



5th Edition of RE4SG Conference & Exhibition

Report

2025

Introduction

The Renewable Energy for Sustainable Growth (RE4SG) Conference and Exhibition 2025, organized by the Energy Private Developers Association (EPD) in collaboration with the MININFRA, University of Strathclyde / Global Renewables Centre (GRC), and both local and international stakeholders, embodied the spirit of progress by uniting visionaries, policymakers, private sector leaders, and innovators aiming to shape the region's clean energy future.

EPD proudly hosted the 5th Edition of this flagship event under the transformative theme: "Empowering Africa's Energy Future: Innovation, Transition, and Sustainability." The conference showcased Rwanda's renewable energy journey as a regional model, offering a vibrant platform for international business, partnerships, and investment in sustainable energy solutions.

As EPD marked 11 years of leadership in advancing Rwanda's energy transition, the milestone reflected a decade of tangible impact: as of July 2025, 84.6% of Rwandan households are connected to electricity 59.6% through the national grid and 25% via off-grid systems, mainly solar.

Rwanda's continued commitment to achieving 60% of generation capacity from renewable energy by 2030 underscores the central role of private developers in driving this transformation.

The RE4SG 2025 Conference and Exhibition attracted 1,069 participants 305 in-person and 764 online from 13 countries, showcasing regional and global interest in Rwanda's energy success.

The exhibition featured innovations in Electric mobility, Solar systems, and Clean cooking, while panel discussions and field visits to KEYA Hydro power plant managed by ENERGICOTEL, Nasho Solar Irrigation of REG, and E-mobility assembling Plant (SPIRO Ltd), Clean Cooking Plant (Safer1 and Eco-green Solution).

The 2025 edition reaffirmed the RE4SG conference week as a catalyst for innovation, policy dialogue, and sustainable investment, propelling Africa toward a resilient, green, and inclusive energy future.



Dr. Ivan TWAGIRASHEMA

EPD's Chairman

In his opening remarks, Dr. Ivan TWAGIRASHEMA, Chairman of the Energy Private Developers (EPD), welcomed participants to the fifth edition of the RE4SG Conference and Exhibition, held during Rwanda Energy Week 2025. He recognized the presence of the Honorable State Minister of Infrastructure, the Chief Investment Officer of the Rwanda Development Board, the Ambassador of the European Union to Rwanda, the Chief Advocacy Officer of the Private Sector Federation, as well as representatives from government, development partners, academia, and the private energy sector.

Dr. Ivan explained that EPD, established in 2012 under the Chamber of Industry within the Private Sector Federation, brings together companies in Solar, Hydro, Clean Cooking, methane gas, E-mobility and other energy services, all represented in EPD's Board. He noted that this year's conference takes place at a defining moment as Africa advances toward a just, inclusive, and sustainable energy transition. The Chairman commended the Government of Rwanda, particularly the Ministry of Infrastructure, for its continued partnership with the private sector in driving the national energy agenda.

He further thanked development partners such as GRC, GIZ, SNV, the European Union, IRENA, and WRI for their support, and concluded by appreciating the Scottish Government, University of Strathclyde, Development Bank of Rwanda, and EPD members for promoting innovation and clean energy access nationwide.



Serge Wilson MUHIZI

EPD's Chief Executive Officer

The CEO of the Energy Private Developers Association (EPD) welcomed delegates to the fifth edition of RE4SG Conference and Exhibition, themed "Empowering Africa's Energy Future: Innovation, Transition, and Sustainability."

He highlighted that last year's conference yielded tangible outcomes, including a five-year strategic partnership between EPD and the Ministry of Infrastructure, positioning the private sector as a key driver of Rwanda's energy strategy. In addition, through a new collaboration with BK Foundation, 141 rural households were electrified, and an equal number of improved cookstoves were distributed. This year's CSR initiative targets powering a rural school and health facility with solar energy.

The CEO emphasized EPD's ongoing partnerships with development partners such as EU, SNV, and GIZ through the ReCIC Project, under which 12 clean cooking companies distributed nearly 450,000 improved cookstoves by April 2025.

In collaboration with IRENA and the Ministry, EPD launched the Energy-Food Nexus Initiative, conducted studies on integrating renewable energy into agri-food value chains, and well established multi-stakeholder platforms.

Another joint study focuses on financing and capacity gaps in clean cooking enterprises. New partnerships with LuxDev and BIWE aim to advance skills development, e-mobility, and energy efficiency, while collaboration with WEN-Africa and the World Bank enhances gender inclusion in the energy transition. Regionally, EPD contributes to initiatives like the East African Renewable Energy Federation, Global Renewables Centre, and a four-country Energy Transition Initiative with China, Kenya, and Ethiopia.

The CEO acknowledged government support, including regulatory reforms raising unlicensed project capacity from 50kW to 100kW, responding to EPD led advocacy and empowering small developers. He reaffirmed the private sector's readiness to scale renewable energy generation and encouraged delegates to maximize opportunities for learning, networking, and collaboration to advance an inclusive and sustainable energy transition across Africa.



Damien Frame

GRC Program Manager

Mr. Frame expressed his appreciation for the knowledge exchange platform provided by this conference and previous editions, highlighting the value of sharing learning and building collaborations. He provided an overview of the Global Renewables Centre (GRC), established by the Scottish Government as a knowledge exchange hub linking four partner countries: Rwanda, Malawi, Zambia, and Scotland.

