Lighting the way? Assessing the World Bank's Climate Action Plan and energy access

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Cover Image: African skyline
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EXECUTIVE SUMMARY

Roughly 1 billion people globally still live without access to electricity with the vast majority residing in rural communities in Sub-Saharan Africa and Asia.[1] Towards resolving this unacceptable situation, in its 2013 Energy Directions Paper, the World Bank Group (WBG) committed to focusing its energy operations on attaining the goals of the United Nations (UN) Sustainable Energy for All (SEforAll) initiative and the UN Sustainable Development Goal 7 (SDG7).[2] The SEforAll and SDG7 goals include universal energy access by 2030 and doubling the share of renewable energy in global final energy consumption by 2030.[3]

As indicated, energy access goals and climate goals are inextricably linked. Poor communities are the hardest hit by climate change impacts and climate change threatens current and future poverty eradication.[4] In December 2015, 195 countries adopted the Paris Climate Agreement with a commitment to limit global average temperature to well below 2°C above pre-industrial levels and to make financial flows consistent with a pathway towards low greenhouse gas (GHG) development. Shortly after the Paris Agreement, in April 2016 the WBG published its Climate Change Action Plan (CCAP). This plan upheld the SEforAll and SDG7 goals and pledged to help member countries meet their Nationally Determined Contributions (NDC) to the Paris Climate Agreement.

Unfortunately, global progress is still far behind on universal energy access and keeping temperatures well below 2°C warming. If swift changes do not occur we will not meet either goal. Despite increased energy access rates in recent years, progress has been considerably uneven, **leaving the majority of people living in Sub-Saharan Africa still in the dark** (only 43 percent have access).[5] Moreover, even if we meet current NDC targets, **global warming is still likely to exceed 3˚C to 4˚C** in the 21st century.[6]

Following up on a 2017 assessment of the WBG's Energy Directions Paper,[7] this document examines the degree to which the WBG's Climate Change Action Plan (CCAP) effectively addresses the dual objective of increasing energy access for the poor while meeting the goals of the Paris Climate Agreement. This work also reviews the intersection of WBG assistance, energy access goals, and NDC goals in six high energy access deficit countries.

MAIN FINDINGS OF ASSESSMENT

Overall, the assessment found indications of WBG progress towards increasing energy access and renewable energy capacity. However, unfortunately the assessment also revealed troubling setbacks and the potential for WBG aggregate development outcomes ultimately to hinder universal energy access and NDC climate goals.

PROMISING PROGRESS:

- CCAP upholds the commitment that WBG energy sector operations should support SEforAll and SDG7 goals, including universal energy access by 2030 and 36% renewable energy share of global final energy consumption by 2030.[8]

- **CCAP asserts that WBG assistance should be consistent with Global Climate Goals and a country's Nationally Determined Contributions (NDC) to the Paris Climate Agreement.** The collective actions set out in the NDCs will help determine whether or not we will meet the 2 degree target and thus, avoid climate catastrophe.

- **CCAP sets out quantified targets for renewable energy and associated energy access by 2020**: 20 GW for all renewable energy, including large hydropower[9]; 10 GW for grid-connected variable renewable energy (VRE); and at least 2 transactions closed for distributed solar power resulting in 150,000 solar home systems in sub-Saharan Africa. However, this report deems these targets to be deficient.

- **WBG has increased energy access rates** – According to recent WBG reporting, the number of absolute new connections associated with WBG operations appears to have increased substantially in the last few years reaching over 26 million from FY15 to FY17 compared to only 6.9 million during the previous three years. Most recently, in FY2017 and FY2018, the WBG approved several large-scale energy access projects, including $150 million for the Off-grid Solar Access Project for Underserved Counties in Kenya and $350 million for the Electrification Project in Nigeria that aims to reach rural communities through distributed solar power.

- **Some NDCs aim for universal energy access and distributed renewable energy**. In the two countries that contain the most people without access to energy, India and Nigeria, the NDCs clearly incorporate universal energy access as part of the NDC's objective. Accordingly, Nigeria commits to an unconditional target of 13 GW of off-grid solar by 2030 to address both its energy access and climate goals. More countries need to be assisted

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with their NDCs to follow Nigeria's example. (Unfortunately, Nigeria also has upcoming fossil fuel projects supported by the WBG that contradict its NDC goals.)

TROUBLING SETBACKS:

- **WBG does not adequately prioritize energy access and renewable energy**. Given the unsubsidized cost of solar and wind technologies are cost competitive with fossil fuels, and compared with the energy access and renewable energy pledges made by other international organizations, the WBG's 2020 targets are wholly deficient and must be replaced with meaningful targets (see Tables 1 and 2 below). Moreover, the WBG does not have any official investment criteria that provide clear guidance to staff on how to prioritize portfolio selection based on direct increase to energy connections, under-funded renewable energy opportunities, and proven reduction of GHG emissions.

- **Not enough WBG support for rural electrification**. Despite increases in electricity connections in the last three years, the overall rate of electrification for the poorest 40 percent of the population is not improving in countries with WBG operations. This may indicate that the WBG's efforts have focused more on urban access than rural access. Rural populations make up the vast majority (87 percent) of people without access to energy. The CCAP aimed for only 150,000 distributed solar systems in Sub-Saharan Africa over 5 years, when it will take well over 15 million new off-grid connections annually to reach universal access by 2030.[10] **Distributed Renewable Energy addresses both rural energy access and global climate goals.**

- **WBG operations hinder NDC climate goals.** Even though the CCAP states that WBG assistance must be consistent with NDCs and global climate goals, the WBG has not adopted clear guidance to incorporate this principle into Country Partnership Frameworks (CPFs) or criteria for portfolio selection. The cases of Nigeria and Kenya demonstrate that the WBG continues to support operations that are not consistent with countries' NDCs. For example, the WBG is channeling support to coal power plants including the Lamu Coal Power Plant in Kenya through PPP investment incentives and new captive generation plants associated with cement production. It is not enough for the WBG to have operations that support NDCs; the WBG must also ensure that it is not supporting actions that run counter to NDCs.

- **Increasing RE investments is not enough.** While the WBG continues to increase its investments in renewable energy every year, it also continues to provide high levels of public finance to fossil fuels (averaging $2 to $3 billion a year).[11] Much WBG support goes to infrastructure for fossil fuel exports, which do not address energy access or climate goals. Furthermore, the WBG does not measure the aggregate development outcomes from increased fossil fuel investments associated with WBG policy lending, advisory services, or financial intermediaries (FI). The CCAP does not provide a target to reduce WBG finance for fossil fuels. As such, the WBG's fossil fuel investments significantly diminish the WBG's net contribution to doubling the share of renewable energy in final energy consumption by 2030.

- **Increasing WBG support for gas is not a low-GHG development path.** Due to leakage, natural gas is the largest source of global methane emissions, a GHG with atmospheric warming 80 times greater than carbon dioxide.[12] This fact alone largely offsets the perceived climate benefits of gas relative to coal. In addition, gas

development is often interconnected with oil development. For example, the WBG has provided over $900 million to the Sankofa Gas Project in Ghana. This WBG gas finance enabled the development of the "super-giant" Sankofa oil fields (500 million barrels).

RECOMMENDATIONS – WBG POST-2020 COMMITMENTS

In order to contribute to avoiding climate disaster and sufficiently increase the provision of energy to the rural poor, the WBG must put forward and more ambitious targets for rural energy access and distributed renewable energy. The WBG has indicated that it plans to announce new commitments and targets for beyond 2020 at the COP24 in December 2018.[13] The WBG's post-2020 commitments should include:

- **Increase rural energy connections by 15 million households per year**. In Africa alone, the African Development Bank (AfDB) has pledged 75 million new off-grid connections for rural households and small businesses by 2025.[14] Per year, the AfDB's pledge equals 15 million households. The WBG should match the AfDB and increase rural energy connections by 15 million households per year until universal access is reached. In meeting this pledge, the WBG must be sure to avoid double counting for joint-agency initiatives.

