AFRICA RENEWABLE ENERGY INITIATIVE

AREI

Transitioning Africa to a renewable energy powered future with access for all
AREI is...

• A Vision and a Framework
• Africa-led & sustainable development oriented
• Explicitly addresses needs of major productive sectors
• Development focused/climate compatible
• Open to wide participation and collaboration
• A multi-stakeholder effort committed to accelerated transition of Africa’s energy-economies
• A framework that cultivates partnerships and synergies among existing and future RE efforts
AREI CONTEXT
THE ENERGY ACCESS GAP

Share of population without electricity access

Future access situation: BAU scenario

- Huge implications on human well-being, employment and prospects for sustainable development
IMPORTANCE OF ENERGY FOR AGRICULTURE AND FOOD

Agricultural sector

- 60% employment
- 19% value added
- 40% hard currency earnings

...energy-related limitations

- Minimal mechanization
- Low productivity

<table>
<thead>
<tr>
<th>Designation</th>
<th>Africa</th>
<th>Latin America</th>
<th>Europe</th>
<th>World</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tractors</td>
<td>523,917</td>
<td>1,765,242</td>
<td>10,737,469</td>
<td>25,530,184</td>
</tr>
<tr>
<td>Agricultural workers/tractor</td>
<td>394</td>
<td>24</td>
<td>3</td>
<td>51</td>
</tr>
<tr>
<td>Hectares/tractor</td>
<td>2,113</td>
<td>67</td>
<td>45</td>
<td>187</td>
</tr>
</tbody>
</table>
AREI

GOALS AND PRINCIPLES
GOALS

ENERGY ACCESS...

help achieve the Sustainable Development Goals, enhanced well-being, and sound economic development by ensuring universal access to sufficient amounts of clean, appropriate and affordable energy

...CLIMATE

help African countries **leapfrog towards renewable energy systems** that support their low-carbon development strategies while enhancing economic and energy security
EXPECTED TRANSITION

ACROSS THE CONTINENT...

At least **300 GW by 2030** of new and additional installed capacity with an initial **10 GW by 2020**

MORE SPECIFICALLY

- Increase **absolute number of users** connected to the national grids or new mini-grids
- Increase **absolute share of RE** of energy consumption in productive sectors: agriculture, industry, and services
- Increase in the **share of local/African firms** providing RE equipment & supply on the continent
GUIDING PRINCIPLES

Contributing to achieving SD in Africa

Promoting the full range of renewable electricity applications, as well as non-electrical forms of energy

Promoting all kinds of renewable energy technologies

Addressing the entire African continent and benefit all African countries.

Boosting intra-regional cooperation
KEY PRECEPTS

Country Ownership

Transformative and programmatic

Enhanced private and public sector engagement

Smart, modern distributed renewable energy systems of the future

Multi-stakeholder participation and social and environmental safeguards
DISTRIBUTED, DECENTRALISED, PEOPLE-CENTERED ENERGY SYSTEMS OF THE FUTURE

Amount Used 1870-2011: 515 GtC
Amount Remaining: 275 GtC
Total Carbon Budget: 790 GtC
KEY DRIVERS FOR TRANSFORMATION
TRANSFORMATIVE CORE WORK AREAS

1. Mapping for coordination
2. Strengthen policy, regulatory, organization, and incentives frameworks
3. Capacity mobilization, building, and partnerships
4. Financing and investment
5. Project development and support
TRANSFORMATIVE CROSS-CUTTING WORK AREAS

6. Safeguards and technology assessment

7. Multi-stakeholder engagement

8. Wider context monitoring

9. Communications and outreach
TIMELINE

The Action Plan envisages a three-phase implementation process:

• The **immediate establishment phase (2016-17)**: Formal implementation of the AREI, including establishment of the Independent Delivery Unit (IDU).

• **Phase I (2017-2020)**: Assessments, preparations and critical enabling activities at the continental African level as well as in a number of pioneering countries, setting the basis for enhanced acceleration in phase II. Enabling of appropriate RE projects already in the pipeline. Achievement of at least 10 GW new and additional generation capacity.

• **Phase II (2020-2030)**: Ambitious, full-scale roll-out of nationally determined policies, programs and incentives as initiated under Phase I. Continuous assessments and revisions for further scaling up. Achievement of at least 300 GW new and additional generation capacity.
WHAT IS HAPPENING?

MAPPING for ACTION
WHY MAPPING?

