Renewable energy solutions for Africa
Sub-Saharan African countries are rapidly attracting attention as new renewable energy markets. Thanks to the continent’s dynamic economic and population growth, its wealth in renewable energy resources, and falling technology costs, renewable energy investments can introduce widespread affordable, reliable and sustainable energy access to the region. Over 600 million people still live without access to energy in Africa, representing a significant residential and productive market demand for affordable, reliable and clean energy solutions.Advancing energy access in Africa is fundamental to accelerating sustainable economic development and can be achieved by the deployment of large-scale and decentralized (off-grid) renewable energy solutions.
Mission

RES4Africa promotes the deployment of large-scale and decentralized renewable energy solutions in Sub-Saharan African markets to meet local energy needs for growth. RES4Africa gathers a network of international leaders from across the clean energy value chain and supports the creation of an enabling environment for renewable energy investments and strategic partnerships. RES4Africa functions as a bridge between members and partners of emerging markets for an exchange of perspectives and expertise.
RES4Africa aims to create an enabling environment for renewable energy investments in Sub-Saharan African countries by:

1. Acting as a connecting platform for **dialogue & strategic partnerships** between members and partners to exchange perspectives and foster cooperation

2. Providing **technical support & market intelligence** through dedicated studies and recommendations based on members’ know-how to advance RE markets

3. Leading **capacity building, training and innovation** efforts based on members’ expertise to enable skills and knowledge transfer that support long-term RE market creation

These **3 strategic work streams** focus on the most relevant themes, from financing and business models, to policy and regulation, socio-economic development and technical feasibility, innovation and sustainability.
RES4Africa is at the forefront of initiating dialogue and connecting stakeholders to enable an exchange of perspectives and pave the way for strategic cooperation initiatives. The association functions as a platform for dialogue to build bridges between members and partners to support renewable energy investments in Sub-Saharan African countries and establish multi-stakeholder networks. Flagship activities include the RES4Africa Program launches and other dedicated events.

**Key activities and deliverables include:**

1. **RES4Africa Program Launch “A step change in the deployment of Renewable Energy in Eastern Africa”**
   **26-27 October 2016, Nairobi**

   2016 marked the official RES4Africa launch in East-Africa during its first regional dialogue event in Nairobi, organised in collaboration with Africa-EU Energy Partnership (AEEP). The event was key to develop a multi-stakeholder network, connect local and regional decision makers and exchange perspectives about unlocking East-Africa's renewable energy potential.

   **Key outcomes:**
   - RES4Africa program officially launched in East-Africa
   - 350+ attendants, 60+ B2Bs, 70+ speakers, 10+ partner organisations
   - Publication of 8 position papers with concrete recommendations on what it takes to foster renewables in East-Africa
   - Proposal to conduct a grid integration study of non-programmable renewables in the National Electric System of Kenya
   - Proposal to launch a Micro-Grid Academy vocational and managerial training programme
2. **G7 Energy Ministerial Side Event: “Africa 2030: empowering the continent through innovation, green tech solutions and capacity building”**

**9 April 2017, Rome**

Enel Foundation, RES4Africa and Africa-EU Energy Partnership (AEEP), hosted a side event to the G7 Energy Ministerial in Rome under the auspices of the Italian G7 Presidency on accelerating the deployment of innovative sustainable energy solutions in Africa to enable energy access, strengthen energy supply, create job opportunities, and consolidate economic growth in rural and urban Africa.

**Key outcomes:**

- Official G7 side event back-to-back with the G7 Energy Ministerial on accelerating access to sustainable energy in Africa to enable the continent’s sustainable economic development
- 200+ attendants, 20+ high-level speakers
- Communiqué with key recommendations for action presented to the G7 Energy Ministerial in Rome
- Publication of a white paper “Beyond the energy approach for sustainable development in Africa
- Official announcement of Micro-Grid Academy vocational and managerial training programme

3. **RES4MED’s 5th annual conference: “Innovation as the key enabler to power Africa”**

**22 May 2017, Rome**

The 2017 Annual Conference marked RES4MED’s 5th Anniversary. Besides looking back at 5 years of RES4MED activities, the 2017 conference focused on how innovation is impacting the energy sector’s strategic thinking on renewable energy deployment in African markets.