Mr. Frame highlighted the GRC's achievements, first and foremost supporting the Renewable Energy Associations to engage with their local stakeholders but also to reach wider through the GRC network.

Mr. Frame noted that the network has strengthened over time, fostering new international communities of practice to share best practices and attract funding for renewable energy projects. This has facilitated new collaborations leveraging external funding sources, including: new joint research between Scottish and African academics, initiatives supporting women in energy, community energy programs, solar irrigation pilot projects, and student outreach activities.

Looking ahead, the GRC will expand the theme of integrating and financing decentralized renewable energy systems, drawing lessons from Scotland's policies, technical solutions, and commercial models that support local and institutional renewable energy adoption. He emphasized that collaboration among academia, the private sector, regulators, and communities is critical to overcoming technical and policy challenges.

Mr. Frame concluded by reaffirming GRC's commitment to knowledge exchange, innovation, and gender inclusivity, with continued support from the Scottish Government. He encouraged ongoing partnerships to accelerate renewable energy deployment, enhance capacity building, and promote sustainable energy solutions across partner countries.



KANAMUGIRE Calixte

Chief Advocacy Officer / PSF

The Chief Advocacy Officer of the Private Sector Federation (PSF), Mr. Kanamugire Calixte, emphasized the importance of collective efforts in advancing Rwanda's energy sector.

He noted that the conference serves as a key platform for collaboration among the government, development partners, and private sector actors to address energy challenges through innovative, sustainable, and inclusive solutions.

Mr. Kanamugire highlighted the private sector's role not only as investors but also as energy providers, innovators, and partners in expanding electricity access, promoting clean cooking technologies, and investing in commercial and industrial solar systems.

He commended the Energy Private Developers Association (EPD) for its leadership in coordinating the private energy sector, noting that EPD's partnerships align with national priorities and continental frameworks such as AU Agenda 2063 and SDG 7, which focus on affordable and clean energy for all.

He reaffirmed PSF's commitment to supporting the government and stakeholders in creating a conducive business environment through responsive policies and market-driven solutions that enable private sector growth.

In closing, Mr. Kanamugire stressed the need for inclusive energy transition, emphasizing gender equality, youth participation, and the engagement of people with disabilities as active leaders in the sector.

He called for continued collaboration, innovation, and partnerships to drive Rwanda's and Africa's sustainable energy future.



Belen CALVO UYARRA

EU - Ambassador / Rwanda

H.E. Belen Calvo Uyarra, EU Ambassador to Rwanda, expressed her honor in participating in the fifth edition of the Renewable Energy for Sustainable Growth (RE4SG) Conference and Exhibition, held at one of Rwanda's greenest venues.

She commended the Government of Rwanda, the Energy Private Developers Association (EPD), and partners for creating a platform reflecting the theme "Empowering Africa's Energy Future: Innovation, Transition, and Sustainability." Ambassador Uyarra praised Rwanda's vision under NST2, aiming for universal energy access, 60% A renewable energy generation,

and universal clean cooking by 2030. She reaffirmed the EU's commitment to supporting Rwanda in advancing clean energy, climate action, and sustainable development in alignment with the Paris Agreement, highlighting the role of renewable energy in reducing emissions, protecting ecosystems, and creating green jobs.

She cited key EU-supported initiatives such as the RUZIZI III Hydropower Project (206 MW) and the Methane-to-Energy Project on Lake Kivu, illustrating Team Europe's collaborative approach in mobilizing public and private sectors for impact.

She also referenced the Africa-EU Joint Vision 2030, promoting a just and equitable energy transition, and highlighted EU support for clean cooking and climate-smart agroforestry projects benefiting households, women, and the environment.

Concluding, Ambassador Uyarra emphasized that energy is both a technological and socio-economic agenda, tied to youth empowerment, gender equality, and community resilience.

She reaffirmed the EU's ongoing partnership with Rwanda and Africa in building a sustainable, inclusive, and innovative energy future, and wished participants fruitful deliberations throughout the conference.



Michelle UMURUNGI

RDB - Chief Investment Officer

On behalf of the Rwanda Development Board (RDB), Ms. Michelle Umurungi warmly welcomed participants to the fifth edition of the Renewable Energy for Sustainable Growth Conference and Exhibition.

She commended the Energy Private Developers (EPD) for their leadership in building this influential platform that fosters dialogue, innovation, and collaboration toward a sustainable energy future. Reflecting on Rwanda's transformation since the 1994 Genocide against the Tutsi,

Ms. Umurungi highlighted the country's progress in expanding electricity access from 18% in 2014 to over 80% today, with Rwanda on course to achieve universal access by 2030. She stressed that this clean energy shift reflects political will, visionary leadership, and strategic planning.

RDB, she noted, has implemented over 50 business reforms since 2008, creating a conducive investment climate through streamlined registration, simplified compliance, and incentives such as tax exemptions, 0% import duties, and accelerated depreciation for renewable projects.

She emphasized the value of public-private partnerships in advancing renewable energy, facilitating knowledge transfer, and connecting local opportunities with global investors. Under Vision 2050 and NST2, Rwanda aspires to become a regional energy hub and clean manufacturing destination, while developing Centers of Excellence for research, education, and innovation.

