



iCE-JET

frica

*Delivering a*

JUST & EQUITABLE  
ENERGY TRANSITION

iCE THE  
INTERNATIONAL  
CENTER FOR ENERGY

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# SUMMARY

Making the shift from carbon-heavy economies to net zero greenhouse gas emissions by 2050 is imperative. This scale of change, though daunting, presents massive opportunities for profound growth and lasting change, especially in Africa.

The decisions made over the next few years will determine whether our existence on Earth, as we know it, will continue or collapse because of human activity. As the world suffers the worsening impacts of climate change, policy responses must be increasingly holistic – driving overall changes in how we “exist” and realize better outcomes “for people and planet.” Africa stands at the vanguard in terms of potential. Yet, despite historically negligible emissions, Africa is worst-hit by climate change. Even so, it remains a vital piece in the decarbonisation puzzle as its unique resources help power clean technologies and deliver a green future for the world—all this as her interests continue to be subordinated by financial and geo-political imbalances. The way forward is clear. Charting a ground breaking route to socio-economic development with green, renewable energy is unavoidable – but it must be with far more than pacts and pledges. Africa must engage and stimulate the local intellect, curry private sector investments, foster an enabling environment, and prioritize implementation by her private sector and not her cash-strapped governments. This program document fully expresses a vision to emphasize the African people and their interests as vital stakeholders in the energy transition. Hopefully, it is a vision you can get behind and be a part of.

**Sandra Williams**  
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# ICE-JET: The essence, Our vision.

**The Essence: ICE-JET is a multilateral, cross-sector, and collaborative platform that birthed pragmatic solutions towards advancing a “JUST & EQUITABLE ENERGY TRANSITION” in Africa.**

As the world's youngest continent, Africa is expected to be home to nearly 2.5 billion people by 2050. Eighty percent of them will live in Sub-Saharan Africa, where less than half of all the people have access to electricity today and as little as 16% have access to clean cooking fuels and technologies. Africa is also among the most vulnerable parts of the world to climate change and is already experiencing an increase in devastating flood- and drought-related food insecurity, according to the latest report on climate mitigation by the Intergovernmental Panel on Climate Change (IPCC). It is also important to note that, though Africa contributes the least to greenhouse gas emissions, it is impacted the most. In addition to this, Africa is expected to respond with the same urgency and speed that other continents use in implementing their energy transition plans.

Despite this inequity, the energy transition, with its systematic shift to renewable energy, needs to be understood as a vast opportunity to improve livelihoods across Africa in ways that transcend purely economic benefits. Africa is critical to a green future. The continent's geographic diversity holds enormous potential for solar and wind power, and its soils are home to many minerals and rare-earths needed for clean energy technologies. One of the major challenges for Africa is that, in the face of numerous and competing challenges, it must provide as much power as possible from renewable sources, develop entire suites of clean technologies, modernize recycling, eliminate single-use plastics, and build a circular economy. Emerging ideas, entrepreneurs, and companies will drive their energy transition, but they can only succeed with the proper support and investment. Africa therefore needs a platform and voice that communicates its unique challenges to the rest of the world and leads a drive for an energy transition that is truly equitable and fair.

It is against this backdrop that ICE-JET proposes to unfurl immediate, private sector-led, and government-supported action using a three-pronged approach:

- Advocacy and Empowerment;
- Projects for People, and
- The JET Africa Green Fund



## ICE-JET: Advocacy & Empowerment

According to one of the reports of the International Renewable Energy Agency (IRENA) on Renewable Energy Market Analysis in Africa and its Regions, a global reduction in CO2 emissions in accordance with the Paris Agreement could have a significant and positive impact on gross domestic product (GDP), job creation, and welfare across Africa. This would be due to factors like lessened climate impacts, improved public health, and the emergence of new industries that support the Energy Transition in and outside of Africa.

### **The challenge**

Despite the positive impacts the transition could have on Africa, the energy transition is a mammoth task for Africa due to her unique circumstances. Developed countries do not take into full consideration the uniqueness of Africa's challenges in the energy transition. Thus, Africa must speak up in the international community to ensure that the transition to a net-zero economy is equitable and just for all relevant stakeholders.