- **Pledge $3.8 billion annually to distributed renewable energy (DRE).** Increasing global DRE capacity is important to meeting both rural electrification and NDC climate targets. The WBG has not yet adopted a sufficient commitment towards increasing DRE. From FY14 to FY16, the WBG's energy sector budget averaged $11 billion a year. If the WBG provided 50% to energy access, it would equal about $5.5 billion. According to the IEA, 69% of energy access funding should go for off-grid solutions. Thus, the WBG should be spending about $3.8 billion a year on DRE.[15]

- **Assist the top 20 high energy deficit countries to integrate universal energy access into NDCs.** About 80 percent of those without electricity live in the top 20 largest energy access deficit countries.[16] However, few NDCs in these High Energy Access Deficit Countries directly link to the SDG7 universal energy access goal. The WBG should assist countries to integrate universal energy access into the objectives and mitigation measures of the NDC. [Nigeria could be used as an example]

- **Help countries meet their more ambitious conditional NDC climate goals.** In Sub-Saharan Africa, most NDC targets are conditional on receiving adequate international assistance. The WBG is one of the largest sources of international assistance to developing countries and as such, should ensure adequate funding and policy support for countries to reach their more ambitious conditional NDC climate goals.

- **Ensure all WBG operations are consistent with conditional NDC targets.** In keeping with the CCAP affirmation that WBG assistance should be consistent with NDCs, the WBG needs to require that operations prove that they will not endanger conditional NDC targets and GHG mitigation measures. In addition to all project investments, the WBG must ensure that development policy finance, infrastructure investment frameworks (PPP investment frameworks), technical assistance, and investments through financial intermediaries do not threaten conditional NDC targets.

- **Pledge to lower the share of fossil fuels in total final energy consumption.** As an indicator of WBG support for NDCs, the WBG needs to track and report total final energy consumption mixes for all countries with WBG operations. Development Policy Finance (DPF), Program for Results (P for R), Technical Assistance (TA) and IFC Advisory Services should only support policies that directly result in a lower share of fossil fuels/higher share of renewable energy in the total final energy consumption of a given country. This indicator will also measure support for the SEforAll goal of 35% renewable energy share of global final energy consumption.

- **End Support to Fossil Fuels by 2020 – End to Upstream oil and gas by 2020 is not enough.** In order to increase progress towards the SEforAll renewable energy target and access to affordable clean energy for all, the WBG should phase out support to fossil fuels by 2020. It makes no sense to use limited public money for fossil fuels, when there are so many cost effective renewable energy opportunities that remain under funded. Moreover, the WBG's pledge to end support for upstream oil and gas by 2020 is not meaningful unless it includes divesting from all existing equity in companies linked to upstream oil and gas and WBG assistance provided through financial intermediaries, development policy finance, and technical assistance/advisory services. This commitment should preclude support for associated infrastructure that directly enables the development of new oil and gas extraction (including, for example, financing for oil and gas pipelines that would expand takeaway capacity).

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INTRODUCTION

Roughly 1 billion people globally still live without access to electricity with the vast majority residing in rural communities in Sub-Saharan Africa and Asia.[17] Access to affordable and reliable energy is fundamental to reducing poverty, since it is essential for the provision of clean water, sanitation and healthcare, as well as the provision of reliable lighting, heating, cooking, mechanical power, transport and telecommunication services.[18]

The World Bank reports that the poor are the hardest hit by climate change impacts and that climate change threatens current and future poverty eradication.[19] Given that the energy sector is the largest contributor to greenhouse gas (GHG) emissions, it is paramount to poverty reduction and global climate change goals that the energy sector equitably transitions to non-GHG emissions fuels and technologies.

In full recognition of this dual development objective, in 2012 the United Nations General Assembly embraced the Sustainable Energy for All (SEforAll) initiative. In addition, in January 2016, the UN Sustainable Development Goals (SDG) took effect. Both SEforAll and SDG7[20] share three interlocking energy objectives for 2030:

1. Achieve universal access to modern energy services,
2. Double the historic global rate of improvement of energy efficiency, and
3. Double the share of renewable energy in the global energy mix.

In its 2013 Energy Directions Paper, the World Bank Group (WBG) committed to focusing its energy sector operations on attaining the goals of the United Nations (UN) Sustainable Energy for All (SEforAll) initiative and the UN Sustainable Development Goal 7 (SDG7).

SUMMARY OF 2017 ENERGY ACCESS ASSESSMENT OF ENERGY DIRECTIONS PAPER

The two primary WBG development frameworks that focus on the energy sector and climate change include: 1.) **WBG Energy Sector Directions Paper** and 2.) **WBG Climate Change Action Plan 2016-2020**. Both of these frameworks are paramount to the WBG's approach to achieving both universal energy access and remaining well under 2°C warming. In October 2017, the Swedish Society for Nature Conservation and Bank Information Center Europe published an assessment of the WBG's Energy Directions Paper,[21] which concluded:

Despite the World Bank's commitment to universal energy access, the **World Bank has not adopted any targets for its own contributions** to the 2030 universal access goal. Moreover, **the WBG fall short in prioritizing enough of its own budget for energy access**. It provided only $1.5 billion in 2016 towards energy access, which is equal to 13 percent of the Bank's energy budget.

In addition, the assessment found that what the WBG counts as "improving energy access" is not well de-

fined, giving the example of a World Bank energy access project in Mozambique that provided considerably less funding for extending connections to communities than it provided for increasing access to power for coal-exporting operations.

The WBG needs to heed the warning of the International Energy Agency's Africa Energy Outlook (2017), which finds that – **the number of people without access to energy in sub-Saharan Africa is increasing and part of the problem stems from the fact that finance continues to focus on exporting fossil fuel resources instead of meeting domestic energy needs**.[22]

The assessment recommends that the WBG adopt targets aimed at accelerating progress towards the 2030 universal energy access goal, including:

- **$5.75 Billion for Energy Access Annually –** The WBG should dedicate at least 50 percent of its annual energy sector budget or around $5.75 billion to clearly defined energy access projects and programs
- **15 Million New Electricity Connections Annually –** The WBG should directly contribute to at least 15 million people gaining electricity annually.
- **Access before Exports –** Ahead of any WBG support for fossil fuel exports in a given country, the WBG must first ensure that support for annual increases in electrification rates is happening at a rate adequate to meet universal access by 2030.
- **Phase out Support to Fossil Fuels by 2020**. The use of limited public finance to prop up the further development of fossil fuels needs to come to an end. In order to increase progress towards the SEforAll renewable energy target and access to affordable clean energy for all, the WBG should phase out support to fossil fuels by 2020.

The following paper continues this work by assessing the WBG Climate Change Action Plan (CCAP).

PARIS CLIMATE AGREEMENT

In December 2015, 195 countries adopted the first universal, legally-binding climate pact - the Paris Agreement. The three key objectives/pledges of the Paris Agreement, as defined in Article 2, are to:

1. **Hold the increase in global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the increase to 1.5°C**;
2. Increase the ability to adapt to the adverse impacts of climate change and **foster climate resilience and low GHG emissions development**; and
3. **Make financial flows consistent with a pathway towards low GHG and climate-resilient development**.

The WBG has pledged to support the Paris Agreement and most of the countries that are members of the WBG are also signatories to the Paris Agreement – thus, WBG operations should be in alignment with these objectives.

