How Finance can Help Achieve the Goals of the Paris agreement

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U.S. Department of State
December 1, 2016 | Vietnam
“Paris implementation” in context

- Finance “goal” of Paris: driving investment towards low-emissions, climate-resilient development:
  - Current global infrastructure investment is around $2-3 trillion per year.
  - Global infrastructure demand over the next 15 years in a low-carbon scenario would amount to around $93 trillion, or about $6.2 trillion per year.
  - High-carbon, business-as-usual (BAU) scenario, global infrastructure needs projected at around $89 trillion over this period, or about $5.9 trillion per year.

- The need to catalyze significant private investment in infrastructure exists with or without trying to address climate change.
The vast majority of countries have access to diverse sources and instruments for financing development.
Implementation will involve both public and private investment

Who owns renewable energy assets globally?

- Private sector owns more than half of RE assets globally.

Aligning domestic policies for investment is critical

Why?..... Better “enabling frameworks” are strongly correlated with increased investment

Data Source: BNEF, Climatescope 2015
What can governments do?
Paris Implementation will involve a continuum

Policy and regulatory analysis and development
- Inter- / intra-governmental coordination, stakeholder engagement
- Modeling/technical analysis
- Low emission development strategies/adaptation planning
- Inventories
- Domestic MRV systems
- Ongoing reviews

• Climate-related:
  - Energy: carbon pricing, FiT, RPS, EE standards
  - Adaptation: water and agriculture management policies, zoning/building codes.

- Broader policy frameworks: tax and fiscal policies and de-risking instruments; trade and investment policies; legal and regulatory predictability.

Developing a Pipeline of Bankable Projects
For: gov + private project developers

- Feasibility studies (e.g., wind speed mapping)
- Social and environmental impact studies
- Resilience/option assessments
- Engineering design support
- Costing
- Licensing and registration

Navigating and Securing Finance
For: gov + private project developers

- Identifying potential financiers
- Business plan
- Deal structuring
- Fundraising strategy
- Application support
- Legal and financial advisory services needed to close deal

Country Reporting
Natcoms/biennial reporting

For: governments

Finance, capacity building, access, technology
1. Continue to prioritize support in the context of mobilization goals

- Continue upward trajectory in public and mobilized finance toward the $100b mobilization goal
- Align bilateral and multilateral assistance to support specific goals of Paris Agreement and decision
- Promote coordination among donors to mobilize finance, e.g., DFIs, Export Credit Agencies, aid agencies
- Promote innovative approaches and de-risking strategies to enhance private sector investment mobilization

**Example:** Maximizing the catalytic impact of the $100 billion

<table>
<thead>
<tr>
<th>Public Finance</th>
<th>Private Finance Mobilization Opportunities</th>
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</thead>
<tbody>
<tr>
<td><img src="image" alt="2013: $37.9" /></td>
<td><img src="image" alt="Private-public finance ratio for projects with a direct mobilisation potential" /></td>
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<tr>
<td><img src="image" alt="2014: $43.5" /></td>
<td><img src="image" alt="Share of projects with direct mobilisation potential" /></td>
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<td><img src="image" alt="..." /></td>
<td><img src="image" alt="Red: Below average private-public ratio achieved in 2013 and 2014." /></td>
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<td><img src="image" alt="2020: $67" /></td>
<td><img src="image" alt="Yellow: Consistent with average private-public ratio achieved in 2013 and 2014." /></td>
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<tr>
<td><img src="image" alt="+$24" /></td>
<td><img src="image" alt="Green: Above average private-public ratio achieved in 2013 and 2014." /></td>
</tr>
</tbody>
</table>

Source: OECD, 2016
2. Promote policy and investment plans and environments that stimulate low emission, climate resilient development

- Promote a whole of government approach to shifting investment towards climate goals, continued high level engagement
- Promote policies that encourage and incentivize adaptation planning and climate resilient investments
- Understand and orient policy solutions to de-risk and incentivize climate-friendly investments
- Align public tools such as procurement policies with climate objectives

Examples:

- **Shifting energy investment patterns in Southeast Asia** - with 73% ($47 out of $64 billion) of the in energy investment in Southeast Asia supporting fossil-fuel-based generation or infrastructure, there remains significant room for shifting investment towards low-emission energy sources.

