



Africa-EU Energy Partnership

European Financial Flows on SDG7 to Africa – 2022 Report

Methodology

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1. Introduction and scope of research

This methodology provides a detailed overview of the processes used to collect, analyse and present data in the Africa-EU Energy Partnership's (AEEP) *European financial flows on SDG7 to Africa* 2022 report.

The report examines public and private financial flows into the energy sectors of Africa in an effort to identify the progress being made towards meeting Sustainable Development Goal 7 (SDG7) and to highlight the valuable contributions made by the European Union (EU) and its member states in pursuit of this goal. The 2022 iteration of this report covers the period 2020, which spans not only the EU's current Multiannual Financial Framework, but also the period following the date at which the Sustainable Development Goals (SDGs) came into force (2015). While the report largely focuses on the efforts made by EU Institutions and Member States (EI &MS) – to include Official Development Assistance (ODA) commitments and disbursements, core contributions to multilaterals, and leveraging of private sector finance – it was necessary to collect all available information from non-EU donors in order to provide a comparative illustration and an overall picture of the global efforts helping Africa towards meeting SDG7 by 2030.

2. Definitions

Commitment

A firm obligation, expressed in writing and backed by the necessary funds, undertaken by an official donor to provide specified assistance to a recipient country or a multilateral organisation in a given year. Bilateral commitments are recorded in the full amount of expected transfer, irrespective of the time required for the completion of disbursements. Commitments to multilateral organisations are reported as the sum of (i) any disbursements in the year reported on which have not previously been notified as commitments and (ii) expected disbursements in the following year.

Disbursement

The release of funds to or the purchase of goods or services for a recipient; by extension, the amount thus spent in a given year. Disbursements record the actual international transfer of financial resources, or of goods or services valued at the cost to the donor. In the case of activities carried out in donor countries, such as training, administration or public awareness programmes, disbursement is taken to have occurred when the funds have been transferred to the service provider or the recipient. They may be recorded gross (the total amount disbursed over a given accounting period) or net (the gross amount less any repayments of loan principal or recoveries on grants received during the same period). It can take several years to disburse a commitment.

Official Development Assistance

Official Development Assistance as per the Organisation of Economic Cooperation and Development.





ODA flows are defined as those flows to countries and territories on the DAC List of ODA Recipients and to multilateral development institutions which are:

- i. provided by official agencies, including state and local governments, or by their executive agencies; and
- ii. each transaction of which:
 - is administered with the promotion of the economic development and welfare of developing countries as its main objective; and
 - $_{\odot}$ $\,$ is concessional in character. In DAC statistics, this implies a grant element of at least
 - **45%** in the case of bilateral loans to the official sector of LDCs and other LICs (calculated at a rate of discount of 9%).
 - **15%** in the case of bilateral loans to the official sector of LMICs (calculated at a rate of discount of 7%).
 - **10%** in the case of bilateral loans to the official sector of UMICs (calculated at a rate of discount of 6%).
 - **10%** in the case of loans to multilateral institutions (calculated at a rate of discount of 5% for global institutions and multilateral development banks, and 6% for other organisations, including sub-regional organisations).

SDG7

Goal seven of the United Nations' Sustainable Development Goals (SDG). SDG7 is to "Ensure access to affordable, reliable, sustainable and modern energy for all" by 2030. SDG7 has the following three targets:

7.1. By 2030, ensure universal access to affordable, reliable and modern energy services;

7.2. By 2030, increase substantially the share of renewable energy in the global energy mix;

7.3. By 2030, double the global rate of improvement in energy efficiency;

7.a. By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology;

7.b. By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support.

Investment

A commitment or disbursement made by a public or private entity to an energy project, programme or scheme in Africa.







Finance type

The category of finance type by which an investment is made. This report classifies the finance type of an investment into one of the following categories:

- ODA Grants
- ODA Loans
- ODA Equity Investment
- African National Government Capital Expenditure
- Private
 - o Private Loan
 - o Private Grant
 - Private Equity
 - o Private Unknown

A full list of the financial instruments which comprise these finance types can be found in section 4.1.

Sector and subsectors

The sector and subsector of the energy industry in which the project or programme which received the investment is located. A full list of sectors and the subsectors which populate those categories (based on OECD classifications) can be found in section 4.2.

Recipient country

The African country in which a project that has received investment is located. The countries under study include all 55 members of the African Union.

Region

The geographic region in which the recipient country is located. Regions are based on African Union definitions, however 'regional' investments (those directed at more than one country) are based on OECD definitions to ensure consistency with the OECD DAC dataset (see section 4.3).

Country income group

A recipient country's income status, as per World Bank definitions (see section 0).

Donor category

The group in which a financier of an energy project is categorised. Financiers are grouped into the following donor categories:

 El & MS: European Union financial institutions and ministries/development agencies/development banks of its Member States as of 31 December 2019.





- Europe (non-EU): Countries geographically located within Europe, but which are not a member state of the European Union.
- Middle East: Countries within the Middle East and the Levant.
- Asia: Countries located geographically within Asia.
- **Oceania**: Countries located geographically within the continent of Oceania.
- North America: The United States of America, Canada and Mexico.
- South America: Countries located geographically within the continent of South America.
- Private sector: Any finance from private sector organisations (excluding state-backed commercial banks or state-owned organisation in China).
- Multilateral Africa: Multilateral development finance institutions or development banks which are funded predominately by African countries.
- Multilateral Asia: Multilateral development finance institutions or development banks which are funded predominately by Asian countries.
- Multilateral European: Multilateral development finance institutions or development banks which are funded predominately by European (including both EU members and non-EU European states) countries.
- **Multilateral Global**: Multilateral development finance institutions or development banks which are funded predominately by countries from multiple regions.
- Multilateral Middle East: Multilateral development finance institutions or development banks which are funded predominately by Middle Eastern countries.

A complete list of financiers which make up these categories can be found in Section 4.

3. SDG7 compliance

The report focuses on financial flows which support the achievement of SDG7 in Africa, although non-SDG7 financial flows are captured to provide context of wider energy-related financial flows.

Comprehensive data on SDG7 financial flows is not publicly available. For 2019, donors who provided completed questionnaires were asked to indicate an individual project's SDG7 compliance. However, the reporting of SDG7 compliance was extremely limited within the OECD DAC CRS. Therefore, only projects in the sectors of renewable generation, transmission and distribution, energy efficiency, clean cooking and clean transport were considered as SDG7-compliant. Non-renewable generation was excluded from the SDG7 category unless indicated as SDG7-compliant by the reporting donor. Commitments and disbursements to policy support and capacity building are directly related to the achievement of SDG7, albeit the portion attributed to SDG7 is unknown. Despite this, policy support and capacity building is included as SDG7-compliant unless stated.





4. Classifications

The following section outlines the classifications that were used and applied to the report's dataset.

4.1. FINANCIAL INSTRUMENTS

Table 1 outlines the financial instruments used in the dataset. The financial instruments used for official support are as per OECD definitions.

Table 1: Types and definitions of finance instruments used

DAC Code	Type of financing	Description
ODA GR	ANT	
110	Standard grant	Grants are transfers in cash or in kind for which no legal debt is incurred by the recipient.
210	Interest subsidy	A payment to soften the terms of private export credits, or loans or credits by the banking sector.
310	Capital subscription on deposit basis	Payments to multilateral agencies in the form of notes and similar instruments, unconditionally encashable at sight by the recipient institutions.
311	Capital subscription on encashment basis	Payments to multilateral agencies in the form of notes and similar instruments, unconditionally encashable at sight by the recipient institutions.
ODA LO	ANS	
421	Standard loan	Transfers in cash or in kind for which the recipient incurs legal debt (and the resulting claim is not intended to be traded). Since payment obligations on standard loan are senior obligations, i.e. creditors are entitled to receive payments against their claims before anyone else, they are also referred to as senior loans.
422	Reimbursable grant	A contribution provided to a recipient institution for investment purposes, with the expectation of long-term reflows at conditions specified in the financing agreement. The provider assumes the risk of total or partial failure of the investment; it can also decide if and when to reclaim its investment.
423	Bonds	Fixed-interest debt instruments, issued by governments, public utilities, banks or companies, tradable in financial markets.





DAC Code	Type of financing	Description
424	Asset-backed securities	Securities whose value and income payments are derived from and backed by a specific pool of underlying assets.
425	Other debt securities	
431	Subordinated loan	A loan that, in the event of default, will only be repaid after all senior obligations have been satisfied. In compensation for the increased risk, mezzanine debt holders require a higher return for their investment than secured or more senior lenders.
ODA EQ	UITY	
432	Preferred equity	Equity that, in the event of default, will be repaid after all senior obligations and subordinated loans have been satisfied; and will be paid before common equity holders. It is a more expensive source of finance than senior debt, a less expensive source than equity.
510	Common equity	A share in the ownership of a corporation that gives the owner claims on the residual value of the corporation after creditors' claims have been met.
520	Shares in collective investment vehicles	Collective undertakings through which investors pool funds for investment in financial or nonfinancial assets or both. These vehicles issue shares (if a corporate structure is used) or units (if a trust structure is used).
530	Reinvested earnings	This item is only applicable to Foreign Direct Investment (FDI). Reinvested earnings on FDI consist of the retained earnings of a direct foreign investment enterprise which are treated as if they were distributed and remitted to foreign direct investors in proportion to their ownership of the equity of the enterprise and then reinvested by them in the enterprise.
OTHER		
433	Other hybrid instruments	Including convertible debt or equity.
PRIVAT	E	
30 (flow code)	Private development finance	Financing by civil society organisations (NGOs, philanthropic foundations, etc.)
-	Private Ioan	Commercial loan issued by a privately-owned entity (non- civil society organisation).
-	Private grant	Grant issued by a privately-owned entity (non-civil society organisation).
-	Private equity	Equity investment by a privately-owned entity (non-civil





DAC Code	Type of financing	Description
		society organisation).
-	Private unknown	Investment made by a private entity of an unknown finance type (non-civil society organisation).

For higher level analysis and aggregation, 'Private Loan', 'Private Grant', 'Private Equity', 'Private Development Finance' and 'Private Unknown' were grouped into a single 'Private' category for use in certain parts of the report.