NATIONALLY DETERMINED CONTRIBUTIONS (NDCs)

The Paris Agreement shifts away from the differentiation between developed ("Annex 1") and developing ("Non-Annex 1") countries of earlier UNFCCC agreements by introducing a common framework that commits all countries to put forward their best efforts, as defined in their Nationally Determined Contributions (NDCs). According to Article 4, the Paris Agreement commits the Parties to "pursue domestic measures with the aim of achieving the objectives" of the NDCs. The collective actions set out in these NDCs will help determine whether or not we will meet the 2 degree target and thus, avoid climate catastrophe.

Each successive NDC is expected to be more ambitious than the last so that emission reductions are ratcheted up over time. Parties are expected to prepare and submit new, more ambitious NDCs every five years. However, the contributions represented in the current NDCs are not ambitious enough to meet the 2˚C scenario (UNFCCC, 2015). Climate Action Tracker Partners note that the current commitments would likely lead to global warming exceeding 3˚C to 4˚C in the 21st century.[23] The next submission of new, more ambitious NDCs is due in 2020.

The WBG has pledged that it will help member countries meet their NDCs. Given the current NDCs are not ambitious enough to avoid climate disaster, it is paramount that the WBG assist countries to raise their ambitions and make sure that other WBG assistance does not contradict NDC objectives.

NOT ON TRACK TO MEET SEFORALL / SDG7 OR PARIS AGREEMENT OBJECTIVES

According to the WBG's 2018 progress report on SDG7, roughly 1 billion people are still without access to electricity or approximately 13 percent of the World's population.[24] The SDG7 report opens with: "The world is not currently on track to meet SDG7… Current progress falls short on all four of the SDG7 targets…" We are not on track to meet either the SDG7 goals or the Paris Agreement goals because:

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The rate of electrification is too slow – Despite faster electrification rates during 2014-2016, annual gains in the electrified population continue to fall short of the pace required to meet the 2030 target. The IEA reports that if current policies and population trends continue, as many as 674 million people will continue to live without electricity in 2030.[25] Progress in electrification rates has been considerably uneven, leaving the majority of people living in Sub-Saharan Africa still in the dark (only 43 percent have access).[26] According to the WBG's Corporate Scorecard (2017), even though the WBG substantially increased new electricity connections from FY2015 to FY2017, the overall rate of electrification for the poorest 40 percent in countries with WBG operations slipped - dropping from 64% to 63.6%.

The urban-rural divide in access remains wide. Recent progress in access to electricity has been uneven resulting in urban access far exceeding rural access. The WBG reports that 87 percent of those without electricity live in rural communities[27] – urban access stands at 97 percent while rural access is only at 77 percent.[28] WBG notes that off-grid solar solutions are emerging as an important driver of rural energy access, complementing grid electrification at least in some countries.[29] It is important to recognize that distributed renewable energy or DRE provides a cost effective solution for rural energy access and for low-GHG development.

Not enough increase in renewables - still too much fossil fuels – Regarding renewable energy, the SEforAll goal is to reach 36% share for renewable energy in the global total final energy consumption (TFEC).[30] However, according to REN21[31], despite tremendous growth in renewable capacity and output, the overall share of renewable energy in the global TFEC has increased only modestly in recent years to 10.1% in 2017 (including large hydro power). Efforts to keep global warming to well below 2 degrees are also slipping. Energy-related carbon dioxide (CO_2) emissions rose for the first time in four years – by an estimated 1.4% – in 2017. Further bad news includes that after declining for two years, global coal consumption increased an estimated 1% in 2017.[32]

OVERVIEW OF THE WORLD BANK GROUP'S CLIMATE CHANGE ACTION PLAN

Shortly after 195 countries adopted the Paris Climate Agreement, in April 2016 the WBG approved its Climate Change Action Plan (CCAP) covering the period from 2016 to 2020. The CCAP states:

> "*Climate change presents enormous challenges and opportunities for development, making it essential that climate and development be tackled in an integrated way……This Climate Change Action Plan (CCAP) demonstrates how the WBG intends to meet*

these challenges and opportunities, by scaling up climate action, integrating climate change across its operations, and working more closely with others."[33]

The CCAP affirms WBG assistance should be consistent with NDCs and Global Climate Goals:

> *"Going forward, the WBG will carry out long-term system planning to identify and accelerate the implementation of the most economic low-carbon options in client countries, and support with lending and assistance as appropriate, to help client countries deliver affordable and reliable energy services in a manner that is consistent with their NDCs, the global climate goals, and the WBG's Energy Sector Directions Paper….It will continue to support natural gas in accordance with the Energy Sector Directions Paper."*[34] [Underlining has been added]

Both the Energy Directions Paper and the CCAP propose largely the same main approaches, including:

- Transformational Policies, including mainstreaming climate considerations into policies and budgets and price reforms (subsidies and carbon taxes);
- Leveraging more Finance, including through Public-Private Partnerships (PPP); and
- Increased Engagement in Renewable Energy and Natural Gas.

The following CCAP assessment examines these main approaches against the dual objectives of universal energy access and global climate goals. In addition, recent WBG performance is reviewed to gage how the WBG is contributing to universal energy access and NDC targets in two High Energy Access Deficit Countries.

CCAP ASSESSMENT

INDICATORS & QUESTIONS

The following assessment aims to examine the degree to which guidelines and specific measures included in the CCAP effectively target the dual objective of increasing energy access for the poor while meeting the goal of the Paris Agreement, i.e., to limit global temperature rise to well below 2°C. Therefore, the following indicators and questions were assessed:

1. **Renewable Energy and Energy Access Targets:** Does the CCAP have targets aimed at the dual objective of universal energy access for the poor while meeting the goal of the Paris Agreement? Does it have targets for WBG contributions to distributed renewable energy?
2. **Support for Nationally Determined Contributions (NDC)**: How does the CCAP guide the WBG to assist countries to meet their NDC targets; to raise their NDC ambitions; and ensure that other WBG assistance does not contradict NDC objectives?
3. **Prioritization of energy access and low-GHG emissions energy**: How are energy access and low-GHG emissions electricity prioritized in WBG assistance? Does the CCAP influence the Country Partnership Framework (CPF) process and address how to manage conflicts between country priorities, i.e. increasing fossil fuel investments vs reducing GHG emissions (NDC targets)? How does the CCAP measure natural gas operations against energy access and low-GHG emissions goals?
4. **Tracking & Reporting (Aggregate Results/ Impacts on Access and Climate):** How is the WBG measuring aggregate results/development outcomes on NDC and SDG7 (SEforAll) goals? Is the WBG measuring its contributions to total final energy consumption? Are results transparent and verifiable?

CCAP TARGETS RELATED TO RENEWABLE ENERGY & ENERGY ACCESS

This assessment reviews CCAP targets aimed at renewable energy and energy access as an indication of how the CCAP addresses the dual objectives of universal energy access for the poor while meeting the goal of the Paris Agreement. Moreover, special attention is given to CCAP targets related to distributive renewables as they have been deemed the most cost effective technologies to address both energy access in rural areas and global climate goals.

With regard to WBG energy sector operations, the CCAP points out that "**The SE4All Initiative and the WBG's Energy Sector Directions Paper form the cornerstone of the WBG energy objectives**."[35] However, the WBG's Energy Sector Directions Paper does not contain quantified targets for the WBG's contribution towards attaining the goals of the SE4All initiative. The CCAP does, however, go further than the Energy Directions Paper and offers quantified targets regarding renewable energy and ones related to energy access through distributed energy. Tables 1 and 2 provide the specific CCAP language of the targets along with an assessment of how meaningful the targets are.