Concluding, Ms. Umurungi invited investors to partner with Rwanda in creating sustainable, community-driven projects and using the country as a gateway to regional markets. She reaffirmed that Rwanda is open for business and committed to enduring partnerships for a green, inclusive future.



Jean de Dieu UWIHANGANYE

State Minister/MININFRA

Hon. UWIHANGANYE Jean de Dieu, State Minister at the Ministry of Infrastructure, officially opened the fifth edition of the Renewable Energy for Sustainable Growth Conference and Exhibition.

On behalf of the Government of Rwanda, he welcomed all delegates and partners, commending the Energy Private Developers (EPD) and collaborators for organizing a platform that continues to unite policymakers, innovators, investors, and practitioners in accelerating Africa's energy transition.

He reaffirmed that renewable energy remains central to Rwanda's National Strategy for Transformation (NST1), with the goal of achieving universal access to affordable, reliable, and modern energy while contributing to global climate action.

Rwanda's installed generation capacity has grown from 110 MW in 2014 to 465 MW, with renewables mainly hydro and solar currently contributing 56% of the energy mix.

The country targets 615 MW capacity and over 60% renewable share by 2030, supported by new solar and hydropower investments.

The Minister recognized the contributions of development partners, including the EU, World Bank, AfDB, and KfW, in expanding energy access and driving technological advancement. However, he noted that challenges remain, particularly the high financing costs and affordability issues.

He called on the private sector to increase investments, promote innovation, and scale up renewable projects such as clean cooking and solar-powered irrigation.

Concluding his remarks, Hon. Uwihanganye officially declared the conference open, encouraging all participants to collaborate, innovate, and contribute to Africa's sustainable energy future.



Presentation by ENERGIHOTEL/ ECTL Gas

EnergiCotel, an independent power producer (IPP) with over a decade of experience in hydropower, presented its operations and strategic growth plans. The company not only operates hydropower plants in Rwanda but is also exploring hydro opportunities across Africa. In addition to power generation, EnergiCotel provides engineering consultancy services and has partnered with ICON on the supervision of the Rusumo Hydropower Project. The company has completed Rwanda's first port substation, is currently executing the substation for SEA support, and has conducted feasibility studies for projects in Kenya.

As part of its diversification strategy, EnergiCotel is expanding into gas and solar energy. The LPG gas project is scheduled to launch in early 2026, featuring strong, safe cylinders and efficient delivery services even on weekends and holidays. Digital ordering platforms will enhance service quality, ensuring customer feedback is integrated into continuous improvements. The company emphasized its commitment to being a reliable and responsive energy provider.



Panel Discussion: Rwanda NST₂, ESSP Implementation Analysis of National Strategic for transformation (NST₂) progress



Mr. Emmanuel NUWAMANYA

Mr. Emmanuel Nuwamanya Acting Head of Policy and Planning at MININFRA, presented the alignment between Rwanda's Energy Sector Strategic Plan (ESSP) 2024–2029 and the National Strategy for Transformation (NST₂). As of 2025, NST₂'s second year is underway, with 84% of households accessing electricity, 25% from off-grid systems.

He highlighted the private sector's key role in expanding renewable and off-grid access, implementing Vision 2050, and increasing non-biomass clean cooking adoption to 39%. Emmanuel reaffirmed the 615 MW generation target, urging investment beyond hydropower into solar and other renewables, stressing that private sector engagement is vital for universal access and sustainable industrial growth.



Munyaneza Francine

MD – MUNYAX ECO Ltd

Panelist Francine Munyaneza highlighted the dual nature of renewable energy as both a response to climate change and a significant opportunity for socio-economic development in Rwanda and across Africa.

She emphasized that the sector offers avenues for job creation, skills development, and local content enhancement, including industrialization and the manufacturing of solar equipment.

Ms. Munyaneza stressed the importance of private sector engagement in diverse renewable energy applications, including mini-grids,

solar water heaters, water pumps, solar-powered agriculture solutions, cold storage, solar drying, and other productive uses. She highlighted how these innovations can improve energy efficiency, support agricultural productivity, and expand access to modern energy services.

She noted that while renewable energy presents vast opportunities, challenges remain, particularly in supply chain management, import delays, and regulatory barriers.

Ms. Munyaneza called for continued policy support, incentives, and regulatory reforms to facilitate market growth, expand solar deployment, and encourage domestic industrialization of renewable technologies.

She also stressed the critical need for education and capacity building, pointing out that although solar energy has been present in Rwanda for over a decade, there is still a gap in technical skills and practical expertise. She emphasized supporting young companies entering the sector through finance, training, and mentorship.

Finally, Ms. Munyaneza addressed financial risks, including exchange rate fluctuations, and encouraged collaborative approaches to develop practical solutions that protect investments, foster innovation, and ensure sustainable growth in the renewable energy sector.



Mr. Saroj Rai

Technical Advisor - SNV



Mr. Gareth Walsh

Energy and Climate Director - TBI

Panelists Gareth Walsh and Saroj Rai emphasized the complementary roles of private sector engagement and technical support in advancing Rwanda's energy transformation under the NST2 and ESSP frameworks. Mr. Walsh highlighted that since 2012, the private sector has driven much of Rwanda's energy progress, supported by government facilitation through policy reforms, off-grid initiatives, and infrastructure development. He underscored the shift toward a financially sustainable energy sector, where public-private collaboration ensures efficiency, innovation, and universal access.