4.2. SECTOR CLASSIFICATIONS

Commitments and financial flows were classified according to OECD sector and sub-sector definitions. Subsectors were grouped into the following sectors:

- Renewable generation
- Non-renewable generation
- Transmission and distribution
- Clean cooking
- Energy efficiency
- Policy support and capacity building
- Clean transport
- Other

A full list of sectors, subsectors, OECD purpose codes, and whether investments in that sector was considered SDG7 compliant (unless otherwise stated in donor questionnaires) in shown in Table 2.

For 2014-2018, the OECD DAC provides indicators as to whether a commitment or a disbursement contributed towards meeting SDG7. However, many donors did not report this indicator for these years. Therefore, an investment's SDG7 compliance was determined based on the sector/subsector.

Investments directed towards policy support and capacity building are classified as being SDG7 compliant unless otherwise specified, despite an unknown proportion of this being directed towards non-SDG7 projects. These investments were given special consideration as they do largely play a considerable role in meeting SDG7.

For 2019, all donors which submitted completed questionnaires provided SDG7 indicators on all their commitments and disbursements, which was included in the analysis. All 2019 investments for which SDG7 indicators were not available had their SDG7 compliance based on the sector/subsector.





While target 7.a of SDG7 includes "advanced and cleaner fossil-fuel technology', investments in non-renewable generation such as fossil-fuelled generation, or natural gas transmission infrastructure for electricity generation have not been categorised as SDG7-compliant unless otherwise indicated by the donor.

Table 2: List of sectors and subsectors

DAC code	CRS code	Subsector	SDG7?	OECD definition				
Renewable generation								
232	23210	Energy generation, renewable sources – multiple technologies	V	Renewable energy generation programmes that cannot be attributed to one single technology (codes 23220 through 23280 below). Fuelwood/charcoal production should be included under forestry 31261.				
232	23220	Hydro-electric power plants	\checkmark	Including energy generating river barges.				
232	23230	Solar energy for centralised grids	V	Including photo-voltaic cells, concentrated solar power systems connected to the main grid and net-metered decentralised solutions.				
232	23231	Solar energy for isolated grids and standalone systems	1	Solar power generation for isolated mini-grids, solar home systems (including integrated wiring and related appliances), solar lanterns distribution and commercialisation. This code refers to the power generation component only.				
232	23232	Solar energy – thermal applications	\checkmark	Solar solutions for indoor space and water heating (except for solar cook stoves 32174).				
232	23240	Wind energy	~	Wind energy for water lifting and electric power generation.				
232	23250	Marine energy	\checkmark	Including ocean thermal energy conversion, tidal and wave power.				
232	23260	Geothermal energy	\checkmark	Use of geothermal energy for generating electric power or directly as heat for agriculture, etc.				
232	23270	Biofuel-fired power plants	V	Use of solids and liquids produced from biomass for direct power generation. Also includes biogases from anaerobic fermentation (e.g. landfill gas, sewage sludge gas, fermentation of energy crops and manure) and thermal processes (also known as syngas); waste-fired power plants making use of biodegradable municipal waste (household waste and waste from companies and public services that resembles household waste, collected at installations specifically				





DAC code	CRS code	Subsector	SDG7?	OECD definition
				designed for their disposal with recovery of combustible liquids, gases or heat). See code 23360 for non-renewable waste-fired power plants.
234	23410	Hybrid energy electric power plants	~	Electric power plants that make use of both non-renewable and renewable energy sources.
Non-R	enewable	generation		
233	23310	Energy generation, non- renewable sources, unspecified		Thermal power plants including when energy source cannot be determined; combined gas- coal power plants.
233	23320	Coal-fired electric power plants		Thermal electric power plants that use coal as the energy source.
233	23330	Oil-fired electric power plants		Thermal electric power plants that use fuel oil or diesel fuel as the energy source.
233	23340	Natural gas-fired electric power plants		Electric power plants that are fuelled by natural gas; related feed-in infrastructure (LNG terminals, gasifiers, pipelines to feed the plant).
233	23350	Fossil fuel electric power plants with carbon capture and storage (CCS)		Fossil fuel electric power plants employing technologies to capture carbon dioxide emissions. CCS not related to power plants should be included under 41020. CCS activities are not reportable as ODA.
233	23360	Non-renewable waste-fired electric power plants		Electric power plants that use non- biodegradable industrial and municipal waste as the energy source.
235	23510	Nuclear energy electric power plants and nuclear safety		See note regarding ODA eligibility of nuclear energy.
236	23610	Heat plants		Power plants which are designed to produce heat only.
Transr	mission a	nd distribution		
236	23630	Electric power transmission and distribution (centralised grids)	V	Grid distribution from power source to end user; transmission lines. Also includes storage of energy to generate power (e.g. pumped hydro, batteries) and the extension of grid access, often to rural areas.





DAC code	CRS code	Subsector	SDG7?	OECD definition
236	23631	Electric power transmission and distribution (isolated mini-grids)	V	Includes village grids and other electricity distribution technologies to end users that are not connected to the main national grid. Also includes related electricity storage. This code refers to the network infrastructure only regardless of the power generation technologies.
236	23620	District heating and cooling	~	Distribution of heat generated in a centralised location, or delivery of chilled water, for residential and commercial heating or cooling purposes.
321	32167	Energy manufacturing (fossil fuels)		Including gas liquefaction; petroleum refineries, wholesale distribution of fossil fuels. (Use 23640 for retail distribution of gas and 23641 for retail distribution of liquid or solid fossil fuels.)
322	32262	Oil and gas (upstream)		Petroleum, natural gas, condensates, liquefied petroleum gas (LPG), liquefied natural gas (LNG); including drilling and production, oil and gas pipelines.
Clean	cooking			
321	32174	Clean cooking appliance manufacturing	\checkmark	Includes manufacturing and distribution of efficient biomass cooking stoves, gasifiers, liquid biofuels stoves, solar stoves, gas and biogas stoves, electric stoves.
321	32173	Modern biofuels manufacturing	1	Includes biogas, liquid biofuels and pellets for domestic and non-domestic use. Excludes raw fuelwood and charcoal (31261).
236	23640	Retail gas distribution	V	Includes urban infrastructure for the delivery of urban gas and LPG cylinder production, distribution and refill. Excludes gas distribution for purposes of electricity generation (23340) and pipelines (32262).
312	31261	Fuelwood/charcoal		Sustainable forestry development whose primary purpose is production of fuelwood and charcoal. Further transformation of biomass in biofuels is coded under 32173.
Policy	support a	and capacity building		
231	23110	Energy policy and administrative management		Energy sector policy, planning; aid to energy ministries and other governmental or nongovernmental institutions for activities related to the SDG7; institution capacity





DAC code	CRS code	Subsector	SDG7?	OECD definition
				building and advice; tariffs, market building, unspecified energy activities; energy activities for which a more specific code cannot be assigned.
231	23111	Energy sector policy, planning and administration		-
231	23112	Energy regulation		Regulation of the energy sector, including wholesale and retail electricity provision.
231	23181	Energy education/training		All levels of training not included elsewhere.
231	23182	Energy research		Including general inventories, surveys.
Energy	y efficiend	су		
231	23183	Energy conservation and demand-side efficiency		Support for energy demand reduction, e.g. building and industry upgrades, smart grids, metering and tariffs. For clean cooking appliances use code 32174.
Clean	transport			
236	23642	Electric mobility infrastructures	~	Includes electricity or hydrogen recharging stations for private and public transport systems and related infrastructure (except for rail transport 21030).
Other				
322	32210	Mineral/mining policy and administrative management		Mineral and mining sector policy, planning and programmes; mining legislation, mining cadastre, mineral resources inventory, information systems, institution capacity building and advice; unspecified mineral resources exploitation.
322	32220	Mineral prospection and exploration		Geology, geophysics, geochemistry; excluding hydrogeology (14010) and environmental geology (41010), mineral extraction and processing, infrastructure, technology,
				economics, safety and environment management.





4.3. REGIONAL CLASSIFICATIONS

Countries are classified by region as per African Union geographic definitions (see *Table 3*). For investments and flows that are directed to more than one country within a specific region, these were classified as 'Regional'. These 'regional' investments are classified according to their respective OECD geographic definitions due to this data being sourced from the OECD DAC. Investments and flows which are directed at countries which cross multiple regions are categorised as 'Africa, regional'. Financing for projects where the geographic area of the recipient was unknown is classified as 'Unallocated'.

African Union OECD DAC corresponding region Region **Countries** Region Countries Burundi, Cameroon, Central Angola, Cameroon, African Republic, Chad, Central African Republic, Congo-B, Democratic Central Africa Middle Africa Chad, Congo-B, Republic of Congo, Democratic Republic of Equatorial Guinea, Gabon, Congo, Equatorial Guinea, São Tomé and Príncipe. Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Comoros, Djibouti, Eritrea, Kenya, Madagascar, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Mauritius, Rwanda, Eastern Africa Eastern Africa Mozambique, Rwanda, Seychelles, Somalia, South Seychelles, Somalia, Sudan, Sudan, Tanzania, South Sudan, Tanzania, Uganda. Uganda, Zambia, Zimbabwe. Algeria, Egypt, Libya, Algeria, Egypt, Libya, Northern Africa North of Sahara Mauritania, Morocco, Morocco, Tunisia Tunisia, Western Sahara. Africa, regional; Eastern North of Sahara, regional; Africa, regional; Central South of Sahara, regional; Africa, regional; Northern Eastern Africa, regional; Regional Africa, regional; Sub-Saharan Middle Africa, regional; Africa, regional; Southern Southern Africa, regional; Africa, regional; Western Western Africa, regional. Africa, regional. Angola, Botswana, Eswatini, Botswana, Eswatini, Lesotho, Malawi, Southern Africa Southern Africa Lesotho, Namibia, South Mozambique, Namibia, South Africa Africa, Zambia, Zimbabwe. Benin, Burkina Faso, Cabo Benin, Burkina Faso, Cabo Western Sahara Verde, Côte d'Ivoire, Gambia, Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Ghana, Guinea, Guinea-

Table 3: Regional classifications





African Union		OECD DAC corresponding region				
Region	Countries	Region	Countries			
Western Africa	Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo.		Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo			
Unallocated	Unidentifiable	-	-			





4.4. COUNTRY INCOME GROUPS

Countries are categorised according to the World Bank's country income group. Investments and flows into multiple countries within a single geographical region (as per the OECD definitions) or across regions are classified as 'Regional'. Investments and financial flows into projects for which the geographic destination with Africa cannot be identified are categorised as 'Unallocated'.