- **Aligning public procurement policies with climate objectives** - by encouraging the use of sustainability criteria in public procurement, including for energy infrastructure, it is estimated that governments could channel upwards of **$120-195 billion** towards financing sustainable infrastructure globally (McKinsey & Co., 2015).

2. Promote policy and investment plans and environments that stimulate low emission, climate resilient development (continued)

- Understand the role of policies in attracting and mobilizing different sources and instruments.
- Ensure investment plans make optimal use of the full range of resources available.

*Example:* Attracting, mobilizing, and combining finance from a wide variety of sources- while domestic government resources remain the dominant source of financing for development, the **scale** and **diversity** of international resource flows that developing countries have access to has grown dramatically, due in part to more attractive investment conditions.

*Composition of international resource flows to developing countries (2011 $ trillions)*
3. Ensure optimal use of multilateral institutions

- Multilateral Development Banks (MDB)
- Green Climate Fund
  - Readiness fund
  - Designing Project Preparation Facility
- Climate Technology Center and Network – mitigation and adaptation technical assistance on request

Examples:

- **Addressing the lack of bankable project pipelines** - increased financing in project preparation and pipeline development could scale-up investment in sustainable infrastructure by **$150-450 billion** (McKinsey & Co., 2015).

- **Encouraging broader usage of guarantees** - encouraging the broader usage of guarantees to de-risk capital markets could potentially generate **$166-260 billion** (ibid).

- **Optimizing balance sheets** - in January 2017, the Asian Development Bank will combine the balance sheets of its concessional and non-concessional sub-funds, which is expected to boost its total annual lending and grant approvals to as much as **$20 billion**. (New Climate Economy, 2016).

- **Mobilizing institutional investors** - MDBs, as well as multilateral funds like the GCF, could help to tap into the more than **$100 trillion** in global assets managed by institutional investors globally by supporting the establishment of national “green investment banks” or the development of innovative vehicles and securitization models that can help to bridge the divide between investment preferences of institutional investors and the characteristics of sustainable infrastructure projects (e.g., more closely aligning tenor, risk, liquidity.)
4. Mobilizing institutional investors: $ trillions in Assets Under Management (AUM)

- Infrastructure operators + developers: 3.4
- Infrastructure and private-equity funds: 2.7
- Public pensions: 6.3
- Endowments + foundations: 1
- Investment companies: 29
- Insurance companies + private pensions: 26.5
- Sovereign-wealth funds: 10.9

Case study: Power Africa
Paris Implementation will involve a continuum

**NDC/NAP Development**
- For: governments
- Policy and regulatory analysis and development
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  - Ongoing reviews

**Climate/Investment Policies**
- For: governments
- Climate-related:
  - Energy: carbon pricing, FiT, RPS, EE standards
  - Adaptation: water and agriculture management policies, zoning/building codes.
- Broader policy frameworks:
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**Reporting**
- For: governments
  - Country Reporting
  - Natcoms/biennial reporting
The Power Africa Toolbox provides a quick yet comprehensive view of the tools & resources Power Africa uses to drive deals & facilitate investment. These tools fall into five major categories:

**Transaction Assistance**
- Early-stage support for innovative energy solutions, resource evaluations, feasibility and grid impact studies, social and environmental impact studies, project appraisal and costing, engineering designs, public private partnerships, and other project preparation activities
- Late-stage expert technical, regulatory, and financial assistance to host country governments to advance power transactions to financial close and beyond