Mr. Rai, representing SNV, stressed that technical support is essential to enable private participation and create sustainable energy markets. He noted that innovation, inclusion, and environmental considerations must guide implementation. Drawing from SNV's experience with projects like ReCICI, Mr. Rai demonstrated how partnerships, knowledge transfer, and market development expand regional impact. Both panelists concluded that coordinated public-private efforts, backed by strong technical expertise, are key to achieving Rwanda's renewable energy and sustainability goals.



VUNINGOMA Faustin

Coordinator of RCCDN

VUNINGOMA Faustin emphasized the critical role of coordinated action and advocacy in advancing Rwanda's energy sector. Representing the Rwanda Climate Change and Development Network (RCCDN), he highlighted the importance of a common voice to coordinate activities, share experiences, and raise sectoral challenges with policymakers and stakeholders.

Faustin noted that platforms like the Energy Private Developers (EPD) meeting allow stakeholders to communicate policy concerns, share evidence, and contribute to effective energy management.

He stressed the need for awareness and capacity building, particularly in local communities, to ensure that energy interventions are practical and inclusive. Focusing on universal energy access, Faustin observed that mere connectivity statistics do not fully capture the realities on the ground.

Many households, especially in rural areas, remain unable to afford electricity for cooking or heating, and reliance on traditional fuels continues to pose challenges for health, productivity, and education. He highlighted the gap between technical provision and the affordability and usability of energy solutions.

Faustin further underscored that energy challenges are both national and global, requiring coordinated policy, financial support, and technology transfer. He emphasized the need for affordable energy solutions, including locally manufactured infrastructure like wires and equipment, supported by accessible financing mechanisms.

In conclusion, Faustin called for a holistic approach that balances policy, finance, capacity building, and community needs. He stressed that achieving universal and sustainable energy access requires interventions that are equitable, affordable, and responsive to local realities, while aligning with broader planetary sustainability objectives.



Panel Discussion: Mission 300 and Energy Transition Challenges in Africa



Mr. MUGIRANEZA Jean Bosco

Mr. Jean Bosco Mugiraneza, Director General of Energy at MININFRA, highlighted Rwanda's remarkable progress in electricity access, achieved through strong political will and consistent implementation. He noted that electricity access rose from around 3% to current levels due to decisive leadership and clear performance contracts ensuring accountability. MUGIRANEZA emphasized the value of sector working groups uniting government, private sector, and partners for coordinated planning. He also cited innovative financing, including African Development Bank collaboration under the RDF, linking funding to results. Rwanda's experience, he concluded, shows that political commitment drives sustainable energy expansion.



Mr. Brave Mahonie

Dr. Chilala Kakowa Bowa

Mr. Richard Mori

Panelists Dr. Chilala Kakoma Bowa (Zambian Renewable Energy Association), Richard Mori (MESH POWER), Brave Mahonie (Renewable Energy Industry Association of Malawi), and Sunday Okipoyibo (Nigeria) shared regional experiences demonstrating how policy, finance, and local engagement drive renewable energy access across Africa. Dr. Chilala emphasized Zambia's regulatory reforms, private sector incentives, and innovative initiatives such as Mission 300, expanding last-mile connections to over 220,000 households. She underscored the importance of skills development, storage solutions, and multi-tariff systems for sector resilience.

Richard Mori focused on the financial realities of the off-grid sector, noting that while small solar systems remain subsidy-dependent, productive-use applications like solar-powered irrigation, refrigeration, and agro-processing offer sustainable business models and community benefits. Mr. Mahonie highlighted Malawi's efforts to localize energy solutions through public-private partnerships and capacity-building for domestic enterprises, reducing donor dependency and aligning investment with national goals.

OKIPOYIBO illustrated Nigeria's success in de-risking private investment through grant support, training programs, and strong policy frameworks, mobilizing over \$300 million for renewable energy expansion. Collectively, the panelists underscored that Africa's energy transformation depends on political will, financing innovation, local ownership, and cross-border collaboration to achieve universal, sustainable energy access.

Panel Discussion: Financing clean cooking



Martin Asiimwe

Martin Asiimwe, Policy Monitoring and Evaluation Specialist, highlighted the Rwandan government's efforts to facilitate private sector participation in clean cooking solutions. He noted that programs initiated around 2019, with annual funding of approximately \$20 million, were designed to subsidize access to improved cooking technologies while encouraging private sector involvement.

Initial challenges included companies not meeting participation criteria, which prompted transitional support and capacity-building initiatives to ensure quality production standards. Asiimwe emphasized that government interventions are guided by lessons learned from early programs,

including the importance of integrating tiered stove technologies (Tier 3 and Tier 4) to meet local energy needs efficiently. Efforts also focus on enhancing accessibility, demand generation, and affordability, recognizing that households often misuse or underutilize available technologies without proper guidance and subsidies.