Unless otherwise stated, financial flows which are 'unallocated' or directed towards MADCTs (Seychelles) are not included or classified as 'Other'. Unless otherwise stated, Zimbabwe (being the only 'Other LICs' are grouped alongside LDCs in the analysis.

Table 4: Countries by income group

Region	Country
Least Developed Countries (LDCs)	Angola, Benin, Burkina Faso, Burundi, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Djibouti, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Rwanda, São Tomé and Príncipe, Senegal, Sierra Leone, Somalia, South Sudan, Sudan, Tanzania, Togo, Uganda, Western Sahara, Zambia.
Other Low Income Countries (Other LIC)	Zimbabwe
Lower-Middle Income Countries (LMICs)	Cabo Verde, Cameroon, Congo-B, Côte d'Ivoire, Egypt, Eswatini, Ghana, Kenya, Morocco, Nigeria, Tunisia.
Upper Middle Income Countries (UMICs)	Algeria, Botswana, Equatorial Guinea, Gabon, Libya, Mauritius, Namibia, South Africa
More advanced developing countries and territories (MADCTs)	Seychelles
Regional	Africa, regional; Northern Africa, regional; Central Africa, regional; Eastern Africa, regional; Sub-Saharan Africa, regional; Southern Africa, regional, Western Africa, regional.
Unallocated	Unidentifiable

4.5. DONOR CLASSIFICATIONS

Financiers of SDG7 in Africa with identified financial flows were categorised into geographic groupings.





Table 5: Donor categories by region

Category	Donor
Africa	South Africa
Asia	Korea, Japan, India
EU Institutions and Member States (EI & MS)	Austria, Belgium, Czech Republic, Denmark, EU Institutions, Finland, France, Germany, Hungary, Ireland, Italy, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Romania, Slovak Republic, Spain, Sweden, United Kingdom (2014-2019)
Europe (Non-EU Member States)	Iceland, Norway, Switzerland, Turkey, United Kingdom (2020)
Middle East	Kuwait, Saudi Arabia, United Arab Emirates
Multilaterals	African Development Bank, African Development Fund, Banque Ouest Africaine de Développement, Eastern and Southern Trade and Development Bank, ECOWAS Bank for Investment and Development, Asian Infrastructure Investment Bank, European Bank for Reconstruction and Development, Nordic Development Fund, Adaptation Fund, Climate Investment Funds, Food and Agriculture Organisation, Global Environment Facility, Global Green Growth Institute, Green Climate Fund, International Finance Corporation, UNDP, United Nations Industrial Development Organization, World Bank Group, OPEC Fund for International Development, Arab Fund (AFESD), Arab Bank for Economic Development in Africa, Islamic Development Bank
North America	Canada, United States.
Oceania	Australia, New Zealand.
Private sector	All forms of financing sourced from privately-owned companies, charities, foundations, etc.



THE AFRICA-EU PARTNERSHIP LE PARTENARIAT AFRIQUE-UE



5. Currencies and exchange rates

The report presents aggregated financial flows in current EUR prices, consequently all currency not in EUR was required to be converted. The following sources were used to do this:

- For OECD member currencies OECD Exchange rates¹
- For Non-OECD members African Development Bank (AfDB) Exchange rates²

The OECD calculates and presents exchange rates as annual averages. The African Development Bank provides exchanges rates as monthly aggregates, which were then used to produce a yearly average for each year in the study period.

For data sourced from the OECD DAC CRS, all data is presented in USD. This was then converted to EUR, using the corresponding USD to EUR exchange rate for that year. All other investments in local currency using the AfDB exchange rates were converted from local currency to AfDB Unit of Account, and then to EUR at the corresponding AfDB average exchange rate for that year.

A full list of exchange rates used can be found in Annex 1 – Exchange rates.

6. Data sources

The report uses project level information to produce aggregated figures, this ensures that the dataset does not contain any double counting. In total, 21,821 investments were identified over the period 2014-2020 as well as the annual capital expenditure of between 33 and 47 national governments over the seven-year period.

The Creditor Reporting System (CRS) of the Organisation of Economic Co-Operation and Development (OECD)'s Development Assistance Committee (DAC) was used as the primary data source for ODA commitments and disbursements. This provided a consistent and comprehensive dataset from countries that are members of the OECD Development Assistance Committee (DAC). This ensured that the report had a data foundation that was consistent across the study period allowing for robust analysis.

The OECD DAC 2019 data had not been published in time for the 2020 report, it was necessary to supplement the 2014-2018 dataset using primary source data collection. As such, a bespoke questionnaire requesting all 2019 investments was designed and distributed to 37 EI & MS and non-EU public donors and large multilateral organisations.

The 2022 report the updated OECD DAC 2019 data has been incorporated.

A complete list of data sources can be found in Section 6.

The report only covers investments which can be directly attributed to the African energy sector, either directly into projects or into companies which themselves reinvest the flows into

¹ https://data.oecd.org/conversion/exchange-rates.htm

² https://www.afdb.org/en/documents/financial-information/exchange-rates





infrastructure projects. Investments in companies whose focus is broader than Africa or the energy sector are not counted as it is impossible to determine what proportion would be destined for the African energy sector.

6.1. PUBLIC FINANCIAL FLOWS

- Data on OECD members was sourced from the OECD DAC CRS
- Open source research, annual reports and other public disclosures for those organisations where no other reputable source was available, including the UK's CDC, the EBRD, the EU-AITF, Netherlands' FMO, the World Bank, and the United States' Development Finance Corporation (DFC).

Table 6 shows a complete record of each public donor and multilateral along with the agencies or channels through which investment was made that has been captured in the dataset, whether data exists for each year and the source of that data.

Country/Multil ateral	Agencies/Channels	2014	2015	2016	2017	2018	2019	2020	Sources
Adaptation Fund	Adaptation Fund				√			\checkmark	OECD DAC
African Development Bank	AfDB Ordinary Capital, AfDB NEPAD/IPPF, AfDB Middle Income Country Fund, Fund for African Private Sector Assistance, Zimbabwe Multi-donor Trust Fund, NTF	V	V	V	V	V	V	V	OECD DAC Questionnaire
African Development Fund	AfDF, NTF, AfDB Fragile States Facility	√	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	OECD DAC Questionnaire
Arab Bank for Economic Development in Africa	Arab Bank for Economic Development in Africa	√	√					\checkmark	OECD DAC
Arab Fund (AFESD)	Arab Fund	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark	OECD DAC
Asian Infrastructure Investment Bank	Asian Infrastructure Investment Bank				√				OECD DAC

Table 6: List of investments recorded for donors and associated agencies, 2014-2020





Country/Multil ateral	Agencies/Channels	2014	2015	2016	2017	2018	2019	2020	Sources
Australia	Australian Government	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark	OECD DAC
Austria	Austrian Development Agency, Federal Ministry of Finance, FM of Sustainability and Tourism, Provincial governments, local communities, Austrian Development Bank, Federal Ministry for Europe, Integration and Foreign Affairs	V	V	V	V	V	V	V	OECD DAC Questionnaire
Belgium	Directorate General for Co-operation and Development, Official Federal Service of Foreign Affaires (excl. DGCD), DGD, Bio-Invest	V	V	V	V	V	V	V	OECD DAC Questionnaire
BOAD	BOAD	~	~	√	~	√		~	ICA
Brazil	Brazilian Development Bank	√	√						OECD DAC
Canada	Export Development Canada, International Development Research Centre, Global Affairs Canada, Provincial Governments and municipalities, IDRC, EDC	V	V	V	V	V	V	V	OECD DAC Questionnaire
China	Exim Bank China, Sinosteel, Shenyang Lan Sa Trading Co Ltd, China Development Bank, Industrial and Commercial Bank of China, Exim Bank China; Industrial and Commercial Bank of China, Bank of China	V	V	V	V	V	V	V	-American Enterprise Institute, China Global Investment Tracker -Boston University, China's Global Energy Finance





Country/Multil ateral	Agencies/Channels	2014	2015	2016	2017	2018	2019	2020	Sources
									-AidData Geocoded Global Chinese Official Finance
									-Johns Hopkins University, China Africa Research Initiative Loan Data
Climate Investment Funds	Strategic Climate Fund - SREP, Clean Technology Fund, Strategic Climate Fund	√	√	√	√	√		√	OECD DAC
Czech Republic	Ministry of Foreign Affairs, Czech Development Agency	√		√	√	~		~	OECD DAC
DBSA	DBSA	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark	ICA
Denmark	Investment Fund For Developing Countries, Ministry of Foreign Affairs	√		√	√	√		√	OECD DAC
EADB	EADB	~	~	\checkmark	√	~			ICA
EBID	EBID	\checkmark	√	\checkmark	√	~		\checkmark	ICA
EU Institutions	European Development Fund, European Investment Bank, European Commission	√	√	\checkmark	√	√	√	\checkmark	OECD DAC Questionnaire
European Bank for Reconstructio n and Development	European Bank for Reconstruction and Development	√	√	√	√	V	√	√	OECD DAC European Bank for Recon- struction and Development





Country/Multil ateral	Agencies/Channels	2014	2015	2016	2017	2018	2019	2020	Sources
									(EBRD) website
Finland	Ministry of Foreign Affairs, FinnFund, Finnish Government, Ministry for Foreign Affairs of Finland	√	√	√	√	√	√	V	OECD DAC Questionnaire
Food and Agriculture Organisation	FAO								OECD DAC
France	Ministry of Economy, Finance and Industry, French Development Agency, COOP DECENTRAL/MAE, Ministry of Foreign Affairs, Proparco, AFD	1	√	1	√	√	√	V	OECD DAC Questionnaire
Germany	Foreign Office, Federal Min. for the Env., Nature Conservation, Building and Nuclear Safety, Federal Ministry of Education and Research, Federal State of Lower-Saxony, City State of Hamburg, Federal State of North Rhine-Westphalia, Federal State of Bavaria, Federal State of Bavaria, Federal State of Saarland, Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung, Kreditanstalt für Wiederaufbau, German Investment and Development Company, Federal State of Baden- Württemberg, Federal Ministry of Finance, Federal State of Saxony, Federal Ministry for Economic Affairs and	V	V	V	V	V	V	V	OECD DAC Questionnaire