- **Proliferation of initiatives** on renewable energy in Africa
- Concern that **initiatives are fragmented** and uncoordinated
- Missed **opportunities** for delivering **greater impact**
- Danger of **duplication**

- **AREI** is using mapping to assess **gaps**, **priorities** and make **decisions**
- **AREI** mapping exercise builds on existing mapping efforts
- **Mapping builds** synergy, collaborations & **anticipate change**
Shade of green indicates the number of initiatives

Options for sorting initiatives

List of renewable energy initiatives
Initiative details

Description

Related AREI work areas

Donor and partner organisations
WHAT IS HAPPENING?

CRITERIA
To be considered for attribution and eligibility/prioritization of funding
• Guiding principles and key features of the AREI

• Kinds of engagement through AREI
  • Activities through IDU & funds channelled through the AREI trust fund
  • Handle and assess external African proposals to be directly implemented by the AREI IDU and/or financially supported through the AREI trust fund
  • Adopt/attribute projects and programs pursued directly by countries or institutions and financial channels other than the IDU or trust fund that meets AREI criteria

• AREI methodology for assessment, prioritization and approval of projects/programs
  • Country-wide policies & programs, incentives & regulatory reforms (Category A)
  • Direct project support for individual RE systems and enhanced capacity (Category B)
AREI Policy Development Proposals

- Energy Access
- Climate
- Socio-economic and Environmental Impact
- Implementation Strategy
- Stakeholder Involvement
- Transformative Potential
- Institutional Feasibility
- Effectiveness
- Efficiency
- Equity
- Category A Proposals

Energy Access

Socio-economic and Environmental Impact

Implementation Strategy

Stakeholder Involvement

Transformative Potential

Institutional Feasibility

Effectiveness

Efficiency

Equity

Category A Proposals
AREI RE Installation Proposals

Category B Proposals

- Economic
- Financial
- Institutional
- Social
- Environmental
- Technical
OVERALL BALANCE OF AREI ACTIVITIES AND SUPPORT

• **Energy access** orientation
• **Size** of installations
• Type of **technology**
• Forms of **ownership**
• Spread of projects/programs across **countries** and **sub-regions**
• Fair **distribution** of supports
• **African** countries and institutions to predominantly be supported
WHAT IS HAPPENING?

MULTISTAKEHOLDER ENGAGEMENT and SAFEGUARDS
The AREI Framework and Criteria highlights the importance of participation and safeguards to ensure people-centred, equitable renewable energy solutions:

“Promoting a wide range of renewable energy technologies – in particular solar; wind; pico-, micro-, small- and medium-scale hydro; modern biomass; geothermal; and marine – provided they are socially and environmentally appropriate, gender sensitive and in line with these guiding principles”
Social and environmental safeguards

- **AREI** social and environmental safeguards, in line with **AREI Framework and Criteria**.
- Ambition to formulate the **best possible** safeguards, drawing on existing experiences and lessons across sectors.
- **AREI** safeguards essential for **screening** against AREI criteria.
- Development of safeguards through **participation** and multi-stakeholder engagement.
WHAT IS HAPPENING?

PROJECTS

LANDSCAPE
• **Countries and partners** are providing projects & programs

• **Preliminary** information gathered from multiple sources, This is **not** deemed **comprehensive**, and remains **work-in-progress**

• Projects & Programs will be subject to feasibility assessment and **screening** against **AREI criteria**

• We plan for a **dynamic AREI Database** - with continuous tracking and analysis

• This will be used to **mobilize** financial, project preparation and other necessary support through the AREI trust fund and from Partners.
Preliminary information received;

- **442 projects under-review are dominated by generation projects**;
- **18% of these are large hydro (>50 MW), and the majority of these are regional projects > 100 MW each.**
- **50% of the projects are RES generation across different technologies (AREI Category B)**
- **30% of the programs are focused on energy access, financing, capacity building and transmission (AREI Category A)**
- **Only 6 projects have been reported for energy efficiency.**
49.4 GW of capacity includes:

- **25.0 GW** (50% capacity is in large regional projects (> 100MW) – very little of this capacity is expected to start construction by 2020.

- **2.0 GW** of large HPP projects in country (50-100 MW)

- Energy Access projects only represent **3.4 GW (7.0%)**, whereas today’s energy access gap is **35-40 GW**.

- Bio-mass and small HPP projects together add-up to only **1.09 GW** (5% of all capacity)
49.4 GW of capacity includes:

• **50% capacity in large regional projects (> 100MW)**

• East Africa has a pipeline of **14GW** vs. Central Africa with only **5 GW** of projects

• Central Africa accounts for only **370 MW** of projects if we exclude INGA and Ruizizi III.

• However, Central Africa has half the Energy Access to East Africa
Each project needs to be screened against AREI criteria before attribution can be made.
FUNDING AND INVESTMENT

Departure points for AREI Contributions
FUNDING AND INVESTMENT

• AREI is a holistic vision and framework that goes far beyond funding.