TABLE 1 CCAP TARGETS RELATED TO RENEWABLE ENERGY & ENERGY ACCESS

CCAP TARGETS FOR 2016 TO 2020	ASSESSMENT: HOW MEANINGFUL IS THE TARGET?
20 GW Renewable Energy 5-year Target (2020): "The WB will de-risk renewable energy investments (through policy advice, regulatory reforms, direct investment funding, guarantees, and other products, and by reducing resource risks and using DPFs, P for R, or TAs, with an indicative cumulative target of 20 GW in renewable energy generation over 5 years, representing a doubling of current WB additions to renewable capacity over the previous 5-year period." [CCAP, Paragraph 69, underlining added] 10 GW grid-connected RE in next 5 years: WB will facilitate the expansion of renewable energy by supporting grid infrastructure and systems (e.g., grid planning, solar parks, electricity market design, regulations for grid access and operations), with the aim to enable an additional 10 GW of variable renewable energy [VRE] sources to become integrated into grids over the next 5 years. This requires improving the ability of power systems to absorb more variable renewable electricity by investing in: (i) smarter transmission and distribution grids; (ii) hydro storage and increasingly electric batteries; (iii) natural gas-based generation to balance variable renewable energy, especially where hydro-based storage is not available; and (iv) expanding power grid interconnections and scaling-up regional energy trade to allow efficient utilization of renewable energy resources in the region." [CCAP, Paragraph 70, underlining added] Note: It is unclear whether or not the 10 GW of grid-connected RE would be in addition to the 20 GW of RE in the first pledge. IFC and MIGA will support the growth of grid-connected RE: IFC expects financing for grid-connected renewable energy to remain approximately constant—around $1 billion on average. [CCAP, Paragraph 74] Note: The IFC does not commit to increase funding for gird-connected renewable energy.	Although the WBG's commitment to double RE GWs from the previous 5-year period is welcomed, there is reason to believe the WBG's pledge of 20 GW is not ambitious and will be easy to meet. To start, the cost of solar and wind technologies have come down drastically in the last couple years. The average cost of electricity – measured in unsubsidized levelised cost of electricity (LCOE) – from renewable power generation technologies either is already very competitive or is continuing to fall to competitive levels – especially for onshore wind and solar. These technologies are already cost competitive with fossil fuels.[36] According to REN21[37], renewable power generating capacity soared to its largest annual increase ever in 2017, with an estimated 178 GW installed worldwide (not including large hydropower). Many countries are already successfully integrating high shares of VRE. At least 10 countries generated 15% or more of their electricity with solar PV and wind power in 2017. India alone added a record 9.1 GW of new RE installations (not including large hydropower) in 2017. Karnataka province alone has tripled its solar power target from 2 GW to 6 GW by 2022.[38] Second, the WBG's RE targets indicate the WBG will include all types of WBG operations towards attaining the 20 GW RE target. The CCAP specifies Development Policy Finance (DPF), Program for Results (P for R), and technical assistance (TA). Although these policy-oriented WBG operations are very important to regulatory and investment frameworks affecting RE capacity, they have largely indirect and difficult to measure results. As such, the WBG risks exaggerating its contributions when there are many factors contributing to increases in RE capacity, including other donor initiatives. The 20 GW target should only count direct WBG investments and no large hydropower (>50MW). The WBG CCAP targets represent on average 4 to 6 GW a year (including large hydropower[39]) across all member countries. Given the very favorable market conditions for RE, the WBG's 2020 pledge should have been greater. The WBG post 2020 pledge should strive to be significantly more ambitious.

TABLE 2 CCAP TARGETS RELATED TO DISTRIBUTED RENEWABLE ENERGY & ENERGY ACCESS

CCAP TARGETS FOR 2016 TO 2020	ASSESSMENT: HOW MEANINGFUL IS THE TARGET?
Rooftop solar: Creating the conditions for the flow of institutional capital into these smaller systems would have a major impact on scaling the deployment of rooftop solar. The goal is to close two systematic transactions on rooftop solar in two countries by 2020." Distributed energy service companies (DESCOs)[40]: "A joint IFC/WB team will explore how the WBG can accelerate the growth of distributed solar in SSA [sub-Saharan Africa]. By 2020, the objective is to close two transactions in two countries and crowd in private capital through successful securitization." "By 2020, the team expects the number of deployed Solar Home Systems in Nigeria to have increased by 50,000 and the number for SSA [Sub-Saharan Africa] by 150,000." Distributive Renewable Energy: "IFC is developing de-risking tools and renewable energy insurance that will help facilitate additional outside investment in the distributed renewable market. The objective is a net increase in investments in distributed renewable energy, and the opening of new markets." [CCAP, paragraph 74]	The CCAP target does not seem very ambitious. The WBG should be aiming to close systematic transactions for rooftop solar in every member country, not just two. The WBG's quantitative targets are small compared to the African Development Bank (AfDB) and the US government's Power Africa program. AfDB's New Deal on Energy target = 75 million households and businesses supplied by off-grid solar PV in 5 years (by 2022).[41] US Power Africa: the program has provided 237,000 new off-grid connections in Nigeria (program launched 5 years ago, June 2013).[42] In 2017, according to Bloomberg New Energy Finance, $49 billion was invested in distributed renewable energy globally.

CCAP renewable energy and energy access targets are weak: Given the Energy Directions Paper did not have specific quantified targets for WBG contributions to renewable energy and energy access, the CCAP's quantified targets are a welcome addition. However, the renewable energy and distributed energy targets offered by the CCAP are not meaningful and lack ambition. The Intergovernmental Panel on Climate Change's 5th Assessment states that globally the power sector must rapidly decarbonize and become carbon free by mid-century. As table 1 explains, onshore wind and solar have already become cost competitive with fossil fuel power generation technologies[43] and investments across the globe are soaring (India alone installed over 9 GW of RE in a single year).

These facts alone make the WBG pledge of 20 GW over five years insufficient and lacking ambition. Furthermore, CCAP pledges related to energy access through distributed energy are not on level with other initiatives such as the US government's Power Africa program and the African Development Bank's (AfDB) New Deal on Energy. At the COP24 in December 2018, the WBG intends to announce new commitments and targets for beyond 2020. [44] **The WBG's post-2020 pledges regarding renewable energy, including DRE and energy access, should strive to be significantly more ambitious** (see Recommendations below).

No quantitative targets for policy lending: Through policy lending, the WBG influences policies, regulations, and institutions that alter the costs and development preferences in the energy sector. Policy lending can include, *inter alia*: long-term energy development plans; public procurement/budget expenditures; permitting processes; contract models; taxation regimes; energy pricing/tariffs; infrastructure investment frameworks (e.g. Public Private Partnerships or PPP projects); government guarantees, and regulations (including environmental and social) surrounding the energy sector. Policy lending at the WB is termed Development Policy Finance (DPF) and accounts for approximately a third of all World Bank funding—equal to more than $15 billion in 2016. Most importantly, World Bank DPF operations contain **Prior Actions** which stipulate policy reforms, i.e., new laws, regulations, etc., that must be adopted before funding is released to the government. **The CCAP identifies DPF operations as the main World Bank instrument for incentivizing countries to transition to low-carbon economies**.

With regard to WBG assistance for "transformational policies", the CCAP does not put forward any quantitative targets. The CCAP provides general guidance on policies that would support increased renewable energy investments such as reducing resource risks for renewable energy through Development Policy Finance (DPF), Program for Results (P for R) and

technical assistance (TA). For IFC, the CCAP recommends advisory services aimed at de-risking tools and renewable energy insurance. However, no specific development outcomes for policy lending are elaborated.