Country/Multil ateral	Agencies/Channels	2014	2015	2016	2017	2018	2019	2020	Sources
	Energy, Federal Min. for the Env., Nature Conservation and Nuclear Safety, Federal Ministry of Food and Agriculture								
Global Environment Facility	GEF Trust Fund, Least Developed Countries Trust Fund (LDCF), GEF (general)	√	√		\checkmark	\checkmark		\checkmark	OECD DAC
Global Green Growth Institute	Green Growth Planning and Implementation	√			√	√		\checkmark	OECD DAC
Green Climate Fund	Green Climate Fund		√	√	√	√		\checkmark	OECD DAC
Hungary	Miscellaneous, Ministry of Finance					√			OECD DAC
Iceland	ICEIDA		\checkmark					\checkmark	OECD DAC
India	Export-Import Bank of India, Exim Bank, India Export-Import Bank, Exim Bank of India	√	√	√	\checkmark		√	\checkmark	OECD DAC
International Finance Corporation	International Finance Corporation						\checkmark	\checkmark	OECD DAC Questionnaire
Ireland	Department of Foreign Affairs (DCAD), Department of Foreign Affairs	√		√	\checkmark	√	√	V	OECD DAC Questionnaire
Islamic Development Bank	Islamic Development Bank	\checkmark	~	√	√	\checkmark	√	\checkmark	OECD DAC, Annual reports





Country/Multil ateral	Agencies/Channels	2014	2015	2016	2017	2018	2019	2020	Sources
Italy	Earmarked fiscal flows to NGOs & religious organisations, Ministry of the Environment and Protection of Land and Sea, Direzione Generale per la Cooperazione allo Sviluppo, Local administration, Central administration, Italian Society for Enterprises Abroad, Public universities, research institutes and Italian red cross, Ministry of Foreign Affairs and International Cooperation, Artigiancassa	V	V	V	V	V	V	V	OECD DAC Questionnaire
Japan	Japanese International Co-operation Agency, Ministry of Foreign Affairs, Japan International Cooperation Agency	V	1	1	1	1	1	V	OECD DAC Questionnaire
Korea	Export-Import Bank of Korea, Miscellaneous, Korea International Cooperation Agency	√	√	V	V	V	V	V	OECD DAC, news monitoring
Kuwait	Kuwait Fund for Arab Economic Development (KFAED)	√	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	V	OECD DAC, Annual reports, news monitoring
Lithuania	Ministry of Environment					\checkmark		\checkmark	OECD DAC
Luxembourg	Ministry of Foreign Affairs	√	√	√	√	√		√	OECD DAC
Netherlands	Ministry of Foreign Affairs, FMO, FMO - Access to Energy Fund, FMO - Building Prospects, FMO - MASSIF, FMO - Development	V	1	V	1	1	V	√	OECD DAC Questionnaire





Country/Multil ateral	Agencies/Channels	2014	2015	2016	2017	2018	2019	2020	Sources
	Accelerator, Ministry of Foreign Affairs (DGIS)								
New Zealand	Ministry of Foreign Affairs and Trade		\checkmark					\checkmark	OECD DAC
Nordic Development Fund	Nordic Development Fund	\checkmark			\checkmark		\checkmark	\checkmark	OECD DAC Questionnaire
Norway	Norwegian Agency for Development Co- operation, Ministry of Foreign Affairs, FK Norway	√	√	√	√	√	√	V	OECD DAC Questionnaire
OPEC Fund for International Development	OFID	~	\checkmark	\checkmark	√	\checkmark	√	\checkmark	OECD DAC Questionnaire
Poland	Ministry of Foreign Affairs		~	~	~	~			OECD DAC
Portugal	Portuguese Government, Camões- Institute for Cooperation and Language	√	√	V	√	√		V	OECD DAC
Romania	ROAID					\checkmark			OECD DAC
Saudi Arabia	Saudi Development Fund		V	√	√	√		V	OECD DAC, Annual reports, news monitoring
Slovak Republic	Other ministries	\checkmark	\checkmark					\checkmark	OECD DAC
South Africa	Development Bank of Southern Africa (DBSA)							\checkmark	





Country/Multil ateral	Agencies/Channels	2014	2015	2016	2017	2018	2019	2020	Sources
Spain	Ministry of Economy and Competitiveness, Municipalities, Public Universities, Spanish Agency for International Development Co- operation, Autonomous Governments, Comunidad Autónoma de La Rioja, Comunidad Autónoma de Andalucía, Comunidad Autónoma de Extremadura, Comunidad Foral de Navarra, Ministry of Industry and Energy, Ministry of Industry, Trade and Energy, Autonomuos Community of Andalusia, Ministry of Economy and Business, Ministry of Foreign Affairs, European Union and Cooperation, COFIDES	V	V	V	V	V	V	V	OECD DAC, Questionnaire
Sweden	Swedish International Development Authority, The Swedish Research Council, Ministry of Foreign Affairs	√	√	\checkmark	√	√	√	V	OECD DAC Questionnaire
Switzerland	State Secretariat for Economic Affairs, Swiss Agency for Development and Co- operation, Cantons and municipalities	√	V	V	√	V	V	V	OECD DAC Questionnaire
TDB	TDB	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark			ICA
Turkey	Miscellaneous, Turkey					\checkmark		\checkmark	OECD DAC
UNDP	UNDP	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark	OECD DAC
United Arab Emirates	Abu Dhabi Fund for Development, Abu Dhabi Department of Finance, Miscellaneous	√	√		√	√		√	OECD DAC, Annual reports, news monitoring
									5





Country/Multil ateral	Agencies/Channels	2014	2015	2016	2017	2018	2019	2020	Sources
United Kingdom	CDC Capital Partners PLC, Department for International Development, Foreign & Commonwealth Office, Department for Business, Innovation and Skills, Scottish Government, Department of Energy and Climate Change, Miscellaneous, CDC Group, Department for Business, Energy and Industrial Strategy	V	V	✓	✓	V	V	√	OECD DAC, Department for International Development (DFID) website, CDC website
United States	US International Development Finance Corporation, Agency for International Development, Millennium Challenge Corporation, Trade and Development Agency, Department of Energy, African Development Foundation, State Department, U.S. Agency for International Development, Department of Defense, Department of State	V	V	V	V	V	V	V	OECD DAC Development Finance Corporation (DFC) website
World Bank Group	International Bank for Reconstruction and Development, International Development Association, International Finance Corporation, World Bank, World Bank Carbon Fund, Clean Technology Fund	V	V	V	V	V	V	V	OECD DAC World Bank Group website



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6.2. PRIVATE FINANCIAL FLOWS

Data on private sector is limited. Information was obtained from the World Bank's Private Participation in Infrastructure database, which reports on private and public investments into energy projects which reached financial close during the period 2014-2020 alongside a number of other sources (see below). This information was cross-referenced using the OECD DAC CRS and the African Energy Live Data platform.

- OECD DAC CRS
- World Bank Group's Private Participation in Infrastructure (PPI) database
- Cross-border Information's propriety power project database, *African Energy Live Data* was used to gather financial flows and cross-check other public/private investments.
- GOGLA
- African Minigrid Developers Association
- Bloomberg's Climatescope
- Annual reports

Further data on private finance was obtained from industry association, where possible. However, this often did not include private equity investments, nor was it possible to allocate investments made directly into globally focused companies which were active in Africa.

In all cases, the financing of private sector projects was disaggregated so that only private sector contributions were counted, thereby avoiding double counting where public support was already including with the OECD DAC CRS.

While the WB PPI database does not specify private equity investments by investor, it does state the public and private equity split between the total equity amount. For the dataset, the total private equity investment was entered as a single figure equal to the stated private sector share of the total equity amount.

Likewise, the WB PPI does not disclose private loan amounts by investor, yet does list all public and private investors, as well as stating the public loan amounts by lender. For the dataset, the difference between the total debt finance and stated public debt finance was assumed to be private debt finance, where private lenders were listed.

6.3. AFRICAN NATIONAL GOVERNMENT BUDGETS

Data on capital expenditure on energy projects by African national governments for 2014-2020 was obtained through open source research, with spending information disclosed in official budget statements and/or speeches. Where possible, recurrent expenditure and spending on non-SDG7 compliant infrastructure or programmes was excluded. Data was collected for internal spending (that which was raised through government revenue or borrowing on markets) and



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external spending (that which was lent by international donors, excluding any lending for projects captured elsewhere in the data collection process).

It is important to note that reporting of energy spending is not disaggregated between SDG7compliant and non-SDG7-compliant projects. Therefore, spending on projects which do not contribute towards meeting SDG7 may be included in the data. There are also a number of countries in which energy and water expenditure are combined.