Who is it for?
- Project developers, investors, host-country governments, entrepreneurs, African-owned and operated enterprises

**Finance**
- Equity, mezzanine financing, senior and sub-senior loans, guarantees, export credits, grants, and insurance programs

Who is it for?
- Project developers, financing institutions, entrepreneurs, host-country governments, U.S. lenders and exporters

**Policy/Regulatory Design & Reform**
- Technical assistance to improve the enabling environment for private sector investment in the power sector through policy, legal, regulatory and utility reforms, improved procurement practices and power sector planning, and the adoption of financial incentives and risk mitigation schemes

Who is it for?
- Host-country governments, utilities, regulators, and other stakeholders

**Capacity Building**
- Technical assistance to support institutional strengthening, technical and regulatory skill development, and project development and management activities
- Trade missions to the U.S. and to sub-Saharan Africa

Who is it for?
- Host-country governments, utilities, energy regulators, public procurement agencies

**Legal Assistance**
- Legal assistance to strengthen host country government expertise and negotiating capacity in structuring, financing and closing power transactions

Who is it for?
- Host-country governments and African utilities

www.usaid.gov/powerafrica/toolbox
<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Agency/Org.</th>
<th>Tool Description</th>
<th>Who is it For?</th>
<th>Eligibility Requirements</th>
<th>Where Can the Project be Located</th>
<th>BTG?</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.-Africa Clean Energy Finance</td>
<td>OPIC, USAID, DOS</td>
<td>Project preparation support for early-stage renewable energy projects</td>
<td>Project developers</td>
<td>Must qualify as a “Clean Energy Investment” and meet specific OPIC &amp; USTDA criteria.</td>
<td>Select SSA countries</td>
<td>✔</td>
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<tr>
<td>Development Innovation Ventures</td>
<td>USAID</td>
<td>Grant competition for innovative, transformative development solutions</td>
<td>Non-profit and private companies</td>
<td>Applicant solutions must show cost effectiveness, rigorous evidence of success, and proposed pathways to scale</td>
<td>USAID partner countries</td>
<td>✔</td>
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<tr>
<td>Geothermal Risk Mitigation</td>
<td>African Union Commission</td>
<td>Grant support for surface studies and drilling &amp; testing reservoir confirmation wells</td>
<td>Project developers</td>
<td>Applicants must pass pre-qualification phase</td>
<td>Select SSA countries</td>
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<tr>
<td>Facility</td>
<td>MCC</td>
<td>Grant funding for feasibility studies &amp; engineering designs</td>
<td>Host-country governments</td>
<td>Partnership Requirement</td>
<td>MCC Partner Countries</td>
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<tr>
<td>Off-Grid Energy Challenge</td>
<td>USAID, USADF</td>
<td>Grant funding for off-grid renewable energy solutions that power local economic activities</td>
<td>African-owned and operate enterprises, associations, or organizations</td>
<td>Applicants must provide off-grid solutions that deploy renewable resources and power local economic activities</td>
<td>Select SSA countries</td>
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<tr>
<td>Sustainable Energy Fund for</td>
<td>AIDB, USAID</td>
<td>Project preparation grants for small to medium scale renewable energy &amp; energy efficiency projects</td>
<td>Project developers</td>
<td>Project sponsor must be registered as a legal entity in a Regional Member Country by the end of the grant approval</td>
<td>AIDB Regional Member Countries</td>
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<td>Africa – Window I</td>
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<tr>
<td>Market Research &amp; Intelligence</td>
<td>U.S. Department of Commerce</td>
<td>Country and Industry Reports Customized Market Research Background Reports</td>
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<td>Must be a U.S. company</td>
<td>Countries where U.S. foreign Commercial Service or a Partner Post operates</td>
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<tr>
<td>Single Company Promotion</td>
<td>U.S. Department of Commerce</td>
<td>Assistance in promoting a new technology or service in a new country</td>
<td>U.S. companies or local subsidiary</td>
<td>Must be a U.S. company or local subsidiary</td>
<td>Countries where U.S. foreign Commercial Service or a Partner Post operates</td>
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<td>Advocacy Assistance</td>
<td>U.S. Department of Commerce</td>
<td>Assistance to exporters of U.S. goods and services as they compete against foreign firms for international public sector contracts/projects</td>
<td>Exporters of U.S. goods and services seeking to compete in foreign government procurements</td>
<td>Exporters of U.S. goods and services</td>
<td>Any SSA country</td>
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<tr>
<td>Business Matchmaking</td>
<td>U.S. Department of Commerce</td>
<td>Identify potential local partners, determine the marketability of products or services, meet one-on-one with pre-screened local buyers, sales reps, and business partners</td>
<td>U.S. companies</td>
<td>Must be a U.S. company</td>
<td>Countries where U.S. foreign Commercial Service or a Partner Post operates</td>
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<td>USTDA Grants</td>
<td>USTDA</td>
<td>Grant support for feasibility studies, pilot projects &amp; other project planning activities</td>
<td>Project developers, Host governments</td>
<td>Grant recipients are required to select U.S. firms to perform USTDA-funded activities</td>
<td>SSA countries</td>
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**Enhancing Access: Power Africa Project Preparation Facilities**