The WBG does not report development outcomes associated with the level of fossil fuel investments or gigawatts generated pre and post policy operations. In order for the WBG to know whether or not it is supporting "transformational policies", it needs to directly link energy access and climate outcomes to its policy lending operations (including DPF, P for R, and TA). To begin, policy operations should be judged on whether they enable electrification rates that are fast enough to reach universal access by 2030. Policy operations should be assessed for associated impacts on a country's total final energy consumption. For example, is it becoming more or less fossil fuel intensive? The WBG needs to track and report total final energy consumption mix in countries – not just increased renewable energy.

The WBG's post-2020 pledges must have policy operation targets, including adequate electrification rates, especially in rural areas, to reach universal access by 2030; increases in DRE capacity; and increases in renewable energy's share of total final energy consumption.

CCAP Guidance related to NDCs

It is important to remember that it is the collective actions set out in countries' NDCs that will help determine whether or not we meet the well below 2°C target and thus, avoid climate disaster. The assessment next looks at how the CCAP guides the WBG in assisting countries to meet their NDC targets; and raise their NDC ambitions; and how the CCAP ensures that other WBG assistance is consistent with NDC objectives.

As already stated above, overall the CCAP affirms that WBG assistance should help countries deliver energy services in a low-GHG manner and be consistent with NDC objectives and global climate goals.[45] Coinciding with this overall approach, the CCAP indicates that "The WBG will support countries in translating their NDCs into climate policies and investment plans into actions, and in mainstreaming climate considerations into policies and budgets, through advisory services, public expenditure reviews, and development policy operations."[46] Furthermore, the CCAP declares that "Over time, the WBG will also support, on demand, the design of future NDCs to enable a progressive increase in ambition."[47]

In December 2017, the WBG announced that "In line with countries submitting updated and potentially more ambitious Nationally Determined Contributions (NDCs), the World Bank Group will present a stocktake of its Climate Change Action Plan and announce new commitments and targets beyond 2020 at COP24 in Poland in 2018.[48]

The WBG indicates that it will help countries to meet their NDC targets mainly by incorporating NDC measures into a given government's policies and budgets through the WBG's DPF operations and advisory services. Yet, the CCAP does not provide any specific guidance on how staff should incorporate NDC targets into policy lending operations or direct project investments. Nor are NDCs specifically covered with regard to any of the WBG's existing operational policies, procedures or guidelines.[49] The CCAP does not mention any follow up as far as the WBG issuing specific guidelines or directives requiring the WBG to revise or draft any such guidance. To date, no such detailed guidance has been issued.

NDCs and Country Partnership Frameworks (CPF): The WBG in collaboration with a country's government develops a CPF. The CPF is a four-to-six year strategy to guide the WBG's activities in that country. All projects and programs that the WBG finances within the time frame of the CPF must be aligned with the CPF. It is important to understand that even though WBG activities need to coincide with the CPF, the WBG often justifies any given project as being CPF compatible as long as it generates revenue and jobs. This means CPFs need to be very specific to be meaningful.

The CCAP indicates that the NDCs are slated to be integrated into all upcoming Country Partnership Frameworks.[50] This CCAP guidance is a step in the right direction, but how far it goes in the right direction depends on how well it is implemented. It is not only important to ensure that the WBG includes assistance for NDCs but to ensure that all WBG assistance aligns with a country's stated NDC climate goals. The CCAP does not provide any guidance on how staff should determine whether proposed operations or development strategies within the CPF may contradict NDC goals, for example by promoting export of fossil fuels or increased investment in fossil fuels. The CCAP offers no methodology for determining consistency with NDCs.

PRIORITIZATION OF ENERGY ACCESS AND LOW-GHG EMISSIONS ENERGY

The integration of SDG7 universal access targets and NDC climate targets into policy lending and country partnership frameworks, if adequately implemented,

could go a long way towards prioritizing energy access and low-GHG energy in WBG operations and therefore in its borrowing countries. Unfortunately, the CCAP did not put measures and guidance in place to ensure adequate implementation will occur. In addition to concerns that have already been discussed above, including inadequate targets for project finance, policy lending and country partnership frameworks, this section reviews CCAP's support for increased support for natural gas.

Increased WBG Support for Natural Gas: The CCAP states that investments in fossil fuel projects will be limited, "as guided by the WBG's Energy Sector Directions Paper, to those justified by emergency situations, strong cases for development impacts, or when they support a transition to a cleaner energy mix."[51] In addition, the Energy Sector Directions paper states that the WBG will increase its support for natural gas by addressing the barriers to commercializing natural gas and provide opportunities for private investment across the entire gas exploration, production, and downstream supply chain, including unconventional gas.[52]

The CCAP fails to provide adequate guidelines to ensure that energy access and low-GHG energy will be adequately prioritized by WBG assistance. First, the general guideline that WBG will only support fossil fuels in "strong cases for development impacts" constitutes no change in policy. All oil and gas projects supported by the Bank make the case that positive development impacts will take place in the form of revenue generation and/or job creation. It is difficult to see how the continuation of such an approach will result in a low-GHG transition.

Secondly, the CCAP does not prescribe how WBG natural gas operations will be measured against energy access or low-GHG emissions goals (i.e., facilitating grid-connected renewable energy). Natural gas operations do not automatically provide more energy access for the poor; lower GHG emissions; or more integrated renewables.

I**ncreased support for natural gas is not a low-GHG development path.** The global oil and gas sector is the largest industrial source of emissions of methane,[53] a potent greenhouse gas that has an atmospheric warming effect approximately 80 times greater than carbon dioxide.[54] Methane leakage is a problem across the entire value chain of natural gas production and distribution and thus, largely offsets the perceived climate benefits of gas relative to coal.[55]

Currently, the World Bank only concentrates on reducing methane emissions associated with gas flaring involved in oil operations.[56] The CCAP (Paragraph 80) states that "The WBG will work with governments, oil companies, and other development institutions to end ongoing routine flaring of gas at oil production sites around the world by 2030, and to entirely avoid routine flaring at all new oil fields." However, a WB study shows that by giving WB assistance and other incentives to capture gas (like pay-for-performance mechanisms[57]), the WB can turn otherwise un-bankable oil projects into bankable projects. By paying for the capture of gas instead of reducing GHG emissions the Bank is contributing to an increase in GHG emissions because the new project itself is based on ultimately burning more oil or gas.[58] In addition, outside of gas flaring, the WBG requires no methane emissions reduction measures (e.g., leak detection and reduction) along the chain of gas production and distribution for its project or policy lending to the oil and gas sector._

Furthermore, the CCAP does not address the fact that increases in natural gas finance can directly displace investments in renewable energy. This would be counter to natural gas leading to lower GHG development. Currently, wind and solar energy are increasingly cost-competitive with natural gas generation. In fact, according to REN21, wind power-plus-storage and solar PV-plus storage have already started to compete with natural gas peaking plants in some markets.[59]

One of the WBG's largest projects in Africa in terms of amount of financing and size of oil and gas reserves is the Sankofa Gas Project in Ghana. Approved in FY2016, this project received support from IDA, IBRD, and IFC for a total of $935 million in guarantees and loans (see Table 3). It illustrates serious concerns associated with the WBG increasing its support for gas.