	2014	2015	2016	2017	2018	2019	2020
Algeria	\checkmark						
Angola	\checkmark						
Benin	\checkmark			\checkmark	\checkmark		\checkmark
Botswana	\checkmark						
Burkina Faso	\checkmark						
Burundi	\checkmark	\checkmark	\checkmark	\checkmark			\checkmark
Cabo Verde	\checkmark						
Cameroon		\checkmark			\checkmark	\checkmark	\checkmark
Central African Republic					\checkmark	\checkmark	\checkmark
Chad	\checkmark		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Comoros				\checkmark	\checkmark	\checkmark	
Congo-B				\checkmark	\checkmark	\checkmark	\checkmark
Côte d'Ivoire	\checkmark						
Democratic Republic of the Congo	\checkmark						
Djibouti							
Egypt	\checkmark						
Equatorial Guinea			\checkmark				
Eritrea							
Eswatini					\checkmark	\checkmark	\checkmark
Ethiopia	\checkmark	\checkmark	\checkmark		\checkmark	\checkmark	\checkmark
Gabon		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Gambia			\checkmark		\checkmark	\checkmark	\checkmark
Ghana	\checkmark						

Table 7: African national government spending data collected





	2014	2015	2016	2017	2018	2019	2020
Guinea			\checkmark	\checkmark	\checkmark	\checkmark	√
Guinea-Bissau	\checkmark	\checkmark					
Kenya	\checkmark						
Lesotho	\checkmark			\checkmark	\checkmark	\checkmark	\checkmark
Liberia		\checkmark	\checkmark	\checkmark	\checkmark		\checkmark
Libya							
Madagascar	\checkmark						
Malawi		\checkmark	\checkmark		\checkmark	\checkmark	\checkmark
Mali	\checkmark	\checkmark		\checkmark	\checkmark	\checkmark	\checkmark
Mauritania	\checkmark						
Mauritius	\checkmark						
Morocco					\checkmark	\checkmark	\checkmark
Mozambique	\checkmark						
Namibia	\checkmark		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Niger			\checkmark		\checkmark	\checkmark	\checkmark
Nigeria	\checkmark						
Rwanda	\checkmark						
São Tomé and Príncipe				\checkmark	\checkmark	\checkmark	\checkmark
Senegal	\checkmark						
Seychelles	\checkmark		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Sierra Leone	\checkmark						
Somalia						\checkmark	\checkmark
South Africa	\checkmark						
South Sudan	\checkmark	\checkmark	\checkmark		\checkmark		\checkmark
Sudan							
Tanzania	\checkmark						
Togo	\checkmark						
Tunisia				\checkmark	\checkmark		\checkmark



	2014	2015	2016	2017	2018	2019	2020
Uganda	\checkmark						
Western Sahara							
Zambia	\checkmark	\checkmark	\checkmark		\checkmark	\checkmark	\checkmark
Zimbabwe	\checkmark						

6.4 NON-SDG7 FINANCIAL FLOWS

Financial flows from non-EU and non-OECD member states were sought for the analysis of this report. While large amounts of financing has been reported – the majority of which from news reports or unverified and sometimes conflicting datasets – it has not been possible to determine the SDG7 compliance of much of this financing. Given that the SDGs are interdependent and much not prejudice one another, the burden is on the financier to prove that their finance is SDG-compliant. Therefore, financial flows which cannot be proven to be SDG7-compliant is omitted from the dataset and the analysis.

7. Disbursements data sample

Donors which have provided information to the OECD DAC each year, there is a consistent dataset of both commitments and disbursements. However, for the several donors and countries that do not report, information on disbursements is limited. Table 10 shows the number of ODA disbursements which have been reported to the OECD DAC 2014-2020.

Table 11 shows what percentage disbursements account of total investment by donor category.





Donor category	2014	2015	2016	2017	2018	2019	2020	Grand Total
Asia	238	53	47	54	55	15	237	699
EU Institutions and Member States	619	578	582	702	769	875	800	4,925
Europe (non-EU Member States)	106	97	66	71	113	73	263	789
Middle East	58	59	46	44	45	0	32	284
Multilaterals	587	464	419	482	537	189	616	3,294
North America	142	210	240	288	293	467	344	1,984
Oceania	7	34	16	33	12	0	2	104
Private sector	1	2	2	40	18	0	75	138
Total	1,758	1,497	1,418	1,714	1,842	1,619	2,369	12,217

Table 10: Number of ODA disbursements reported, 2014-2019

8. Grant equivalent

Reported grant equivalents as recorded in the OECD DAC were used to indicate the quality of ODA loan financing. Using project level commitments/disbursements and grant equivalent disclosures (presented in USD amounts and converted to EUR), the grant equivalent to disbursement amount ratio as a percentage (the grant element) was calculated for each ODA loan investment.

The OECD DAC reports grant equivalent data for ODA disbursements for the years 2015-2018 (the OECD changed to the grant equivalent approach in 2014, and as such there is no 2014 information available). To supplement this data, information on the grant equivalent of commitments and disbursements was requested from donors for 2019 via the questionnaire. Table 11 and Table 12 give an overview of the sample size of grant equivalent data obtained.

% of disbursement data % of commitment data Year containing grant equivalent containing grant equivalent 2014 2015 33% 18% 2016 33% 4% 2017 26% 16% 2018 27% 9%

Table 11: Proportion of ODA data with grant equivalent per year, 2014-2020





Year	% of disbursement data containing grant equivalent	% of commitment data containing grant equivalent
2019	61%	31%
2020	65%	54%

While a high percentage of grant equivalent data was collected for the year 2019 and 2020, this was entirely comprised of disbursements issued by EU Institutions and Member States. This itself is reflective of the fact that EU Institutions and Member State provided the overwhelming majority of disbursement data over the study period.

Table 12: Proportion of ODA loan disbursement data with grant equivalent by donor category, 2015-2020

Donor category	% of disbursements data containing grant equivalent
Asia	71%
EU Institutions and Member States	74%
Europe (Non-EU member states)	12%
Middle East	63%
Multilaterals	0%
North America	85%
Oceania	94%

Due to the limitations of the sample size, analysis was only carried out on the ODA loan disbursements of EI & MS, Asia and the Middle East over the period 2015 to 2018.

9. Core contributions to funds and multilaterals

Data on core contributions made by OECD members to funds and multilaterals was sourced from the OECD DAC CRS for the period 2014-2020. No data on core contributions to funds or multilaterals from non-OECD members was available.

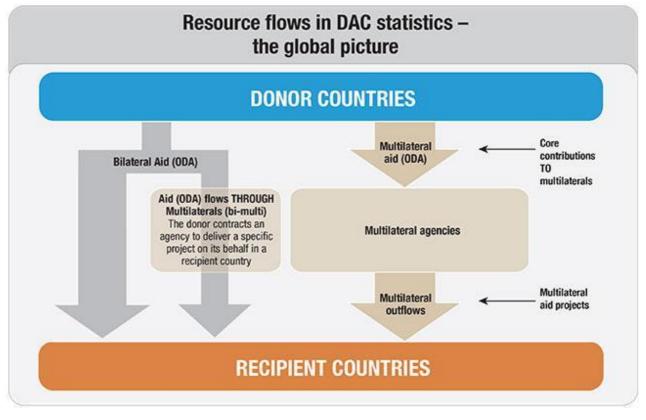
Core contributions are not included in the overall aggregation of funding for energy in Africa to ensure there is no double counting when considering the commitments and disbursements of funds and multilaterals.

Commitments and/or disbursements directed at a project, programme or scheme which flows through a multilateral or fund are classified as a bilateral investment rather than a core contribution, or an investment made by that multilateral or fund. Figure 1 illustrates the OECD definitions of core contributions (multi) and bilateral ODA directly to recipient countries (bi) or via multilaterals (bi-multi).





Figure 1: OECD definitions of ODA flows, bi versus multi



Source: Organisation for Economic Cooperation and Development's Development Assistance Committee

9.1. QUANTIFYING THE EU CONTRIBUTION VIA MULTILATERALS

To quantify EI & MS support for SDG7 in Africa beyond their direct commitments and disbursements, the report has attempted to provide a picture of the scale of indirect financing via their financial commitments towards multilaterals.

The proportion (in percentage terms) of EU Member State core contributions to multilaterals for 2020, as given in the OECD DAC CRS, was then applied to the total commitments made by multilaterals which are identified as having funding provided by EI & MS for each corresponding year.

It should be noted that the proportion of EI & MS funding is restricted to that of OECD member states, as no other data is provided despite some multilaterals being funded by non-OECD member states. Multilaterals also raise finance beyond the core contributions of their member state governments, therefore the figures provided in the report are an estimated maximum rather than an actual figure and should therefore be treated with care.





• Annex 1 – Exchange rates

EUR 1 to local currency							
Currency	2014	2015	2016	2017	2018	2019	2020
Algeria Dinar	107.21	110.87	120.66	124.65	137.45	134.09	116.34
Angola Kwanza	130.94	130.58	177.63	186.12	265.88	376.98	513.09
Argentina Peso	10.71	10.27	16.28	18.83	32.80	53.31	81.40
Australia Dollar	1.47	1.48	1.49	1.47	1.58	1.61	1.71
Botswana Pula	11.94	11.19	12.04	11.78	12.00	10.87	104.88
Brazil Real	3.13	3.69	3.87	3.61	4.31	4.39	5.94
Bulgaria Lev	1.96	1.96	1.96	1.96	1.96	1.96	1.94
Burundi Franc	2066.26	1749.20	1820.98	1936.72	2102.48	2065.07	2155.77
Canada Dollar	1.47	1.42	1.47	1.47	1.53	1.48	1.48
Cabo Verde Escudo	110.18	109.18	110.22	110.94	108.99	109.73	89.76
Franc CFA	658.44	654.86	654.60	657.20	655.61	657.20	533.50
Chilean Peso	664.25	554.76	1106.90	564.84	590.48	1119.47	1139.59
China Yuan Renminbi	8.15	6.89	7.33	7.63	7.82	7.72	7.86
Colombia Peso	2657.00	2773.78	3689.68	3765.60	3936.51	3731.58	4205.14
Comoros Francs	493.32	491.14	490.95	492.89	491.71	492.90	488.05
DR Congo Franc	1240.60	1034.36	1080.42	1574.67	1912.98	1851.06	2049.92
Costa Rican Colon	664.25	554.76	553.45	564.84	590.48	559.74	569.80
Croatia Kuna	7.64	7.60	7.53	7.48	7.43	7.41	7.50
Czech Republic Koruna	27.68	27.06	27.00	26.27	25.67	25.44	26.50
Denmark Krone	7.46	7.45	7.43	7.48	7.47	7.46	7.40
Djibouti Franc	238.30	198.79	196.35	199.96	209.97	200.02	200.16
Egypt Pound	9.47	8.54	10.31	19.33	20.98	19.17	17.97
Eritrea Nakfa	20.61	17.13	17.68	17.59	18.24	17.11	16.99
Ethiopia Birr	26.36	23.06	24.12	26.63	32.33	29.15	39.19