Project Preparation Facilities (PPFs) support governments, investors, and developers of power projects by helping to expedite the technical, financial, legal, and regulatory processes involved in energy deals. As a companion resource to the Power Africa Toolbox, this document contains information on early-stage PPFs that currently operate in sub-Saharan Africa’s energy sector.

<table>
<thead>
<tr>
<th>PPFs in Sub-Saharan Africa and their Project Development Stage Focus Areas</th>
<th>Enabling</th>
<th>Concept</th>
<th>Pre-feasibility</th>
<th>Feasibility</th>
<th>Development</th>
<th>Structuring</th>
<th>Financing</th>
<th>Construction</th>
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<tbody>
<tr>
<td>Electrification Finance Initiative (ElectriFi)</td>
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<td>Infrastructure Development Collaboration Partnership Fund (DevCo)</td>
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<td>Climate Investor One (CIO)</td>
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<td>InfraCo Africa</td>
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<td>Climate Technology Initiative Private Financing Advisory Network (CTI PFAN)</td>
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<td>African Energy Finance Corporation (AEFC)</td>
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Case study: Low Emission Development
U.S. government supported Enhancing Capacity for LEDS program with 26 countries, including 8 in Asia.

- Specific LEDS projects mobilized **$2.7 billion** for LEDS implementation (2010-2015)
  - For example, the USAID-supported **Private Finance Advisory Network for Asia** mobilized over **$150 million in 2015** for clean energy in the region by connecting clean energy businesses and projects with private sector financing to close deals
How EC LEDS provides support across the continuum

**NEAR- AND MID-TERM ACTIONS**

- **UNFCCC:** Robust NDCs submitted, progress tracked transparently, subsequent ambitious NDCs submitted

- **Mid-century LEDS established**

**Low Emission Planning Improved**
- Improve greenhouse gas inventories
- Develop analysis and analytical tools
- Establish institutions, plans, and policies

**Low Emission Actions Implemented**
- Deploy clean energy
- Advance sustainable land use (forests & ag)
- Mobilize finance

**2020+**

- GDP increased
- GHGs reduced

How EC LEDS provides support across the continuum
Thank you!
The vast majority of countries have access to diverse sources and instruments for financing development.
Implementation will involve both public and private investment

Who owns renewable energy assets globally?

- Private sector owns more than half of RE assets globally.

Asia-Pacific Region Leads in Assets Under Management

Source: Preqin Infrastructure Online, Funds and Limited Partnership Investors, June 2015; Asset management 2020: A brave new world, PricewaterhouseCoopers, 2014; McKinsey analysis