Furthermore, the systematic switch to renewable energy, which forms part of the energy transition, needs to be regarded as an opportunity, not a burden, to enhance livelihoods across Africa in ways that go beyond just economic gains. Unless people and organizations are adequately trained, informed, and empowered to benefit from this admirable initiative, attaining it could result in a dubious undertaking. As the clean energy transition is heavily influenced by policy, our initiative could position and help shape the policy agenda, provide research and analysis, and mobilize coalitions to push for changes in government policies.

### **ICE-JET Response**

**Advocacy:** the urgency of the energy transition is understandably lost on many African governments and communities. The need for advocacy in this regard cannot be overemphasized. ICE-JET will work through media and town hall campaigns to raise grassroots awareness and aspirations and inspire the political will to undertake the clean energy transition.

**Training:** JET Africa, together with the ICE Energy Learning School (ICE-ELS) and other partners, will champion training programs with governments, companies, and places of learning. ICE-JET's intention is to reform trainings and school syllabuses to amplify sustainability and clean energy technologies in the fields of research and education.

**Empowerment:** JET Africa will empower MSMEs to deliver innovative solutions to the problem of clean energy access. Together with partnered organizations, we would work to support entrepreneurship and company growth in small communities across Africa by providing access to accelerators, incubators, test beds, and commercialization services.



# ICE-JET: Projects for People

In alignment with the 2020 revised Environmental and Social Sustainability of the United Nations Environmental Program (UNEP), ICE-JET is deploying four scalable projects towards the realization of its vision, and to curb the challenges facing Africa's energy transition. JET Africa projects are as follows:



Illuminate Africa



BLUE ECONOMY & PLASTICS



Art4Climate



Smart Electric Mobility

## Illuminate Africa

According to the International Renewable Energy Agency (IRENA), electricity makes up about 19 percent of total energy consumption and has the potential to grow exponentially. Electricity plays a major role in the energy transition. It helps in decarbonisation, which is essential for the energy transition, and is even more impactful when it is generated by renewable sources. To reach decarbonisation targets and fight climate change, the use of renewably generated energy needs to grow substantially. However, to achieve an increase in the use of renewable energy, there must first be access to electricity. This is a major challenge for Africa.

### **The challenge**

Less than 50 percent of the African population has access to electricity. This serves as a drawback to the energy transition in Africa. Access to electricity and the ultimate transition to renewable electricity align with the United Nations' Sustainable Development Goals. There can be no energy transition without access to clean, reliable, sustainable, and modern energy. It is therefore imperative that Africa move from fossil fuel generated electricity to renewable energy. This is a goal Africa must strive to achieve in order to have a successful renewable energy transition.

### **ICE-JET Response.**

ICE-JET shares this vision of Africa's transition to renewable electricity. Its flagship project, Illuminate Africa, is birthed in response to this challenge. Through the project, ICE-JET and Illuminate Africa are committed to facilitating the advancement of solar, wind, green hydrogen, and other alternative green technologies towards energy generation and universal access in Africa. The project also sets out to encourage the advancement of clean electrification and drive investments in off-grid renewable energy.





## Blue Economy & Plastics

Oceans are the source of livelihood for many people around the world. Ninety percent of trade, travel, and tourism revolve around the ocean. According to a report by Sarah Nyawira in her role as UN Volunteer Project Management, Monitoring, and Evaluation Officer with the UN Environment Program (UNEP), it was estimated that 60 million people live within 100 km of a coral reef and benefit from the economic, social, and cultural services it provides in Africa. Oceans have continuously provided the raw materials or foundation for economic activities such as tourism, ports and shipping, fisheries, and processing. These activities underpin local economies and businesses, sustaining the livelihoods and wellbeing of the human population.