• Funding is more than the AREI Trust Fund – it’s about ensuring AREI attributed activities enable necessary funds to be effectively achieved.

• Public funding shall enable activities and bold policies, programs, incentives to create secure, conducive investment environment for all.

• This public funding leverages much larger financing of actual investments in projects on the ground.
FUNDING OF ENABLING ACTIVITIES LEVERAGE MUCH LARGER INVESTMENT FLOWS
ENABLING ACTIVITIES

Domestic African government funding
Other international public funding (incl. innovative)
Multilateral development banks
Private Sources international
Bilateral
Private Sources Africa
South-South support
Philanthropy

Funding promoting enabling activities under the Africa RE Initiative framework

Africa RE Initiative Supportive activities and operations
Studies, assessments, policy guidance, capacity building, funding proposal support, international coordination and exchange, multi-stakeholder participation, social and environmental safeguards, delivery unit operations

Africa RE Initiative Incentives and investments support channeled through AfDB trustee facility
Feed-in tariffs, payment guarantees, de-risk measures, connection support, concessional credit, capital subsidies, direct support and syndicate funding.

Supportive activities aligned with Africa RE Initiative but directly pursued by countries or other institutions
Studies, assessments, policy guidance, capacity building, funding proposal support, international coordination and exchange etc.

Incentives and investments support aligned with Africa RE Initiative but directly pursued by countries or other institutions
Feed-in tariffs, payment guarantees, de-risking, connection support, concessional credit, capital subsidies, tax exemptions, direct support etc.
Enabling activities leverage investments from a variety of actors

INVESTMENT FLOWS

- Municipalities
- State-owned utilities
- Universities and schools
- Government offices
- Hospitals and clinics
- Communities
- Cooperatives
- Households
- Farmers
- Domestic companies
- SMEs
- Philanthropists
- Companies
- Institutional investors
- Financial institutions
- Philanthropists
- Remittances
- Government agencies
- Public institutions Africa
- African private investors and developers
- International private investors and developers

Accelerated and scaled up public and private investments

Renewable Energy Deployment in Africa

- For universal access
- For low- to zero carbon emissions
- Through future-oriented, smart distributed RE systems on- and off grid

- At least 10 GW new and additional generation capacity by 2020
- At least 300 GW new generation capacity by 2030
## FUNDING STATUS FOR 2017-2020

<table>
<thead>
<tr>
<th>INDEPENDENT DELIVERY UNIT</th>
<th>ATTRIBUTED ACTIVITIES</th>
<th>AREI TRUST FUND</th>
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<tbody>
<tr>
<td>Funds for the establishment and operationalisation of the Independent Delivery Unit of AREI as a coordinating and facilitating entity to enable supportive activities in line with the AREI Action Plan.</td>
<td>Funds for ‘attributed’ activities, enabled by AREI and directly accessed via African countries and international public funding (through for example bi- and multilateral means and the Green Climate Fund) for both supportive and incentives/investments activities in accordance with AREI Criteria.</td>
<td>Funds provided to the AREI Trust Fund for subsequent disbursement as project/programme support and incentives for renewable energy investments at country levels.</td>
</tr>
<tr>
<td>Requirements: €66 million for 2016-2020</td>
<td>Requirements: At least USD 10 billion of new and additional public funding for leveraging public and private investments for 2016-2020</td>
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</tbody>
</table>
| Support received by January 2017:  
  France: € 6 million  
  Germany: € 1 million | Commited by January 2017:  
  USD 10 billion total for 2015-2020 from France (€ 3 billion), Germany (€ 3 billion), EU (€ 3 billion), USA, Canada, UK, Japan, Italy, Sweden and Holland | |
SUCCESS FACTORS OF AREI

• **Country commitment** is fundamental
• **Bottom-up thinking** solves real challenges
• Active **engagement of multiple stakeholders** for embedding energy in society and productive sectors
• Pipeline **projects from the countries** based on their assessment of needs and conditions
• Phase 1 success will depend on how well the **establishment phase** is developed; and phase 2 is dependent on the quality of earlier phases as building blocks for **Transformational pathways**.
BOARD OF DIRECTORS’ MEETINGS

• The inaugural Board of Directors’ meeting was held in Addis Ababa, Ethiopia on 29th January 2017;

• The second meeting of the Board of Directors was held in Conakry, Guinea on 4th March 2017

  ▪ A list of 19 projects has been submitted by EU to be considered as AREI contribution
  ▪ The list of projects has approved to be submitted to IDU for validation or endorsement
THANK YOU!

Download brochure, summary, framework, action plan, criteria, at

www.arei.org