TABLE 3 WBG SUPPORT FOR SANKOFA OIL AND GAS IN GHANA[60]

Project	WBG Division	Amount (million US$)	Type of Assistance
Sankofa Gas Project (SGP)	IDA	$500	Guarantee, tenor = 22 years
Sankofa Gas Project (SGP)	IBRD	$200	Guarantee, tenor = 22 years
Vitol Sankofa	IFC	$235	Loan
Total		$935	

This project is an example of the WBG claiming that it is supporting only gas development, when in fact its support is enables oil fields to be developed through acquiring the necessary finance. The Sankofa oil fields contain an estimated 500 million barrels of oil, which is considered to be a "super giant" field. According to the World Bank's project description on its website:

> *"The Sankofa Gas Project (SGP) supports the development of the offshore Sankofa gas field within the offshore cape three points (OCTP) block in Western Ghana, which will be developed by two private sponsors (Eni and Vitol) together with Ghana National Petroleum Corporation (GNPC)…. The development objective of the Sankofa Gas Project (SGP) for Ghana is to increase the availability of natural gas for clean power generation by leveraging private capital investment…. World Bank Guarantees only support the commercial arrangements for the Sankofa Gas development."*

The following excerpts taken from the World Bank's Project Appraisal Document clearly prove that the WBG's support for the "gas project" is interconnected with oil development and makes the development of the "super giant" oil fields possible:

> (paragraph 39) **Project Description**: The proposed natural gas project will also ensure the development of two non-associated oil fields.
>
> (Paragraph56). **Rationale for using World Bank Guarantees**. The Private Sponsors have been unsuccessful in seeking commercial insurance in support of the payment security structure proposed under the project and as last resort have sought guarantees support from the Bank…As of mid-June 2015 the Private Sponsors' estimate of investment made with little recourse amounts to over US$1 billion. The World Bank Guarantee support therefore is critical to make the project financially sustainable for the Private Sponsors and to allow them continuing their ongoing investments in the project….
>
> [Paragraph 57] The US$700 million World Bank Guarantee support will leverage substantially larger gas payment flows over the terms of the contract (20 years) and facilitate an investment in the OCTP block of up to US$7.9 billion by the private sector.[61]
>
> [Paragraph 58] IFC plans to finance Vitol Ghana with IFC investment (A and possibly B) loans between US$300 million to US$600 million on the strength of the OCTP block oil revenues, …

The Sankofa Gas project is a perfect example of how the WBG's support for natural gas can lead to significant oil development, in this case 500 million barrels. The WBG's CCAP and Energy Directions paper fail to adequately consider the connection between gas and oil development and the true contribution to global GHG emissions that increasing support for natural gas actually represents, including through methane leakage and potentially crowding out renewable energy investments.

Pledge to End Upstream Oil and Gas Finance – In December 2017, at the One Planet Summit in Paris, the WBG announced that it will no longer finance upstream oil and gas after 2019. The Bank goes on to say "In exceptional circumstances, consideration will be given to financing upstream gas in the poorest countries where there is a clear benefit in terms of energy access for the poor and the project fits within the countries' Paris Agreement commitments."[62] Although this is a step in the right direction there is reason for concern.

The pledge should be effective immediately given the world already cannot remain under 2 degrees warming with the existing oil and gas reserves being burned. Second, in order for the pledge to be meaningful, it must specify that it includes WBG assistance provided through financial intermediaries (see Box 1) and development policy finance operations (see explanation of DPF operations above). Furthermore, the IFC must divest all existing equity in companies/financial intermediaries linked to upstream/exploration activities (e.g., $50 million in Africa Oil, Kenya; $75 million in Seven Energy, Nigeria; and $75 million in Apex International Ltd., Egypt).

FINANCIAL INTERMEDIARIES

In a financial intermediary arrangement, the WBG provides loans or equity financing to an entity such as a local bank, a private equity fund, or a special government-managed fund. The financial intermediary then passes on the WBG's funds to various investment projects, including oil and gas projects. Unlike direct WBG project investments, it is more difficult to track the FI sub-project investments. CSOs have demanded more transparency on financial intermediary lending, and some sub-project disclosure is happening but there is still a long way to go.

The WBG provides around $8 billion or more of investment annually through financial intermediaries, including over 54% of the IFC's total private sector investment portfolio.[63] Lending through FIs represents an important source of financing for oil and gas operations. For example, the Indian Oil Corporation has benefitted from hundreds of millions of dollars in indirect assistance from the IFC. The IFC channeled these funds through several large Indian commercial banks, which went on to arrange and guarantee billions of dollars in Indian Oil bonds.[64] Another FI example includes the IBRD's $200 million funding for the Indonesia Infrastructure Finance Facility, which contains natural gas projects in its current portfolio.

TRACKING & REPORTING

The following section takes a look at relevant data reported by the WBG and additional data collected as part of this assessment that provide insight into the WBG's performance on energy access and NDC climate goals, including:

1. WBG contribution to energy connections
2. Percent of population with access to energy in countries with WBG operations
3. NDCs in high energy access deficit countries
4. WBG operations' support to NDC targets

WBG CONTRIBUTION TO ENERGY CONNECTIONS

According to the WBG's most recent Corporate Scorecard (2017), the number of absolute new connections associated with WBG operations appears to have substantially increased in the last few years, from 6.9 million for FY11-FY13 to over 26 million for FY15-FY17 (see Table 4). For comparison, the US Power Africa program reported for 2013-2017, it had achieved 51.8 million (or 10.6 million household connections) delivered mainly by pico solar systems and a small number of mini-grids.[65]

However, the WBG's reporting of new electricity connections is not transparent or verifiable and has discrepancies. Table 4 provides data on electricity connections from three different WBG sources. It does not make sense that fewer people gained access (4.3 million fewer) during FY2000 to FY2014 than the number reported for FY2000 to FY2013. Many of the WBG's energy access programs are jointly funded with other institutions. It is unclear how they are reporting WBG contributions in these jointly funded projects and programs. The WBG needs to show in a transparent way that double counting is not taking place.

TABLE 4 VARIOUS WBG REPORTS OF NEW ELECTRICITY CONNECTIONS

People gaining Access (million)	Timeframe (years)	Annual Average (million/year)	Source
13.2	FY2000 to FY2014 (across 15 years)	0.88 per year	IEG, 2016. World Bank Group Support to Electricity Access, FY2000-2014
17.5	FY2000 to FY2013 (across 14 years)	1.25 per year	WBG website as viewed on 3/23/18: http://www.worldbank.org/en/results/2013/04/10/sustainable-energy-for-all-results-profile
6.9	FY2011 to FY2013 (across 3 years)	2.30 per year	WBG Corporate Scorecard, October 2017
26.16	FY2015 to FY2017 (across 3 years)	8.72 per year	

In addition, it is important to understand how the WBG is addressing the urban-rural divide in energy access (e.g., urban vs rural connections or grid vs. off-grid connections). Lastly, the WBG's results are not verifiable. There are no project data sources to verify results against or evidence surrounding assumptions. WBG staff is aware of these concerns and indicate that the WBG will be publishing a report in Fall 2018 that provides more transparent reporting of its contributions to new energy connections.

PERCENT OF POPULATION WITH ACCESS TO ENERGY IN COUNTRIES WITH WBG OPERATIONS

Even though the WBG has substantially increased the number of new connections it has contributed to in the last three years, **in countries with WBG operations the overall rate of electrification for the poor is not improving, but rather it is slipping**. Table 5 shows that the overall rate of electrification for the poorest 40 percent in countries with WBG operations dropped from 64% in 2013 to 63.6% in 2017. This may indicate that the WBG's efforts have focused more on urban access than rural access. The WBG urgently needs to ramp up new rural connections as the rate of electrification continues to be far too slow to reach universal access by 2030.

TABLE 5 ACCESS TO ELECTRICITY IN COUNTRIES WITH WBG OPERATIONS

ACCESS TO ELECTRICITY	BOTTOM 40%*	GAP TO AVERAGE
Baseline, 2013	64.0%	9.0
2017	63.6%	10.1

Source: WBG Corporate Scorecard, 2017.

