A Toxic Dumping Ground For E-Waste."



Africa must avoid becoming a repository for unregulated renewables waste while neglecting the disciplined management associated with nuclear energy. Nuclear power provides reliable baseload electricity with minimal land requirements, near-zero operational emissions, and waste that is contained, decays over time, and is potentially reusable. The IAEA's 2025 "Outlook for Nuclear Energy in Africa" projects that nuclear capacity could increase tenfold by 2050, in a high-case scenario (or fivefold in a low-case scenario), supplying reliable baseload power. Renewables, in turn, offer valuable supplementary contributions, yet their substantial future waste burdens necessitate robust safeguards equivalent to those applied to nuclear.



A responsible path forward involves prioritizing nuclear energy for reliable baseload generation, and enforcing extended producer responsibility for renewables imports. Waste management is essential to avoid adverse outcomes. Initiatives such as regional recycling infrastructure should be developed to address waste challenges.

Adopting nuclear energy enhances energy security and prevents the transmission of persistent toxic waste to future generations. Nuclear energy's "unspent reserve" also provides potential future fuel.

Africa's energy future should be characterised by responsibility.



STUPID RADIATION REGULATION HINDERS SAFE NUCLEAR POWER

ANDREW KENNY

Nuclear power is the safest and cleanest source of energy, and always affordable if it is run properly. It is by far the best option for South Africa's future electricity supply. The biggest obstacle for nuclear power is stupid regulation, especially on radiation.

Radiation is everywhere: in the air, the ground, the water, in our food and in our own bodies. Every cell of every animal that has ever lived is bathed in radiation, doing no harm at all. This natural radiation is far, far greater than the radiation we ever get from nuclear power. Eating one banana will give you more radiation than you would get from Koeberg if you lived at its perimeter fence for a hundred years.

"There is no safe level of radiation" is a totally wrong statement. At extremely high levels, such as you would get from nuclear weapons or from radiotherapy (the high radiation kills cancer cells), radiation is very dangerous. But below a certain level, which is far higher than we are ever exposed to except in hospitals, it does no harm at all.

Yet, until now, nuclear power regulation is based on the ridiculous notion of "LNT", meaning "Linear No-Threshold". At a certain very high level, radiation does cause harm, so LNT assumes that at half of that level it causes half the harm, at 1% of that level 1% of the harm, and so on. What nonsense!

Suppose it is found that 50% of people die from falling 20 metres (about the height of a 6-storey building). Suppose the average height of a bed is 60 centimetres. According to LNT, that would mean that 1.5% of people would die from falling out of bed. $(0.6 / 20) \times (50)$.

The world population is now 8 billion. Assume half of the people sleep in a bed. LNT says that 60 million people might die falling out of bed $(0.015) \times (4 \text{ billion})$. Imagine the green headline: "60 million people could die from existential bed threat!"

Another absurd nuclear radiation policy is "ALARA" meaning "As Low As Reasonably Achievable"



Andrew Kenny is a nuclear engineer who has published many public interest articles around the world. He has worked with large power stations and other industrial operations.



CONTINUED ON PG 14



CONT.... FROM PG 13

Now, is it reasonable for everybody in the world to sleep on the ground? This is what Japanese people and campers already do. So, ban all beds and everyone must, by law, sleep on the ground.

Nuclear LNT regulation is worse than this. People can die from very low falls. A tiny number of people might die from falling out of bed. But nobody will die from radiation below a certain high threshold. In fact, quite the opposite: up to a certain level, radiation reduces cancer and so reduces deaths from it. This is because animals have been exposed to radiation since the beginning of life on Earth, and our immune systems have evolved to cope with it. Radiation can cause double DNA strand breaks, but it increases the body's repair mechanism by more, so the net result is a reduction of cancer. Most of us receive far less radiation than the optimum for reducing cancer.

This has been found in surveys of households exposed to radon, a naturally radioactive gas that seeps out of the ground; the incidence of cancer in these households was reduced. In Taiwan, in 1982, by accident, 1,700 apartments were built using steel that was heavily irradiated. The people living in these apartments were exposed to heavy levels of radiation. When this was discovered in 1998, a thorough investigation was done into the health of the people exposed. It was found that they had a much lower incidence of cancer than the rest of the population (non-exposed).

Recently, the USA's Department of Energy (DOE) has announced it will be ending ALARA (which means ending LNT too). I don't know how many nuclear regulators will follow suit but it is wonderful news, a good beginning.

The National Interest writes: "By ending the ALARA principle, DOE opens the door to science-based radiation regulation that could restore nuclear power's competitiveness."

Quite so.