Innovative financing mechanisms are also being explored, including partnerships with international actors such as Singapore and Sweden, to enable private sector investment in clean energy solutions and carbon markets. Asiimwe highlighted the role of institutional engagement, particularly schools, healthcare facilities, and hospitality centers, as key biomass consumers where improved cooking solutions can be scaled cost-effectively.

He concluded that effective implementation requires synergy between government, private sector, and development partners, combining technical support, financial incentives, and institutional engagement. By strategically targeting both households and larger institutional consumers, Rwanda is creating a sustainable, scalable, and inclusive clean cooking market that aligns with national energy access and climate goals.



Panelists Yvette (GIZ), Ehudi Shingiro, Jitendra (LuxDev), and Christine Muhongerwa (Safer1) emphasized that sustainable progress in Rwanda’s clean cooking sector requires an integrated approach combining finance, coordination, innovation, and inclusion.

Yvette highlighted the need for affordable financing, industrial-scale production, and awareness campaigns to drive adoption, while Ehudi stressed coordinated private sector engagement to bridge supply and demand gaps through partnerships and financial support mechanisms. Jitendra underscored local ownership and innovative solutions, such as clonal forestry, blended finance, and the “EQ4AQ” model ensuring availability, accessibility, affordability, acceptability, and quality of clean cooking solutions.

Christine emphasized women’s pivotal role in promoting energy adoption, calling for gender-responsive financing, lower interest rates, and training to empower women entrepreneurs. Collectively, the panelists agreed that clean cooking success depends on holistic collaboration among government, development partners, and the private sector—fostering financial inclusion, gender equality, and sustainable access for all Rwandan communities.

Panel Discussion and Presentation: Advancing Gender Inclusivity in Energy Transition



The panel discussion on Advancing Gender Inclusivity in the Energy Transition explored the pivotal role of women in shaping a just and equitable energy future. Participants emphasized that achieving gender equity in the sector requires deliberate actions, strong institutional commitment, and societal change.

Discussions highlighted the importance of data-driven tools to track progress toward national climate goals and identify areas where women can play a stronger role such as in clean cooking, electric mobility, and energy access. The need for early exposure and visibility was also stressed, urging engagement of girls from high school, showcasing female role models, and expanding scholarships and mentorship programs to attract women into science, technology, and engineering fields.

Cultural norms, leadership gaps, and professional biases were identified as major barriers limiting women's participation and retention in the sector. The conversation also underscored the value of inclusive financing and partnerships, with initiatives ensuring that funding mechanisms incorporate gender equality principles. Panelists called for greater representation of women in technical and leadership roles, safe and supportive workplaces for mothers, and continuous encouragement for young girls to pursue energy careers. The dialogue concluded with a strong call to action to empower, include, and invest in women as key drivers of Africa's sustainable energy transition.

Panel Discussion: Policy Dialogue: Energy-food Nexus

How energy policies impact food security



Dr. Patric KARANGWA

Dr. Patric, Director General at MINAGRI, emphasized youth-driven innovation and energy access as key enablers of resilient, sustainable, and equitable food systems. He highlighted integrating renewable energy both centralized and decentralized—into agricultural planning to address climate and sustainability challenges.

Sessions focused on green energy investment, cooling access, and solar technologies in food value chains. With participation from organizations like COBRA, discussions underscored Public-Private Partnerships, financing, and policy support as vital for scaling renewable energy adoption. Dr. Patric reaffirmed bold policies to mainstream clean energy into Rwanda's agricultural transformation.



Mr. Daniel MULISA/MININFRA

Fay MATONGO of ZARENA shared insights from the “Solar for Climate Resilience and Productive Use” project, which installed solar-powered irrigation in drought-prone communities to boost crop yields and water efficiency.

The initiative adopted a cooperative business model, empowering farmers to jointly manage systems and revenues. Matongo emphasized that success depends on strong governance, capacity building, and local ownership. Supported by district authorities and MINAGRI, the project trained farmers in energy and irrigation management.

She stressed cross-sector collaboration and SDG 17 partnerships, noting that sustainable, scalable energy solutions require linking technology, governance, and community engagement.

Daniel, External Links & Donor Coordinator at MININFRA, emphasized cross-ministerial collaboration between energy, agriculture, and food systems to drive coherent development. He noted that energy deficits cause up to 30% of crop losses, highlighting the need for reliable access.

MININFRA’s rural electrification strategy and policy frameworks promote transparency and private sector participation through PPPs. He cited government-backed financing, including a 15% renewable energy subsidy and a \$20 million fund for enterprises. Daniel urged companies to move from vision to implementation, leveraging policies, financing, and partnerships to expand sustainable energy access.



Ms. Fay MATONGO /ZARENA



Dr. Ivan TWAGIRASHEMA

Wilson Matekenya of IRENA highlighted that smallholder farmers, producing about 66% of Africa's food on plots under one hectare, remain central to agricultural transformation.

Despite declining costs of solar irrigation and cold storage, adoption barriers persist due to high upfront costs and weak market links. He emphasized integrating renewable energy with water management, value-chain development, and market access. Matekenya called for coordinated government support, data-driven planning, and farmer cooperatives to enhance financing and knowledge exchange.

He concluded that holistic, inclusive approaches are essential to scale renewable energy and strengthen smallholder resilience.