*Bottom 40% is defined as the poorest 40% of people in each country. The gap is calculated as the difference between the country's total population average rate and the average rate for the poorest 40% of the population.

NDCs IN HIGH ENERGY DEFICIT COUNTRIES

This section discusses the degree to which six high energy deficit countries specifically include energy access in their NDCs. It also takes a closer look across the WBG's current portfolios in two of these countries, Nigeria and Kenya, to review whether relevant WBG operations are supporting their NDC targets.

Connection between NDCs and Energy Access: For this paper, the NDCs of six high energy deficit countries were reviewed including India, Nigeria, Ethiopia, Bangladesh, Kenya, and Mozambique. Table 6 below provides a summary of this review including NDC inclusion of energy access, GHG reduction targets, and relevant mitigation measures/targets.

It is important to note that NDCs can include unconditional GHG reduction targets and conditional targets. Conditional targets generally indicate that the country

will only be able to meet this target if they receive adequate international assistance (such as from the WBG) in the form of aid, investments, and/or technology/capacity transfer.

In general, all of the NDCs reviewed have the main NDC objective to develop in the lowest GHG pathway possible. Additionally, three high energy deficit countries reviewed have unconditional targets to reduce GHG emissions as well as quantified RE targets (India, Nigeria and Bangladesh). All six countries have conditional GHG reduction targets that need to receive international assistance to be achieved.

Of the six countries reviewed, most made reference to the need for increased energy access in the narrative but did not necessarily include universal access by 2030 in the overall NDC plan of action or mitigation measures. However, both Nigeria and India more closely tied universal energy access goals to the NDC. Nigeria aims for universal access by 2030 as part of its NDC objective. Furthermore, Nigeria's key unconditional mitigation measure of **13 GW off-grid solar** is directly associated with the universal energy access objective.

TABLE 6 NDC TARGETS IN HIGH ENERGY DEFICIT COUNTRIES

Country & Energy Access	Energy Access Target	GHG Reduction Targets	Mitigation Measures/Targets
India ~249 million people w/o access	India's NDC considers universal energy access and energy security as one of the fundamental development goals for the country. Points out: The National Electricity Policy (NEP) underscores the focus on universalizing access to electricity and promoting renewable sources of energy, as does the Integrated Energy Policy (IEP).	Unconditional: To reduce the emissions intensity of its GDP by 33 to 35 percent by 2030 from 2005 level. Conditional: To achieve about 40 percent cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030 with the help of transfer of technology and low cost international finance including from Green Climate Fund (GCF).	In addition to continuing existing initiatives & policies: Introduce new, more efficient and cleaner technologies in thermal power generation. Promote renewable energy generation and increase the share of alternative fuels in overall fuel mix. Promoting energy efficiency in the economy.
Nigeria 59.8% electrification 75.7 million people w/o access	NDC objective includes providing energy access to all Nigerians by 2030. The key measure of 13 GW off-grid solar is directly associated with the universal energy access objective.	Unconditional: Reduce GHG emissions by 20% from BAU levels (900 Mt-CO_2e) in 2030 [66] Conditional[67]: Reduce GHG emissions by 45% from BAU levels (900 MtCO_2e) in 2030 Note: BAU assumes universal access by 2030	Establish 13 GW of off-grid solar PV (unconditional) End gas flaring by 2030 (unconditional) Efficient gas generators [i.e., combined cycle] Improve efficiency 2% a year (30% by 2030) Improve electricity grid
Ethiopia 42.9% electrification 58.5 million people w/o access		No unconditional target. Conditional: **Limit GHG emissions to 145 MtCO2e or lower by 2030** (representing a **64% reduction** from the projected BAU emissions)	Clean energy expansion (no specific target)

Bangladesh 75.9% electrification 39.3 million people w/o access	Existing Mitigation Actions: "The country has set aggressive target to scale up the potentials of Solar Irrigation Pumps, Solar mini and nano grids to address the energy access issue of off-grid population."[68]	Unconditional: Reduce GHG emissions by 5% from BAU levels (234 $MtCO_2e$) in 2030 in the power, transport, and industry sectors. Conditional: Reduce GHG emissions by 15% from BAU levels	Mitigation plan: 10% of energy from renewable sources by 2020. "Maximising coal output and managing coal fired power stations in a carbon-neutral way" Conditional: 100% of new coal based power plants use super-critical technology by 2030
Kenya 56% electrification 21.3 million people w/o access	Mitigation measures are associated with increasing energy access.	No unconditional target. Conditional: Reduce GHG emissions by 30% from BAU levels (143 $MtCO_2eq$) by 2030.[69]	Expansion in geothermal, solar and wind; and clean energy options. Clean energy technologies to reduce overreliance on wood fuels. Enhancement of Energy and resource efficiency across sectors.
Mozambique 24% electrification 21.9 million people w/o access	Mitigation actions include: increase access to renewable energy sources Implementation of the NDC will include the most vulnerable communities, promoting an inclusive climate proofed development, with a higher degree of access to efficient technologies and cleaner energy sources, ….	No unconditional target. Conditional: Total reduction of 76.5 $MtCO_2eq$ in the period from 2020 to 2030.	Increase access to renewable energy sources (no specific target provided) [Mitigation is based on existing Climate Change Plan and Energy Strategy]

Table Notes: Conditional targets are dependent upon international support, e.g., finance, investment and technology transfer. Population electrification rates are for 2016 from the World Bank website.

NDCs should directly integrate universal access as a priority: Few NDCs in High Energy Deficit Countries directly link to the SDG7 goal of universal access by 2030. In Sub-Saharan Africa, most NDCs have targets conditional on adequate international assistance. International assistance, like that provided by the WBG, should be focused on rural access and conditional NDC targets. Distributed renewable energy addresses both of these goals. It makes sense to integrate universal access priorities with NDC targets and supported measures. The WBG's new post-2020 commitments should ensure adequate international assistance for countries to meet the more ambitious conditional NDC targets and should pledge to help countries integrate universal energy access into NDCs.

ARE WBG OPERATIONS CONSISTENT WITH NDC TARGETS?

As previously indicated, the CCAP affirms that WBG assistance should be consistent with NDC objectives as well as global climate commitments. The following section reviews current WBG operations in Nigeria and Kenya that are highly relevant to these countries' stated NDC targets and mitigation measures. In Tables 7 and 8, WBG operations are divided according to operations determined to be in support of NDC targets and mitigation measures and operations that contradict NDC targets.

TABLE 7 NIGERIA: CURRENT WBG OPERATIONS HIGHLY RELEVANT TO NDC TARGETS

WBG OPERATION	FUNDING (MILLION US$)	ACTIVITIES SUPPORTED BY WBG OPERATION
Country: Nigeria		
WBG Operations that support NDC Targets		
IDA: Nigeria Electrification Project [approved June 2018]	$350 loan	Aims to increase access to electricity services for households, public educational institutions, and underserved micro, small, and medium enterprises (MSMEs) mainly through Stand-alone Solar Systems for Homes (SSH) and mini-grids (possibly solar – diesel hybrids).
IFC: Lighting Nigeria [approved July 2014]	$2.8 Advisory services	The program aims to accelerate the development of the markets for modern off-grid lighting products (mainly solar); assistance to Lighting Africa program.
WBG Operations that Contradict/Endanger NDC Targets		
MIGA: Azura Power West Africa Ltd.[70] [approved Dec. 2015]	$492 guarantee	Construction of a new 450 MW natural gas-fired open cycle power plant to be connected to the existing grid. Nigeria's NDC specifically lists efficient gas generators [i.e., combined cycle power plants] as a key GHG mitigation measure. Thus, the WBG support for an inefficient, open cycle power plant goes against key NDC measures and GHG reduction goals.[71]
IFC: Dangote Industries Limited [approved May 2016; invested Apr 2018]	$150 loan	World's largest oil refinery and 2nd largest petrochemical plant. The petrochemical plant will make refined oil products (like plastic) and urea fertilizer (natural gas feedstock). Government guarantee - $1.6 billion for this complex takes away government assistance that could go towards energy access.
IFC: Indorama Port [approved June 2017]	$52.5 loan	Port servicing petrochemicals and off shore oil industry. [serving energy for exports not access]
IFC: Seven Energy [approved March 2014]	$75 equity (17%)	Oil and gas development, including upstream (exploration). Note this is an active equity investment that should be divested to be consistent with the NDC and the WBG's pledge to end support for upstream oil and gas.