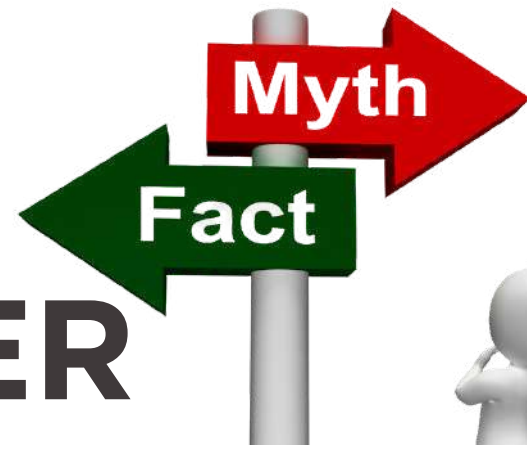


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MYTH BUSTER



MYTH:

The “Only for Rich Countries” Excuse

“Nuclear power is for wealthy nations.” Because electrons check GDP before flowing.

FACT:

Countries outside the traditional Western power bloc have successfully launched nuclear programmes through structured partnerships and phased financing models. Nuclear energy is a long-term infrastructure investment, not a luxury purchase.

Energy security is not a status symbol.

MYTH:

The “Africa Doesn’t Have the Water” Concern

“Nuclear plants use too much water for African conditions.” As if innovation stopped in 1985.

FACT:

Modern reactor designs use advanced cooling systems, including dry and hybrid cooling technologies suited for arid regions. Engineering evolves, and so do siting strategies. Water constraints are managed through design, regulation, and environmental planning.

Technology adapts. That’s the point.



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THE CONTINENTAL ENERGY AND INFRASTRUCTURE INVESTMENT FORUM: TURNING AFRICA'S ENERGY AMBITION INTO BANKABLE REALITY

In February 2026, Zambia stepped confidently into the continental spotlight as it hosted the Continental Energy and Infrastructure Investment Forum from 2 to 5 February. Notably, this marked the first time the Forum was held outside South Africa, signalling a broader regional ownership of Africa's energy investment agenda.

The tone of the gathering was pragmatic and solutions-driven. Speaking at the Forum, Albert Halwampa, Director General of the Zambia Development Agency, highlighted that Zambia currently has over 10 000 megawatts of power projects seeking financing. Crucially, several power purchase agreements are already in place, meaning projects are not conceptual. They are structured and awaiting financial closure. This emphasis on transaction readiness set the Forum apart. Rather than broad policy discussions alone, the focus was firmly on connecting independent power producers with credible financiers. Institutions such as the Development Bank of Southern Africa were identified as strategic partners capable of unlocking capital and moving projects from pipeline to implementation.

Across African energy commentary in recent months, three themes consistently emerge: energy security, diversification of generation capacity, and infrastructure that underpins industrialisation. The discussions in Zambia reflected these priorities clearly. Delegates acknowledged that while Africa's project pipeline is robust, mobilising capital at scale requires regulatory certainty, blended finance mechanisms, and disciplined project preparation.

Encouragingly, the Forum brought together policymakers, utilities, developers and financiers in a way that suggested growing maturity in the continental energy ecosystem. The underlying message was that Africa is not short of opportunity. What is required is alignment between technical planning and financial structuring.

A significant highlight was the contribution of Dr Kelvin Kemm of Nuclear Network Africa, who attended as a special speaker. Dr Kemm placed the investment discussions within a broader strategic framework, emphasising the importance of reliable baseload generation alongside renewable expansion. He reminded participants that long-term grid stability and industrial growth depend on diversified energy portfolios, including advanced nuclear technologies.

CONTINUED ON PG 18



Zambian President, Hakainde Hichilema, spoke at the CEIF Conference in Zambia



Dr Kelvin Kemm, one of South Africa's Leading Nuclear Power Experts, Speaker at the CEIF Conference in Zambia

CONT.... FROM PG 17

His presentation resonated strongly with delegates. In a forum largely centred on finance and transactions, Dr Kemm provided strategic depth, challenging stakeholders to think beyond short-term capacity additions and to consider the infrastructure backbone required for sustained economic transformation. For many attendees, this was a timely and thought-provoking intervention.

The decision to host the Forum in Zambia was itself significant. It underscored the country’s growing role in regional energy leadership and demonstrated confidence in its investment environment. More broadly, it reinforced the principle that Africa’s energy future is a shared continental project.

In summary, the 2026 Forum delivered a clear and positive message. Africa’s energy challenges are substantial, but so too are its opportunities. With structured projects, committed stakeholders and increasing collaboration between developers and financiers, momentum is building. If the connections forged in Zambia translate into financial closure in the months ahead, the Forum will stand as an important milestone in turning Africa’s megawatts on paper into power on the grid.



CEIF delegates arriving at the Conference Centre, Zambia 2026



Dr Boster Dearson Siwila, CEO of The Radiation Protection Authority of Zambia

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