Dr. Ivan TWAGIRASHEMA, Chairman of the Energy Private Developers Association (EPD), emphasized the need to feed a growing population while only 40% of habitable land is farmed, requiring a 60% production increase by 2050. He stressed transforming agriculture through integrated energy solutions from irrigation and mechanized farming to storage and processing.

Reliable energy access creates major investment opportunities, especially in renewables. Dr. Ivan called for clear incentives, financing access, and international partnerships linking technology, capital, and local production. He concluded that aligned policies and energy integration are vital to achieving sustainable, productive agriculture.



Mr. Wilson MATEKENYA/ IRENA

Q&A FROM THE CONFERENCE PARTICIPANTS



Ms. Clarisse NISHIMWE

Mr. Abass raised concerns about post-harvest losses, noting that interventions in energy, seeds, or fertilizers alone are insufficient, and asked for examples of integrated success stories in Africa.

Wilson MATEKENYA (IRENA) responded that single interventions rarely work, citing Zambia's Chongwe village, where a clustered approach combined dairy processing, biogas energy systems, and support for storage and market linkages.

While the community benefited significantly, he emphasized that even integrated models require continuous optimization and coordinated support across the value chain to sustain long-term impact.

Ms. Clarisse (GIZ) asked MINAGRI about plans to encourage end-users to adopt refrigeration technologies, considering common misconceptions that refrigeration reduces taste or nutrient value.

Dr. Patric Karangwa clarified that affordability, not misconceptions, is the main barrier, as refrigeration can raise crop prices up to fivefold. The government is expanding access to systems for fruits and vegetables, offering matching grants and subsidies to lower costs, and running awareness campaigns on refrigerated produce benefits.

He noted ongoing efforts to optimize and scale affordable technologies for smallholder farmers, ensuring wider adoption and improved post-harvest management.



Mr. ABASS from Nigeria

Panel Discussion: Global Renewables Centre Impact in Africa : Case studies from Scotland, Malawi, Rwanda, and Zambia



Mr. DAMIEN Frame

Damien Frame emphasized collaboration and introduced the University of Strathclyde, one of Europe's largest engineering centers with over 200 years of history and expertise in low-carbon and energy systems research. His team integrates renewable solutions solar, wind, batteries, and EVs into national and mini-grids, analyzing their impact on networks and investments.

In Zambia, they support rural electrification through modeling and policy analysis; in Malawi, they've deployed market-based mini-grids generating data and investment insights. Frame concluded by highlighting the GRC's partnerships connecting Scotland, Rwanda, Malawi, and Zambia to co-design, finance, and scale clean energy initiatives.



Mr. Serge Wilson MUHIZI

Mr. Charles Dakalila outlined REIAMA's progress and how collaboration under the Global Renewables Centre (GRC) has strengthened its work. Established in 2000, REIAMA promotes renewable energy growth and capacity development. Joining the GRC network linking Rwanda, Zambia, Malawi, and Scotland enhanced its visibility and knowledge exchange.

Conference participation rose from fewer than 100 attendees in 2022 to 216 in 2024 and 260 in 2025. REIAMA also trained 30 women entrepreneurs in mini-grid and renewable energy businesses and engaged banks to improve SME financing —two sponsored the 2025 conference — advancing inclusive, sustainable energy under the GRC framework.

Mr. Serge Wilson Muhizi, EPD's CEO, thanked the Global Renewable Centre (GRC) and the Scottish Government for their strong partnership, noting that GRC covers nearly 60% of EPD's operational budget.

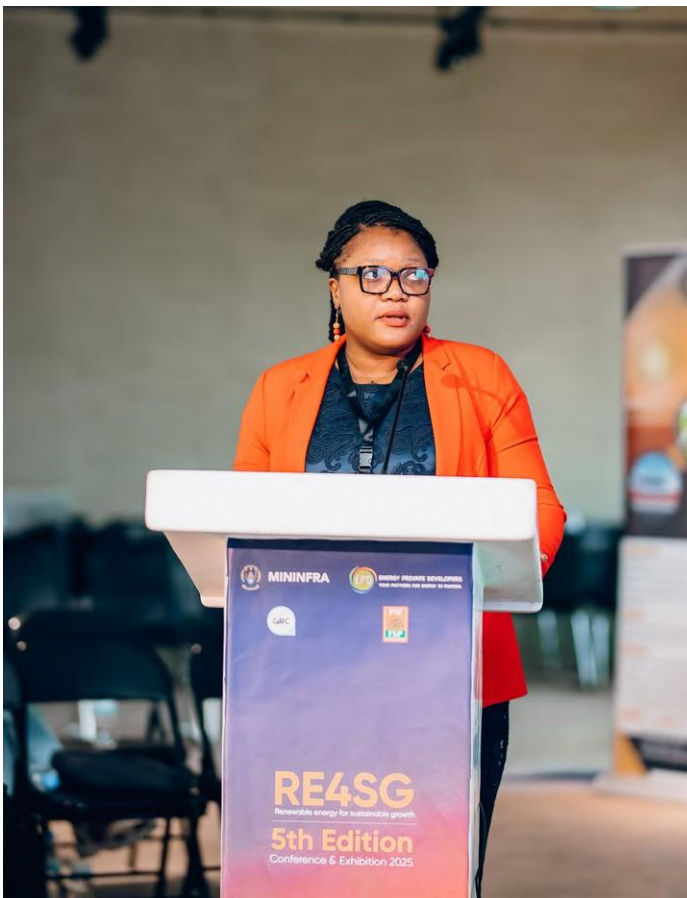
This support has enabled EPD to coordinate the renewable energy sector and organize impactful events like RE4SG. Through GRC, EPD improved coordination in clean cooking, energy access, and productive energy use, while strengthening government engagement and international visibility.