### **The challenge.**

The World Bank Group operational brief of November 2022, however, reports that without significant global action, plastics entering the ocean are expected to triple from between 9 and 14 million tons per year to between 23 million and 37 million tons per year. These plastics contribute to climate change. They emit greenhouse gases as they decompose, and evidence shows that the tiniest bits damage zooplankton-critters that are critical to the ocean's ability to absorb carbon.

Marine litter and plastic pollution, in tandem with rapid increases in population and consumption levels, coupled with high reliance on coastal and marine resources for sustenance and livelihoods, have caused irreversible damage and the collapse of coastal and marine ecosystems. Kenya and Tanzania have lost about 18 percent of their mangroves; Mozambique has lost 27 percent; and coral reefs in the Indian Ocean have declined by 15 percent.

Sub-Saharan Africa has a vast coastline and abundant marine resources, making the blue economy a promising area for economic growth and sustainability. However, plastic pollution is a significant threat to marine ecosystems in the region. Africa is estimated to be the second-biggest ocean plastic polluter. Its growing urban population and poor waste management could result in the continent being the largest contributor to global mismanaged plastic waste by 2060. The impacts of climate change exacerbate and amplify the damages caused by pollution. Needless to say, this continuous harm to the ocean must be stopped.



The background of the page is a photograph of various pieces of plastic waste, including bags and bottles, floating in clear blue water. The lighting is bright, creating a high-contrast scene with some reflections on the plastic surfaces.

To curb the effects of plastic pollution on the blue economy, there is no single solution; rather, a coordinated set of actions is needed for Africa to overcome the challenges facing its blue economy. Some of these challenges include poor data management, weak institutional frameworks and regulations, and lack of awareness.

**ICE-JET Response.**

ICE-JET recognizes this challenge in Africa and is set to change the narrative of the blue economy to ease the energy transition in the continent. Under the Blue Economy and Plastics Project (Project BEP), efforts and activities are directed towards reusing and converting manufactured plastics. This project will bring together a network of resources for collective action to advocate clear messaging in the packaging industry and drive better awareness. Also, ICE-JET will work with willing organizations in the manufacturing and packaging industries to create and scale innovative replacements for single use plastics, eradicate and clean single-use plastic in coastline and work with stakeholders to implement innovative solutions that recycle and convert plastic waste for development uses.

## Art4Climate

Art has the power to educate, empower, engage, and drive social change. African art in particular is one of the earth's oldest and most diverse legacies. This enriches its potential to inspire creative practices that benefit the environment, whether that is by using accessible and natural resources or by inspiring social awareness about sustainability and climate change. Around the world, leaders of the charge on climate issues already recognize art's incredible potential as a cultural rallying point and are taking advantage of the use of Art to drive the energy transition. Africa must rise to the occasion and express its rich culture.

### **The challenge.**

As the tangible impacts of a planetary crisis accumulate, it has become quite urgent for societies to change the ways in which they interact with and affect their environment. International climate talks have amply demonstrated that an intellectual understanding of the scientific facts is insufficient. If Africa must move beyond grand declarations and effect meaningful change, she must work to situate the decarbonisation imperative in the minds, cultures, values, and creative expressions of her population. This can be done through Art.

### **ICE-JET Response.**

Art4climate, a flagship project of JET Africa, leads the charge for Africa's reorientation to sustainability. The project aims to harness artistic and cultural influences and, through them, facilitate the integration of sustainability, art, and eco-friendly standards into urban designs and processes. Through Art4Climate, ICE-JET will also partner with willing organizations to deliver projects that promote the utilization of waste materials for art towards the message of environmental protection and climate change, as well as drive investments in art advocacy for audiences across Africa.

## Smart Electric Mobility

In light of the fact that Africa still struggles with access to energy, the abundance of renewable energy resources offers many chances and opportunities for the continent's energy transition to take many paths across various sectors and make use of a variety of technologies.

Transportation is a fundamental requirement of modern life, as it keeps the economy alive. However, today's transportation is predominantly based on the combustion of fossil fuels, making it one of the largest sources of both urban and regional air pollution. The transport sector contributes approximately one quarter of all energy-related greenhouse gas emissions. This is alarming and calls for urgent action. To successfully achieve the transition to clean technology and ultimately reach net zero by mid-century, the transport sector must be given primary focus, and action must be taken quickly to end the continuous harm caused to the environment.