**Key outcomes:**

- Special conference celebrating 5-year anniversary of RES4MED
- 200+ attendants, 20+ speakers
- Thematic expansion of RES4MED & RES4Africa to include innovation on renewables in Africa
4. **RES4Africa Program Launch in Ethiopia**  
**3-4 October 2017, Addis Ababa**

RES4Africa was launched in Ethiopia during a 2-day high-level conference in Addis Ababa. The event was organized with the support of Africa-EU Energy Partnership (AEEP) and gathered a high-level multi-stakeholder audience to discuss lessons learned, identify gaps and propose solutions for a smooth deployment of renewable energy in Ethiopia.

**Key outcomes:**
- RES4Africa program officially launched in Ethiopia
- 320+ attendants, 90+ speakers, 70+ B2Bs, 15 partner organisations
- Publication of 10 position papers with concrete recommendations on what it takes to foster renewables in Ethiopia & East-Africa
- Mandate to establish a follow-up Steering Committee with State Ministers and representatives of public companies and academia involved in EE.
- Proposal to conduct a feasibility study on RE electrification of agro-industrial parks
- Proposal to conduct a study on the integration of Non-Programmable Renewables in the National Electric System of Ethiopia

5. **RES4Africa RES-EXPO**  
**23-24 January 2018, Nairobi**

RES-EXPO 2018 proposes a regional conference, including B2B sessions and a showcasing exhibition, to build on ongoing policy dialogue and to scale existing networks for companies to connect and form strategic partnerships. The conference gathers relevant international and African stakeholders such as IFIs, manufacturers, institutional actors, international organizations, academia, and civil society.

**Key outcomes:**
- Present results 1 year after 2016 RES4Africa Program launch
- Publication of 15 position papers with concrete recommendations on what it takes to foster renewables in Kenya & East-Africa
- Present results of the Study of Integration of Non-Programmable Renewables in the National Electric System of Kenya led by RES4Africa & CESI
- Official opening of the Micro-Grid Academy program by RES4Africa and strategic partner KPLC
- Exhibition for local, national and international RE solution providers to present their business and products.
- A side-event for the award ceremony of "East-African Renewable Energy Innovation Competition 2017", launched in April by Enel X
RES4Africa promotes the acceleration of renewable energy solutions in Sub-Saharan Africa by sharing members’ expertise and know-how with partners and stakeholders through technical assistance and market insights on key technical, policy and business issues.

Key activities and main deliverables include:

1. Recommendations on deploying renewable energy in Africa: What does it take?

In light of the RES4Africa 2016 & 2017 Program Launches in Kenya and Ethiopia, RES4Africa presented concrete recommendations for the development of renewables in Sub-Saharan African countries, including the following topics:

Recommendations 2016 - Kenya:

- Demand-supply coordination in Sub-Saharan African electricity sector development
- De-risking RE investments - lessons to learn, steps to take
- Unleashing the power of human capital for effective deployment of RE in East-Africa
- Performance and impact evaluation - an integrated framework for energy projects
- Integration of RE in the electricity grid
- Environmental, social and governance in RE projects in East-Africa
- Regulatory study for mini-grid system developments in East-Africa
- Scaling up RE in Sub-Saharan Africa: barriers and recommendations
The Grid Integration Study aims to provide an assessment of the maximum amount of non-dispatchable renewable generation that is possible to integrate in Kenya’s electric power system, while ensuring the power grid’s reliability, integrity and efficiency. The study is performed by Enel Green Power, CESI and RES4Africa, in partnership with Ministry of Energy and Petroleum of Kenya, KPLC, KENGEN, KETRACO, ERC and Strathmore University.

**2. Technical study on the integration of renewable energy in Kenya’s national electric system**

The Grid Integration Study aims to provide an assessment of the maximum amount of non-dispatchable renewable generation that is possible to integrate in Kenya’s electric power system, while ensuring the power grid’s reliability, integrity and efficiency. The study is performed by Enel Green Power, CESI and RES4Africa, in partnership with Ministry of Energy and Petroleum of Kenya, KPLC, KENGEN, KETRACO, ERC and Strathmore University.