GRC funding also supported 15 interns, six now employed. Muhizi reaffirmed that GRC partnerships drive sustainable, inclusive renewable energy growth across Africa.



Mr. Charles DAKALILA/ REIAMA

Global Renewables Centre Impact in Africa



Eng. Dr. Chilala Kakoma Bowa

Eng. Dr. Chilala Kakoma highlighted the crucial role of the Global Renewable Centre (GRC) in bridging the gap between academia and industry across Africa. Representing the Zambian Renewable Energy Association (ZARENA), she emphasized that many university graduates lack practical skills needed in the energy sector.

Through GRC's collaborative platform, Zambia, Rwanda, and Malawi have strengthened partnerships that enhance training, knowledge sharing, and capacity building. Dr. Bowa reported that through GRC initiatives, over 300 individuals across three provinces and 100

youth have been reached, with women comprising 62% of participants. A notable achievement is the 3.3 kWp solar irrigation pilot project in Kala, benefiting more than 200 households and empowering women-led cooperatives—where 45.8% of steering group members and all chairpersons are women.

On capacity building, ZARENA has conducted extensive training in solar system installation, maintenance, and operations, in collaboration with the University of Zambia and industry partners.

A mentorship program was also launched to support women in renewable energy careers, graduating 37 participants in its first cohort and doubling in the second due to positive impact.

Gender inclusion remains central, with outreach to schools encouraging girls to pursue STEM programs, and workshops supporting women-led SMEs in renewable energy finance and entrepreneurship.

Additionally, ZARENA signed MOUs with the University of Zambia and industry partners to promote research publication, student chapters, and stronger academia-industry linkages.

Panel Discussion: Nuclear Power and the Energy Mix / C&I, Storage and Hydropower: Energy Mix solutions for businesses



Dr. Ivan TWAGIRASHEMA

Dr. Ivan emphasized the vital role of energy storage in Rwanda's renewable transition. While solar and wind adoption is growing, their intermittency demands reliable storage for stability.

He noted that global energy priorities are shifting from fossil fuels to strategic minerals lithium, cobalt, nickel, and copper essential for batteries, EVs, and smart grids.

Industrial users like cement factories need high heat, making storage complex yet critical. Ivan urged that IPPs, not government utilities, manage storage systems, supported by R&D to cut costs. He concluded that storage underpins Rwanda's energy independence, efficiency, and sustainability.



Ms. Carine MUKASHYAKA

Dr. Aran Eales discussed how mini-grids and solar technologies enhance rural energy access. With experience in off-grid systems, he noted that solar power—combined with micro-storage and smart monitoring—is now among the most affordable and scalable energy sources.

He emphasized smart meters as key innovations enabling efficient system design and cost control through real-time data. Smart analytics also guide tariff design, improve reliability, and attract investors by revealing clear demand patterns.

Dr. Eales concluded that data-driven research and policies, championed by the GRC, are vital for sustainable mini-grid development and investment.

Eng. Carine MUKASHYAKA discussed small hydropower development in Rwanda, highlighting both opportunities and challenges for private investors. Her company operates three hydropower plants supporting local energy access. Despite supportive policies, high capital costs USD 3,000-5,000 per kilowatt and strict collateral demands hinder SMEs.

She cited technical capacity gaps and bureaucratic delays as major barriers, and urged balanced risk-sharing, better financing, and streamlined approvals.

Expanding capital access, risk-mitigation tools, and grid connectivity, she concluded, will enhance project viability and position hydropower as a key driver of Rwanda's clean energy transition.



Dr. Aran Eales



Mr. Jean Bosco MUGIRANEZA

Mr. Jean Bosco Mugiraneza, Director General of the Energy Division at MININFRA, discussed Rwanda's strategic plan to introduce nuclear energy into its power mix as part of long-term efforts to ensure energy security and diversification.

He explained that while Rwanda continues to develop hydropower, solar, and methane gas, these sources remain limited and variable. With electricity demand growing by 10–15% annually, the government views nuclear power as a reliable and sustainable solution. Rwanda's nuclear energy initiative is centered on Small Modular Reactors (SMRs) and aligns with the Energy Sector Strategic Plan and the

International Atomic Energy Agency (IAEA) framework, which promotes a phased approach. The first phase focuses on human capacity development, with more than 200 Rwandan students currently pursuing nuclear science and engineering studies in Russia and South Korea.

Mr. Mugiraneza highlighted ongoing feasibility studies for a research reactor and a future nuclear power plant, supported by efforts to mobilize financing and strengthen institutional readiness.

Although nuclear power is not expected to enter Rwanda's energy mix before 2035, he emphasized its potential to provide stable, clean, and locally controlled energy to support industrialization and economic growth.

He also addressed public perception challenges, stressing that nuclear technologies are now safely used in medicine, agriculture, and water management worldwide.