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Gambia Dalasi	55.19	47.39	47.46	51.95	51.56	56.10	58.13
Ghana Cedi	3.84	4.09	4.29	4.80	5.37	5.77	6.34
Guinea Franc	9339.39	8323.00	9343.17	10089.78	10620.03	10292.30	10812.36
Hungary Forint	332.13	277.38	276.73	282.42	295.24	373.16	379.86
Iceland Krona	147.61	138.69	138.36	125.52	131.22	139.93	162.80
India Rupee	83.03	69.34	73.79	75.31	78.73	79.96	87.66
Indonesia Rupiah	13285.01	11095.13	11069.04	11296.81	11809.54	11194.75	16612.15
New Israeli Shekel	4.76	4.32	4.26	4.06	4.23	3.98	3.88
Japan Yen	147.61	138.69	122.99	125.52	131.22	124.39	126.62
Kenya Shilling	117.29	108.10	617.79	116.30	119.53	114.66	313.41
South Korea Won	1328.50	1109.51	1106.90	1129.68	1180.95	1119.47	1139.59
Kuwaiti Dinar	0.00	0.00	0.00	0.00	0.00	0.00	0.34
Lesotho Maloti	14.39	14.02	16.33	15.29	15.54	16.25	14.96
Liberia Dollar	113.30	95.50	103.35	124.54	168.30	204.63	586.67
Libya Dinar	1.69	1.53	1.53	1.33	1.61	1.57	1.30
Madagascar Ariary	3193.32	3182.95	3514.78	3531.51	3917.21	4032.28	4275.20
Malawi Kwacha	567.97	550.62	126.44	751.57	859.67	832.03	841.30
Mauritania Ouguiya	403.06	359.77	387.79	400.61	38.24	41.15	42.11
Mauritius Rupee	40.80	38.43	39.28	38.96	39.96	39.59	44.39
Mexican Peso	17.71	17.61	20.50	21.31	22.71	21.53	24.25
Morocco Dirham	11.20	10.79	10.83	10.94	11.07	10.85	10.73
Mozambique Meticais	40.92	42.19	61.17	64.73	70.60	69.67	50.49
Namibia Dollar	14.40	14.02	16.33	15.29	15.54	16.25	18.46
New Zealand Dollar	1.60	1.59	1.59	1.59	1.71	1.70	1.71
Nigeria Naira	208.62	211.61	265.67	332.93	361.53	344.51	399.35
Norway Krone	8.36	8.95	9.30	9.34	9.60	9.82	10.75
Poland Zloty	4.19	4.19	4.36	4.26	4.26	4.31	4.45
Romania Leu	4.44	4.44	4.50	4.57	4.65	4.74	4.79





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Russia Ruble	51.10	69.34	73.79	66.45	73.81	74.63	81.40
Rwanda Franc	909.76	796.67	859.39	923.61	1012.60	1002.74	1053.82
Sao Tome & Principe Dobra	24.48	24.22	24.51	24.69	24.47	24.53	24.47
Saudi Arabia Riyal	4.98	4.16	4.15	4.23	4.42	4.19	4.33
Seychelles Rupee	16.93	14.90	14.67	15.26	16.39	15.80	18.78
Sierra Leone Leone	6002.11	5628.87	6262.75	8149.18	9280.50	9993.02	11077.15
Somalia Shilling	1197.29	756.14	658.06	655.50	681.08	652.39	655.53
South Africa Rand	14.44	14.22	16.28	15.06	15.54	16.22	18.68
South Sudan Pound	4.39	3.73	44.34	120.09	163.03	176.31	185.69
Sudan Pound	7.65	6.72	6.81	7.47	29.55	52.04	60.73
Swaziland Lilangeni	14.40	14.02	16.33	15.29	15.54	16.24	18.46
Sweden Krona	9.10	9.32	9.46	9.66	10.27	10.56	10.45
Switzerland Franc	1.22	1.07	1.09	1.11	1.15	1.11	1.00
Tanzania Shilling	2206.33	2185.52	2399.32	2503.90	2668.21	2570.00	2595.77
Tunisia Dinar	2.25	2.17	2.36	2.70	3.11	3.32	2.60
Turkey Lira	2.91	3.01	3.34	4.12	5.71	6.36	7.97
UAE Dirham	0.00	0.00	0.00	0.00	0.00	0.00	4.15
Uganda Shilling	3463.54	3555.67	3750.61	4054.63	4372.00	4164.34	4181.95
UK Pound Sterling	0.81	0.73	0.82	0.88	0.89	0.88	0.91
US Dollar	1.33	1.11	1.11	1.13	1.18	1.12	1.14
Zambia Kwacha	8.25	31.25	11.38	10.88	12.08	14.08	20.16
AfDB Unit of Account	1.14	1.26	1.26	1.20	1.23	1.23	1.23







• Annex 2 – References

Actis LLP, 'Refurbishing and reconnecting'. <u>https://www.act.is/about-actis/our-portfolio/umeme/</u>

Africa-EU Partnership, 'EU unveils a new Strategy with Africa'. Accessed at: <u>https://africa-eu-partnership.org/en/stay-informed/news/eu-unveils-new-strategy-africa</u>

Africa–Europe High–Level Platform for Sustainable Energy Investments in Africa, Scaling-up energy investments in Africa for inclusive and sustainable growth (November 2019). Accessed at: https://ec.europa.eu/energy/sites/ener/files/11-2019_sei-platformreport-executivesummary_05.pdf

African Development Bank Operations Evaluation Department (Opev), 'Mainstreaming Gender Equality: A Road to Results Or A Road To Nowhere? An Evaluation Synthesis', AfdB Working Paper, May 2011. Accessed at: <u>https://www.oecd.org/derec/afdb/48294202.pdf</u>

African Development Bank, 'African Development Bank urges power sector to capitalize on women's capabilities '. Accessed at: <u>https://www.afdb.org/en/news-and-events/african-development-bank-urges-power-sector-to-capitalize-on-womens-capabilities-18612</u>

African Development Bank, 'Investing in Gender Equality for Africa's transformation'. Accessed at: <u>https://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/2014-2018_-</u> <u>Bank_Group_Gender_Strategy.pdf</u>

African Development Bank, 'Light Up and Power Africa – A New Deal on Energy for Africa'. Accessed at: <u>https://www.afdb.org/en/the-high-5/light-up-and-power-africa-%E2%80%93-a-new-deal-on-energy-for-africa</u>

African Development Bank, 'The African Development Bank's Facility for Energy Inclusion attracts \$160m in commitments for small-scale renewable energy'. March 2020. Accessed at: <u>https://www.afdb.org/en/news-and-events/african-development-banks-facility-energy-inclusion-attracts-160m-commitments-small-scale-renewable-energy-34792</u>

African Development Bank, 'Empowering Women in Africa through Access to Sustainable Energy'. Accessed at: <u>https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/AfDB-Gender_and_Energy_Desk_Review-EN-2016.pdf</u>

African Development Bank, 'The New Deal on Energy for Africa (2018)'. Accessed at: <u>https://www.afdb.org/en/documents/document/the-new-deal-on-energy-for-africa-89193</u>

African Minigrid Developers Association, Benchmarking Africa's Minigrids (2020). Accessed at: <u>https://africamda.org/wp-content/uploads/2020/11/AMDA-Benchmarking-2020-.pdf</u>

Alberto Lemma, Isabella Massa, Andrew Scott and Dirk Willem te Velde, 'What are the links between power, economic growth and job creation', Development Impact Evaluation, Evidence Review, Overseas Development Institute (2016). Accessed at: <u>https://assets.cdcgroup.com/wp-content/uploads/2016/01/25150848/Links-between-power-economic-growth-and-job-creation.pdf</u>

Andrea Renzulli, Serena Cesareo, Gus Schellekens, and Luca Matrone, 'Scaling Up Africa's Renewable Power: The Need for De-Risking Investments and The Case for RenewAfrica'.





RES4Africa Foundation (July 2020). Accessed at: <u>https://www.res4africa.org/wp-</u> content/uploads/2020/07/RES4Africa-Foundation-Scaling-up-Africas-renewable-power.pdf

Angelo Guardo, Alejandro Castaneda, & Barbara Franceschini, 'A New Instrument to Foster Large-Scale Renewable Energy Development and Private Investment in Africa', RES4MED&Africa (February 2019). Accessed at: <u>https://www.res4med.org/wp-</u> <u>content/uploads/2019/02/RenewAfrica-White-Paper_FINAL.pdf</u>

Anton Eberhard, Anton Adriaan, Katharine Gratwick, Elvira Morella and Pedro Antmann, 2016. 'Independent power projects in Sub-Saharan Africa : lessons from five key countries (English). Directions in development'; energy and mining Washington, D.C. : World Bank Group. <u>http://documents.worldbank.org/curated/en/795581467993175836/Independent-power-projects-in-Sub-Saharan-Africa-lessons-from-five-key-countries</u>

Anton Eberhard and Gabrielle Dyson, 'What is the impact of investing in power? Practical thinking on investing for development', CDC Insight, 008 (January 2020). Accessed at: https://assets.cdcgroup.com/wp-content/uploads/2020/01/30151049/Whats-the-impact-of-investing-in-power.pdf

Anton Eberhard and Raine Naude, 'The South African renewable energy independent power producer procurement programme: A review and lessons learned', Journal of Energy in Southern Africa, 27, 4 (2016), pp. 1-14.