**Recommendations 2017 - Ethiopia:**

- De-risking RE investments: Addressing risks for a better market design
- Best practices for wind project development
- Decentralised RE solutions to foster economic development
- Geothermal power opportunities in the Rift Valley
- Managing environmental & social risks to achieve bankability for RE projects in Africa
- Role of regional interconnection in fostering RE integration in Eastern Africa Power Pool
- Unleashing the power of human capital for effective deployment of RE in East Africa
- Entrepreneurship education in Ethiopia. Seizing the opportunities of RE in Africa
- RE and energy storage: new opportunities for emerging markets
- Study on waste-to-energy business in Kenya and Ethiopia
3. White paper: “Beyond the energy approach for sustainable development in Africa”

RES4Africa in collaboration with Enel Green Power proposed a white paper in the framework of the 2017 G7 Energy Ministerial Side Event to promote action on the urgent need to develop innovative and business models to help unleash Africa’s untapped sustainable development potential through the integration of off-grid renewable energy solutions, including within the agrifood value chain.
RES4Africa supports the development of new job markets in renewables by conducting capacity building, training and innovation activities tailored to specific audiences based on members’ expertise and know-how. RES4Africa also seeks to support the growth of Africa’s entrepreneurial sector working on innovative solutions to local development challenges by including a strong focus on the scaling up of innovation in Africa.

**Key activities and main deliverables include:**

1. **RES4MED&Africa Advanced Training Course, Milan**

RES4MED&Africa’s flagship two-week Advanced Training Course delivers state-of-the-art training on technical, regulatory and financial RE topics given by qualified international and Italian experts, academics, and highly skilled technicians, matched with visits to innovative laboratories and power plants. The ATC targets the training of participants from Southern-Mediterranean and Sub-Saharan African countries. More than 100 trainees from these countries have been trained since 2013. The ATC’s 4th edition in Milan trained 35 participants in 2017.

*in collaboration with*
2. RES4Africa Executive Seminars

RES4Africa Executive Seminars aim to foster a public-private dialogue on fostering renewables investments in emerging markets. The seminars enable a knowledge exchange with up-to-date insights from real private sector case studies on the most relevant topics concerning renewables deployment in the regions of focus. Each seminar is tailor-made for a high-level audience where RES4Africa members share best practices, highlight experience and expertise on a variety of renewable energy topics.

Planned: Kenya 2018, Ethiopia 2018

3. Micro-Grid Academy

The MGA is a regional capacity building programme that aims to foster energy access, create clean energy jobs and enhance local ownership of mini-grids in East-Africa through technical and entrepreneurial training courses, including a 10-30 kW off-grid hybrid power plant for practical hands-on training. The Academy is located in Nairobi and trains 300-400 local and international professionals and graduates per year on how to plan, design, build and operate a hybrid mini-grid in rural and remote areas. The MGA is a joint initiative by RES4Africa, KPLC, Strathmore University and endorsed by EACREEE

MGA training activities:

- **ADVANCED TRAINING COURSES**
  - For professionals in energy management

- **PERMANENT TRAINING ACTIVITIES**
  - For local electric technicians

- **AD-HOC KNOWLEDGE-DEEPENING ACTIVITIES**
  - For a wide audience to share and promote new ideas and innovative projects

- **REMOTE ONLINE CLASSES**
  - For permanent learning of technicians and students
4. Innovation & Sustainability

Innovation represents the main driver that enables the energy sector to provide efficient, affordable and reliable solutions to advance energy access and catalyse sustainable economic development in Africa. RES4Africa’s approach involves matching innovative technological solutions, sustainable business models and capable players through strategic partnerships to scale up investments into projects and initiatives that deliver clean, affordable and reliable electricity to African communities and businesses.

RES4Africa issued a white paper presenting the potentialities of innovative business models focused on the implementation of aggregation and trading platforms based on blockchain technology. These innovative business models aim to boost electricity consumption and provide communities with better access to electricity, storage, sustainable cooking systems and the possibility to exchange and trade energy on a peer-to-peer rewarding basis.
RES4Africa Partner Network

International partnerships and collaboration are key for RES4Africa to pursue its mission. RES4Africa works closely with a network of partners at a local, regional and global level and takes part in regional and international cooperation initiatives on renewable energy.

Thanks to its partnerships, RES4Africa benefits from:

- Sharp market understanding based on international and local partners’ expertise;
- Direct access to markets and networks through local, regional and international stakeholders;
- A strong presence in the international renewable energy community resulting in visibility gains;
- Ability to create multi-stakeholder partnerships to achieve project results, access financing, and drive policy & regulatory dialogue;
- Awareness of the global and regional renewable energy agenda to reflect in its own work streams.
Members

Supporter Members

Ordinary Members

Associated Partners

Honorary Members

RES4MED&Africa
Renewable Energy Solutions for the Mediterranean and Africa

www.res4africa.org
info@res4africa.org

Via Ticino, 14
00198 Rome Italy