### **The challenge**

Conventional fossil-based internal combustion engine (ICE) vehicles, which run on gasoline or diesel, contribute to air pollution and greenhouse gas emissions, which are associated with adverse health effects and climate change. In Africa, the impact of vehicle emissions on air quality and public health is a growing concern, especially in densely populated urban areas. Almost all the vehicles in use in Africa, which number over 70 million, use fossil fuels (petroleum and natural gas). Poor quality and the sale of second-hand powered cars increase transport emissions. The UN Environment Report record that about 600,000 deaths a year are associated with air pollution. These deaths are estimated to have cost the continent over \$215 billion in 2013.

With the negative effects of fossil fuel-powered vehicles on the environment and the need for sustainable transportation, it has become imperative that an alternative to conventional transportation be explored. Electric vehicles can serve as a healing balm. Electric vehicles, which rely on batteries rather than fossil fuels, emit fewer greenhouse gases and air pollutants than petrol or diesel cars and have an overall better performance than conventional transport. Indeed, electric vehicles as a source of green transportation must be explored as a solution to this pressing challenge.

To address these challenges, there are ongoing efforts in Africa, as in other parts of the world, to promote alternative fuel vehicles, such as electric vehicles (EVs), as well as policies to improve fuel efficiency and reduce emissions from conventional vehicles.



A white van is parked on a grassy field. The van is the central focus of the image, with its front and side visible. The background is a clear blue sky. The van has a white body with a dark stripe along the bottom. The wheels are black with silver hubcaps. The grass is green and appears to be a lawn or a field. The overall scene is bright and clear, suggesting a sunny day.

### **ICE-JET Response**

ICE-JET Africa recognizes the need for a speedy transition to green transportation and has launched Project Smart Electric Mobility as an energy transition pathway for Africa's road transport. Through the project, ICE-JET will bring together African governments and stakeholders to increasingly focus on promoting electric vehicles (EVs), investing in renewable energy infrastructure, encouraging public transportation systems, and exploring alternative fuels like biofuels and natural gas. Such measures aim to reduce dependence on fossil fuels, improve air quality, enhance energy security, and foster sustainable development on the continent. This project will bring together a network of collective action to advocate clear messaging in the transport sector on the benefits and importance of smart mobility to the transport sector and Africa's economy, as well as drive better awareness. Also, ICE-JET will work with willing organizations in the public and private sectors in the manufacturing and assemblage of electric vehicle parts, as well as in the investment and financing of electric vehicles.

# The JET Africa Green Fund

The JET Africa Green Fund ("JET Fund" or the "Fund") is a multi-donor trust fund well positioned to power the continent's growth and development. The JET Fund targets raising seed capital of \$100 million USD to be deployed towards the realization of the projects.

The ICE-JET fund will be utilized to fund, develop, and execute projects that bear out innovative and sustainable approaches and solutions to the energy transition. The fund will support organizations in the deployment of soft and venture funding to power clean technologies and prepare Africa for its leading role in a green future.

ICE-JET is bankrolling African Solutions by investing in one hundred start-ups and one hundred projects across Africa.



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# Monitoring and Evaluation

ICE-JET accounts for the need to see our promises yield results. Our partnership with the PMO, a project management company, allows us to set project-specific monitoring and evaluation procedures for organizations, start-ups, and governments. Thus, we can compel contractors to deliver on their contractual commitments and promote investor confidence.


We have outlined a comprehensive approach that integrates research, capacity development, advocacy, and project delivery toward achieving our ESG-aligned goals. We are committed to creating a sustainable future for Africa by mobilizing our collective efforts and resources toward clean energy transitions and marine sustainability. Join us as we work towards a brighter and more sustainable future for Africa, and let us continue to build a legacy of sustainable development for generations to come.







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- Nigeria. ■ Ghana. ■ Gambia.
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