Anton Eberhard, Katharine Gratwick, Elvira Morella, & Pedro Antmann, 'Independent Power Projects in Sub-Saharan Africa: Investment trends and policy lessons', Energy Policy, 108 (2017), pp. 390-424. Accessed at: <u>http://www.gsb.uct.ac.za/files/investmenttrendspolicylessons.pdf</u>

Anton Eberhard, 'SA's renewable energy IPP procurement programme: Success factors and lessons', EE Publishers, June 2014. Accessed at: http://www.ee.co.za/article/south-africas-reippp-programme-success-factors-lessons.html

Bo Kong and Kevin Gallagher, 'Chinese development finance for solar and wind power abroad', GCI Working Paper 009, January 2020. Accessed at: <u>http://www.bu.edu/gdp/files/2020/02/WP9-Kong-Bo-inc_abstract-1.pdf</u>

Boingotlo Gasealahwe, 'Electricity Biggest Risk to South Africa Economic Outlook', Bloomberg Economic (September 2020). Accessed at: <u>https://www.bloomberg.com/news/articles/2020-09-04/electricity-biggest-risk-to-south-africa-economic-outlook-chart</u>

Boston University, China's Global Energy Finance (CGEF). Accessed at: https://www.bu.edu/cgef/

Caroline Muriuki, '\$120m to African SMEs for renewable energy', The Exchange, December 2019. Accessed at: <u>https://theexchange.africa/africa/120m-to-african-smes-for-renewable-energy/</u>

Catrina Godinho and Anton Eberhard, 'Learning from Power Sector Reform the Case of Uganda'. Accessed at: http://hdl.handle.net/10986/31562

Center for Strategic and International Studies, 'How Is China's Energy Footprint Changing?'. Accessed at: <u>https://chinapower.csis.org/energy-footprint/</u>

College of William and Mary, AidData's Geocoded Global Chinese Official Finance, Version 1.1.1. Accessed at: <u>https://www.aiddata.org/data/geocoded-chinese-global-official-finance-dataset</u>





Danny Bradlow and Chris Humphrey, 'Sustainability and Infrastructure Investment: National Development Banks in Africa'. Boston University GEGI Working Paper 04. Accessed at: <u>https://www.bu.edu/pardeeschool/files/2016/07/Bradlow.Final_.pdf</u>

Deborah Brautigam and Jyhjong Hwang, 'Great walls over African rivers: Chinese engagement in African hydropower projects'. Development Policy Review, 37 (2019), pp. 313-330. Accessed at: https://doi.org/10.1111/dpr.12350

Ecowas. 'Ecowas Policy for Gender Mainstreaming in Energy Access', 2017.

Elaine Dezenski, 'Below the Belt and Road: Corruption and Illicit Dealings in China's Global Infrastructure', The Foundation for Defense of Democracies, May 2020. Accessed at: <u>https://www.fdd.org/wp-content/uploads/2020/05/fdd-monograph-below-the-belt-and-road.pdf</u>

EMPEA Institute, 'Case Study: Umeme Company Limited', 2016. Accessed at: <u>https://www.empeainstitute.org/app/uploads/2017/09/EMPEA-Institute_Impact-Case-Study_Umeme_WEB.pdf</u>

Energia, 'ENERGIA & partners analyze COVID-19 impact on gender and energy nexus', May 2020. Accessed at: https://www.energia.org/new-energia-partners-covid-19-briefing-paper/

Energia, 'Women's empowerment and electricity access: How do grid and off-grid systems enhance or restrict gender equality?', January 2019. Accessed at: http://efewee.org/files/Womenempowermnt-electricity-access.pdf

Energia, 'Women's empowerment and electricity access: How do grid and off-grid systems enhance or restrict gender equality?' Accessed at: <u>https://www.energia.org/cm2/wp-content/uploads/2019/04/RA1-Womens-empowerment-and-electricity-access.pdf</u>

Enock Twinoburyo, Lina Henao, Olive Dushime, Abigail Simkoko, Yigrem Kassa, & Donald Ndahiro, 'Africa 2030: Sustainable Development Goals Three-Year Reality Check, SDG Centre for Africa (June 2019)'. Accessed at: <u>https://sdgcafrica.org/wp-content/uploads/2019/06/AFRICA-2030-SDGs-THREE-YEAR-REALITY-CHECK-REPORT.pdf;</u>

European Commission Department of International Cooperation and Development, 'Energy'. Accessed at: <u>https://ec.europa.eu/international-partnerships/topics/energy_en</u>

European Commission Department of International Cooperation and Development, 'Empowering Development: Implementation of the new European Consensus on Development in Energy cooperation'. February 2018. Accessed at: <u>https://ec.europa.eu/international-partnerships/system/files/staff-working-document-empowering-development-february-2018_en.pdf</u>

European Commission, 'Africa-EU cooperation'. Accessed at: <u>https://ec.europa.eu/international-partnerships/africa-eu-cooperation_en</u>

European Commission, 'Communication on a new Africa – Europe Alliance for Sustainable Investment and Jobs: taking our partnership for investment and jobs to the next level'. Accessed at: <u>https://ec.europa.eu/commission/sites/beta-political/files/soteu2018-africa-europe-jobs-</u> <u>alliance-communication-643_en.pdf</u>





European Commission, 'Energising Africa'. Accessed at: <u>https://ec.europa.eu/international-partnerships/topics/energising-africa_en</u>

European Commission, 'Gender equality & women's rights worldwide – 2021-25 action plan'. Accessed at: <u>https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12240-EU-Action-Plan-of-Gender-equality-and-women-s-empowerment-in-external-relations-for-2021-2025-</u>

European Commission, 'Gender Equality and Climate Change: Report'. Accessed at: <u>http://eige.europa.eu/sites/default/files/documents/Gender-Equality-and-Climate-Change-Report.pdf</u>

European Commission, 'Guarantees and blending'. Accessed at: <u>https://ec.europa.eu/international-partnerships/guarantees-and-blending_en</u>

European Commission, 'Speech by Commissioner Simson at the EU Sustainable Energy Week's session on Women in the Energy Transition'. Accessed at: <u>https://ec.europa.eu/commission/commissioners/2019-2024/simson/announcements/speech-commissioner-simson-eu-sustainable-energy-weeks-session-women-energy-transition_en</u>

European Commission, 'The Facility for Energy Inclusion'. Accessed at: <u>https://ec.europa.eu/international-partnerships/projects/facility-energy-inclusion_en</u>

European Commission, 'What is gender mainstreaming'. Accessed at: <u>https://eige.europa.eu/gender-mainstreaming/what-is-gender-mainstreaming</u>

European Commission, Council conclusions on Energy and Development, as adopted by the Council at its 3505th meeting held on 28 November 2016. Accessed at: <u>https://www.consilium.europa.eu/media/24219/st14839en16-ead.pdf</u>

European Institute for Gender Equality, 'Gender and Equality', 2017. Accessed at: <u>https://eige.europa.eu/publications/gender-and-energy</u>

European Union Energy Initiative, 'Energy: Enabling Development Europe's Contribution to Sustainable Energy Cooperation', June 2017. Available at: <u>http://www.euei-</u> <u>pdf.org/sites/default/files/field_publication_file/eu_energy_initiative_europes_contribution_to_sus</u> <u>tainable_energy_cooperation.pdf</u>

Financial Times ,'Private equity sparks revival at Ugandan utility Umeme', 27 April 2017. Accessed at: <u>https://www.ft.com/content/a57fa47c-1557-11e7-b0c1-37e417ee6c76</u>

Financial Times, 'Private equity sparks revival at Ugandan utility Umeme'. 27 April 2017. Accessed at: https://www.ft.com/content/a57fa47c-1557-11e7-b0c1-37e417ee6c76

Financial Times, 'Rural women are biggest victims of Africa's energy shortfall'. 14 January 2020. Accessed at: <u>https://www.ft.com/content/885cc12a-f2e5-4808-bec8-5629a498cc6b</u>

GET.invest, 'What We Do'. Accessed at: https://www.get-invest.eu/about-recp/how-we-work/

Grantham Research Institute on Climate Change and the Environment, 'What types of energy does China finance with its development aid?'. Accessed at: <u>https://www.lse.ac.uk/granthaminstitute/news/china-energy-development-aid/</u>





Horn. Reinhart, & Trebesch. 'China's overseas lending', ibid. See also Jevans Nyabiage, 'Chinese lenders turn off the taps on international energy projects as 'debt trap diplomacy' criticisms mount', South China Morning Post, 20 February 2020. Accessed at:

https://www.scmp.com/news/china/diplomacy/article/3051466/chinese-lenders-turn-tapsinternational-energy-projects-debt

Ilham Rawoot, 'Gas-rich Mozambique may be headed for a disaster', Al Jazeera (24th February 2020). Accessed at: <u>https://www.aljazeera.com/opinions/2020/2/24/gas-rich-mozambique-may-be-headed-for-a-disaster/</u>

Infrastructure Consortium for Africa, 'Infrastructure Financing Trends in Africa 2018'. Available online

at: <u>https://www.icafrica.org/fileadmin/documents/IFT_2018/ICA_Infrastructure_Financing_Trends</u> _in_Africa_-_2018_Final_En.pdf

International Energy Agency, Africa Energy Outlook 2019. <u>https://www.iea.org/reports/africa-energy-outlook-2019</u>

International Energy Agency, IRENA, UNSD, WB, WHO, 'Tracking SDG 7: The Energy Progress Report 2019'. <u>https://trackingsdg7.esmap.org/data/files/download-documents/2019-</u> <u>Tracking%20SDG7-Full%20Report.pdf</u>

International Energy Agency, World Energy Outlook 2018. Accessed at: <u>https://www.iea.org/reports/world-energy-outlook-2018</u>

International Monetary Fund, World Economic Outlook 2020.