Mr. Mugiraneza concluded that Rwanda's pursuit of nuclear energy reflects a proactive, forward-looking strategy to achieve national energy independence, resilience, and sustainability in the decades ahead.

Panel Discussion: Mobilizing Investment for Green Energy Transition: Strategies for Financing and Sustainable Energy Investments



The panel on Mobilizing Investment for Green Energy Transition brought together leaders from finance, energy, and development to share strategies for sustainable energy financing. Idrissa Octave (Ignite Power Ltd) highlighted the need for coordination among governments, developers, and financial institutions to accelerate last-mile electrification. He stressed that while technology and funding exist, financing remains urban-centered, urging frameworks that make rural energy projects more bankable and sustainable beyond donor support.

Jean Claude Mutabazi emphasized building domestic capacity and utilizing local opportunities to drive Rwanda's green transition, noting that renewable energy is locally sourced, unlike imported petroleum. Fernand Kamanzi (BRD) showcased BRD's innovations in climate finance, including the Green Investment Facility and blended finance models that reduced loan interest rates for local companies investing in clean energy.

Sam KAGORORA (ENERGICOTEL) shared the firm's success in raising capital through bond issuance and encouraged other companies to list publicly for greater transparency and growth.

Levi Gasangwa (Bank of Kigali) underscored partnerships, credible cash flow, and concessional capital as critical to scaling renewable energy investments sustainably.

Panel Discussion: Scaling Up EV Infrastructure in Africa - Challenges and opportunities in charging station deployment, grid readiness, and investment needs and capacities



The panel highlighted challenges and opportunities in EV charging deployment, grid readiness, and investment mobilization. Tonny Shyaka of FONERWA discussed the fund's role in supporting long-term renewable energy projects through grants and concessional loans, enabling e-mobility investments. Over the past year, FONERWA approved around 50 projects, committing about USD 1 million and prioritizing mobility-energy integration.

Donald Kabanda shared Rwanda's e-mobility growth, from two motorcycles in 2019 to a central hub supporting 300 motorcycles, forming a wider ecosystem across Kigali and secondary cities. Four-wheel EV adoption remains mostly private, though shared facilities are emerging. Pophia Muhoza emphasized inclusivity, providing adapters to allow vehicles from different origins, mainly Chinese imports, to access charging stations. The DEO from Rwanda Energy Group stressed aligning projects with national grid capacity to ensure stability. David from BBOX discussed decentralized solutions, including microgrids, mini-grids, and second-life battery systems, enhancing energy access and operational flexibility.

The panel concluded that public-private collaboration, innovative financing, and decentralized energy solutions are essential to scale EV infrastructure, promote sustainable transport, and advance Rwanda's energy transition.

Presentation: Carbon Markets and Africa's Energy Transition - Unlocking Climate Finance for SMEs - Challenges, Opportunities and Practical Solutions



Dr. Mohamed Alhaj
Founder of Terra Energy



Climate Finance Focus Group

Dr. Mohamed Alhaj highlighted the critical role of climate finance in Africa for both mitigation and adaptation, covering public expenditures, grants, equity investments, and carbon credits. He noted that funding is highly uneven, with only ten countries receiving nearly 46% of total flows.

While mitigation is often prioritized, adaptation is essential for vulnerable nations like Rwanda. Instruments such as green bonds and carbon credits could grow significantly by 2030. Rwanda's climate finance facility has mobilized over \$20 billion, but SMEs face challenges accessing funds due to complex compliance and regulatory hurdles.

Dr. Alhaj proposed focus groups to identify gaps and discuss reforms, emphasizing tailored mechanisms to maximize private sector participation in the energy transition.

Annex: Exhibition where 15 companies showcased their products including E-vehicles companies



Spiro showcasing their electric motor cycle



Electric Stove and Solar Solutions - SOLEKTRA



Clean cooking Solutions



Electric Tractor



E.V Cars Exhibition

Annex: Business Matchmaking where over 200 met for business purpose



Annex: Business Matchmaking



Annex: Networking Dinner and Awarding



EPD Awards for the Sponsors and Partners





Global Renewables Centre (GRC)



EPD awarded Rwanda Environmental Journalist (REJ)



Sema Power Kivu Lake (SPKL)



Renewable Energy Industry of Malawi (REIAMA)

RE4SG 5th Edition Site Visit (RUBAVU, KIGALI, NASHO)



Vist at Shema Power Kivu Lake (SPKL) 50 MW Generation Capacity



Clean Cooking Plant Visit at Eco-Green Solution

Clean Cooking Manufacturing Plant Visit at Safer1 Rwanda Ltd.



E-mobility Assembling Plant visit at SPIRO Ltd



Site visit at Nasho Irrigation Solar Plant (3.3MW)



EPD's Sponsor and Partners

Partners



Sponsor





“

RE4SG

"We are excited to invite you to join us at the Energy Week Conference and Exhibition 2026, organized by EPD, taking place in September 2026.

This premier event will bring together industry leaders, experts, and stakeholders to explore the latest advancements, trends, and solutions in the energy sector.

Don't miss the opportunity to engage in insightful discussions, share best practices, and collaborate on shaping the future of energy.



+250788310434



www.epdrwanda.com



Kimihurura, Rugando