International Renewable Energy Agency, 'Renewable energy: A Gender Perspective'. Accessed at : <u>https://www.irena.org/publications/2019/Jan/Renewable-Energy-A-Gender-Perspective</u>

Jan Corfee-Morlot, Paul Parks, James Ogunleye and Famous Ayeni, 'Achieving Clean Energy Access in Sub-Saharan Africa' (January 2019). <u>https://www.oecd.org/environment/cc/climate-futures/case-study-achieving-clean-energy-access-in-Sub-Saharan-africa.pdf</u>

Joseph Cotterill, 'South Africa to impose its biggest rolling power blackouts'. Financial Times, December 2019. Accessed at: https://www.ft.com/content/27a525a4-1aa4-11ea-9186-7348c2f183af

Jurg van Dyk, 'Power purchase: Africa's shift to take-and-pay clauses', Pinset-Masons Out-Law. <u>https://www.pinsentmasons.com/out-law/analysis/power-purchase-africa-take-pay-clauses</u>

Kartik Jayaram, Omid Kassiri, & Irene Yuan Sun, 'The closest look yet at Chinese economic engagement in Africa'. McKinsey & Co, June 2017. Accessed at: <u>https://www.mckinsey.com/featured-insights/middle-east-and-africa/the-closest-look-yet-at-chinese-economic-engagement-in-africa</u>

Kelvin Fu, 'Strengthening Electricity Distribution in Uganda: The Role of Private Equity', Leadership Academy for Development Case Study (Stanford University Freeman Spogli Institute for International Studies & Johns Hopkins School of Advanced International Studies). <u>https://fsi-live.s3.us-west-1.amazonaws.com/s3fs-public/umeme_final_v2.pdf</u>







Ken Fullerton, 'South Africa's REIPPP'. Sense & Sustainability, April 2019. Accessed at: <u>https://www.senseandsustainability.net/2019/04/02/south-africas-reippp/</u>

King & Wood Mallesons, 'Out of China: The activities of China's export credit agencies and development banks in Africa'. Accessed at:

https://www.kwm.com/en/es/knowledge/insights/out-of-china-the-activities-of-chinas-exportcredit-agencies-and-development-banks-in-africa-20160101

Köhlin, G. et al., 2011. 'Energy, Gender and Development. What are the Linkages? Where is the Evidence?' In Social Development Papers: Social Inclusion and Social Resilience. Paper No. 125/August 2011. World Bank Group, Washington DC. Accessed at: https://ppp.worldbank.org/public-private-

partnership/sites/ppp.worldbank.org/files/documents/Energy%2C%20Gender%20and%20Develop ment%20%E2%80%93%20What%20are%20the%20Linkages%3F%20Where%20is%20the%20Eviden ce_EN.pdf

Li, Zhongshu, Kevin P. Gallagher, and Denise L. Mauzerall.'China's global power: Estimating Chinese foreign direct investment in the electric power sector'. Energy Policy 136 (2020), pp 1-12.

Luzuko Nomjana, 'REIPPP comes of age'. Futuregrowth, February 2020. Accessed at: <u>https://futuregrowth.co.za/newsroom/reippp-comes-of-age/</u>

Maduekwe, M., Morris, E., Greene, J. et al. 'Gender Equity and Mainstreaming in Renewable Energy Policies—Empowering Women in the Energy Value Chain in the Economic Community of West African States (ECOWAS)'. Current Sustainable Renewable Energy Rep 6, 13–21 (2019). Accessed at: <u>https://doi.org/10.1007/s40518-019-00127-2</u>

Maria Prebble and Ana Rojas,' Energizing Equality: sub-Saharan Africa's integration of gender equality principles in national energy policies and frameworks'. IUCN Global Gender Office, May 2018. Accessed at:

https://www.climatelinks.org/sites/default/files/asset/document/2018_IUCN_Energizing-Equality-Sub-Saharan-Africa%27s-Integration-of-Gender-Equality-Principles-Energy-Policies_accessible.pdf

Matt Ferchen, 'Where's the "Development" in China's Global Development Finance?', Diálogo Chino, January 2018. Accessed at: <u>https://dialogochino.net/en/trade-investment/10449-wheres-the-development-in-chinas-global-development-finance/</u>

Maude Vallée, 'Another unknown in post-COVID PPPs in Africa: Resumption of foreign direct investment', World Bank Blogs (September 2020). Accessed at: <u>https://blogs.worldbank.org/ppps/another-unknown-post-covid-ppps-africa-resumption-foreign-direct-investment</u>

McKinsey & Co, 'Brighter Africa: The growth potential of the Sub-Saharan electricity sector (February 2015)'. Accessed at:

https://www.mckinsey.com/~/media/mckinsey/industries/retail/our%20insights/east%20africa% 20the%20next%20hub%20for%20apparel%20sourcing/brighter_africa_the_growth_potential_of_the _sub%20saharan_electricity_sector.pdf

Netherlands Ministry of Foreign Affairs, 'Final Energy Report Uganda', July 2018. Accessed at: <u>https://www.rvo.nl/sites/default/files/2019/02/Final-Energy-report-Uganda.pdf</u>



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Paul Burkhardt and Rene Vollgraaff, 'Eskom CEO plans operations overhaul with slower breakup mulled'. MINING.com, January 2020. Accessed at: <u>https://www.mining.com/web/eskom-ceo-plans-operations-overhaul-with-slower-breakup-mulled/</u>

Paul Burkhardt, 'Eskom Breakup Could Begin with Spin-Off of Transmission Unit'. Bloomberg, September 2019. Accessed at: <u>https://www.bloomberg.com/news/articles/2019-09-02/eskom-breakup-could-begin-with-spin-off-of-transmission-unit</u>

Picciotto, R (2002). 'The Logic of Mainstreaming: A Development Evaluation Perspective', Evaluation Vol. 8(3): 322–339.

Questionnaire to the European Parliament, accessed at: <u>https://ec.europa.eu/commission/commissioners/sites/comm-</u> <u>cwt2019/files/commissioner_ep_hearings/answers-ep-questionnaire-simson.pdf</u>

Renewables Now, 'ECOWAS financial arm to provide USD 21m for solar projects in Benin'. March 2020. Accessed at: <u>https://renewablesnow.com/news/ecowas-financial-arm-to-provide-usd-21m-for-solar-projects-in-benin-690284/</u>

Report to Congress of the U.S.-China Economic and Security Review Commission, 2019. Accessed at: <u>https://www.uscc.gov/sites/default/files/2019-</u> 11/2019%20Annual%20Report%20to%20Congress.pdf

Richenda Van Leeuwen, 'Catalyzing Clinic Electrification for Maternal and Child Health', United Nations Foundation, 26 August 2014. Accessed at: <u>https://unfoundation.org/blog/post/catalyzing-clinic-electrification-for-maternal-and-child-health/</u>

Roxanne Henderson, 'South Africa Gets Backing for Plan to Raise Green Energy Output'. Bloomberg, February 2019. Accessed at: <u>https://www.bloomberg.com/news/articles/2019-02-</u>27/south-africa-gets-backing-for-plan-to-raise-green-energy-output

Ryan Cronk and Jamie Bartram, 'Environmental conditions in health care facilities in low-and middle-income countries: coverage and inequalities', International Journal of Hygiene and Environmental Health, 221(3), 409-422. 2018. Accessed at: https://doi.org/10.1016/j.ijheh.2018.01.004

SEforALL, 'Powering Health', 2019. Accessed at: <u>https://www.seforall.org/publications/lasting-impact-sustainable-off-grid-solar-delivery-models</u>

UN Department of Economic and Social Affairs, 'Growing at a slower pace, world population is expected to reach 9.7 billion in 2050 and could peak at nearly 11 billion around 2100'. Accessed at: https://www.un.org/development/desa/en/news/population/world-population-prospects-2019.html

United Nations, 'Affordable and Clean Energy: Why it Matters'. Accessed at: <u>https://www.un.org/sustainabledevelopment/wp-content/uploads/2016/08/7_Why-lt-Matters-2020.pdf</u>

UNREEEA, 'Overview of Uganda's Renewable Energy Potential', Undated. Accessed at: <u>https://unreeea.org/resource-center/overview-of-the-ugandan-energy-sector/</u>







US Energy Information Administration, 'Country Analysis: Mozambique' (July 2020). Accessed at: <u>https://www.eia.gov/international/analysis/country/MOZ;</u>

USTDA, 'Power Africa'. Accessed at: https://ustda.gov/initiatives/power-africa/

Wei Shen, 'China's role in Africa's energy transition: a critical review of its intensity, institutions, and impacts', Energy Research & Social Science, 68 (2020). Accessed at: <u>https://www.sciencedirect.com/science/article/abs/pii/S2214629620301547</u>

WHO Manifesto for a Healthy Recovery from Covid-19: Prescriptions and Actionables for a Healthy and Green Recovery. Accessed at: <u>https://www.who.int/docs/default-source/climate-change/who-manifesto-for-a-healthy-and-green-post-covid-recovery.pdf</u>

Will Steggals, David Nelson, & Gaia Stigliani, 'Financing clean power: a risk-based approach to choosing ownership models and policy/finance instruments', Climate Policy Initiative (August 2017). Accessed at: <u>https://www.climatepolicyinitiative.org/wp-content/uploads/2017/09/Financing-clean-power-a-risk-based-approach-Sept-2017.pdf</u>

Wood Mackenzie, 'How off-grid energy access is shaping the energy transition: Strategic investments in off-grid energy access' (March 2019). Accessed at: <u>https://www.woodmac.com/news/feature/how-off-grid-energy-access-is-shaping-the-energy-transition/</u>.

World Bank Group, 'Off-Grid Solar Market Trends Report 2020' (March 2020). Accessed at: <u>https://www.lightingglobal.org/wp-</u>

<u>content/uploads/2020/03/VIVID%200CA_2020_Off_Grid_Solar_Market_Trends_Report_Full_High.p</u> <u>df</u>

World Bank, 'Belt and Road Economics: Opportunities and Risks of Transport Corridors', 2019. Accessed at: <u>http://documents1.worldbank.org/curated/en/715511560787699851/pdf/Main-Report.pdf</u>

World Bank, 'Private Participation in Infrastructure (PPI) 2019 Annual Report (2020)'. Accessed at: <u>https://ppi.worldbank.org/content/dam/PPI/documents/private-participation-infrastructure-annual-2019-report.pdf</u>

World Energy Council, 'World Energy Scenarios: Regional Perspective for Sub-Saharan Africa' (2017). Accessed at: <u>https://www.worldenergy.org/assets/downloads/Scenarios_Regional-Perspective-for-Sub-Saharan-Africa-1.pdf</u>

World Health Organisation, 'Harnessing Africa's untapped solar energy potential for health'. Accessed at: <u>http://dx.doi.org/10.2471/BLT.14.020241</u>

World Health Organisation, WHO Gender Responsive Assessment Scale: criteria for assessing programmes and policies. Accessed at: https://www.who.int/gender/mainstreaming/GMH_Participant_GenderAssessmentScale.pdf

World Health Organization, Country Cooperation Strategy: Guinea, 2015.

Yufan Huang & Deborah Brautigam, 'Putting a Dollar Amount on China's Loans to the Developing World', The Diplomat, 24 June 2020. Accessed at: <u>https://thediplomat.com/2020/06/putting-a-dollar-amount-on-chinas-loans-to-the-developing-world/</u>