As described in Table 7, the WBG is providing support to help Nigeria meet their NDC targets, such as $350 million for rural energy access mainly through off grid solar. However, unfortunately, the WBG is also supporting operations that directly contradict Nigeria's NDC, such as a large-scale inefficient gas power plant[72] and the world's largest oil refinery and petrochemical plant. The latter project goes against meeting both of Nigeria's NDC targets of universal energy access and reducing business-as-usual GHG emissions by 45% in 2030. The investment will divert domestic sources of oil and natural gas to petrochemical production instead of energy access for the poor and produce significant GHG emissions in the process.

TABLE 8 KENYA: CURRENT WBG OPERATIONS HIGHLY RELEVANT TO NDC TARGETS

WBG Operation	Funding (million US$)	Activities supported by WBG Operation
Country: Kenya		
WBG Operations that Contribute to NDC Targets		
IDA: Off-grid Solar Access Project for Underserved Counties [approved July 2017; closes June 2023]	$150 loan	Mini-grids for community facilities, enterprises, and households. Stand-alone solar systems and clean cooking solutions for households. Stand-alone solar systems and solar water pumps for community facilities.
IFC: KTDA Small Hydropower	$12.5 loan	7 run-of-the-river small-hydropower plants ("SHP") with a total installed capacity of 16MW at various locations. The SHPs will provide captive power for KTDA's tea factories.
IDA: Additional Financing Infrastructure Finance/Public Private Partnership Project [approved July 2017; closes Oct. 2022]	$50 loan In addition to original finance of $40 loan	Help the government close pending/stalled PPP projects, which include: 35MW Sosian Menengai Geothermal; 35MW Quantum Menengai Geothermal; 35MW Ormat Orpower Geothermal; 300MW Suswa Geothermal Plant (provision of feasibility study). [See further operation details and fossil fuel projects below]
WBG Operations that Contradict NDC Targets		
IFC: **National Cement Company Limited** [approved June 2014; invested Dec. 2014]	$55 loan $15 equity $15 equity (IFC asset fund)[73] **total equity 15%**	New clinker production line. The nominal capacity of the kiln is expected to be 3,300 tons per day (tpd). **New captive generation 15 MW coal plant.**[74] Note: This is a $30 million active **equity position** that goes against the WBG's pledge not to finance coal power generation.
IFC: **National Cement Company Limited** [pending approval][75]	$90 loan $7 equity	Cement plant's expansion[76] more than doubles clinker production & thus, more than doubles GHG emissions associated by-product of the calcination reaction ($CaCO_3$ »$CaO+CO_2$). In addition, expansion includes **new captive generation 8 MW coal plant.**[77]
IDA: Additional Financing **Infrastructure Finance/Public Private Partnership Project** (IFPPP) [approved July 2017; close Oct. 2022]	$50 loan In addition to original finance of $40 loan[78]	Assistance through PPP transaction advisor (arranges funding for PPP projects), PPP contracts negotiations, PPP Project Facilitation Fund (feasibility studies) and implementation of PPP regulations (2013 PPP Act – Note: PPPs involved in power generation exempt from VAT). Help the government close pending/stalled PPP projects, which include: **980MW Lamu Coal Plant** (under negotiation for financial close); Lamu Port Development Project: including oil refinery, pipelines of crude and refined oil (under contract negotiations); **960MW Kitui Coal Plant** (feasibility study underway); and Mombasa Petroleum Trading Hub.
IFC: **Africa Oil** [approved July 2015]	$50 equity	Fund the company's oil and gas **exploration** and development activities of the **South Lokichar Oil Basin** located south of Lake Turkana (note: court battles regarding land disputes and the environmental impacts). Note this is an active **equity investment** that should be divested to be consistent with the NDC and the WBG's pledge to end support for upstream oil and gas.
IDA: **Kenya Petroleum Technical Assistance** (KEPTAP) [approved July 2014; closes Feb. 2021]	$50 Technical Assistance loan	**Transaction Advisory Services**: The Transaction Advisory assignment commenced to support the Government across a variety of upstream petroleum sector related negotiations. The first task order is for the **crude oil pipeline** negotiations.[79]

As with Nigeria, the WBG has operations in Kenya that both support NDC targets, such as $150 million towards off-grid solar and clean cooking technologies, and hinder NDC targets, such as more than one operation in support of new coal power plants. The WB's continued financing of Kenya's PPP projects provides subsidies to fossil fuel projects by funding feasibility studies and tax exemptions (e.g., VAT tax exemption). Pending PPP projects at the time of approval included the 980 MW Lamu Coal Power Plant and the 960 MW Kitui Coal Power Plant. The Lamu Coal Power Plant is nearing financial close and will be Kenya's first coal power plant. The plant is equal to 44 percent of Kenya's current power generation.[80] Kenya will go from 0 percent coal power to 44 percent coal power with the help of the WBG's PPP investment incentives.

Investment incentives for new coal power plants directly go against the Paris Climate Agreement of limiting warming to well below 2°C and of making financial flows consistent with a pathway towards low GHG development. Moreover, such support for coal contradicts the WBG's earlier pledge in the Energy Directions Paper not to support coal power plants.

The WBG's PPP investment frameworks, which the Bank states is a strategy to leverage private sector money into the energy sector and towards energy access goals, do not have any requirements regarding NDC targets, final energy consumption mix, or energy access outcomes. At least five countries (Mozambique, Peru, Indonesia, Kenya, and Nigeria) have large scale fossil fuel projects that are priority PPP projects receiving subsidies as a result of WBG support through development policy finance (DPF) or technical assistance (TA).[81]

It is not enough that the WBG has operations that support NDCs; the WBG must also ensure that it is not supporting actions that run counter to NDCs. The cases of Nigeria and Kenya demonstrate that the WBG continues to support operations that are not consistent with countries' NDCs. The WBG needs to provide detailed guidelines to staff to ensure operations are consistent with targets and mitigation measures of NDCs.

CONCLUSIONS

Overall, the assessment found indications of WBG progress towards increasing energy access and renewable energy capacity. However, unfortunately the assessment also revealed troubling setbacks and the potential for WBG aggregate development outcomes ultimately to hinder universal energy access and NDC climate goals.

PROMISING PROGRESS:

- CCAP upholds the commitment that WBG energy sector operations should support SEforAll and SDG7 goals, including universal energy access by 2030 and 36% renewable energy share of global final energy consumption by 2030.[82]
- **CCAP asserts that WBG assistance should be consistent with Global Climate Goals and a country's Nationally Determined Contributions (NDC) to the Paris Climate Agreement.** The collective actions set out in the NDCs will help determine whether or not we will meet the 2 degree target and thus, avoid climate catastrophe.
- **CCAP sets out quantified targets for renewable energy and associated energy access by 2020**: 20 GW for all renewable energy, including large hydropower[83]; 10 GW for grid-connected variable renewable energy (VRE); and at least 2 transactions closed for distributed solar power resulting in 150,000 solar home systems in sub-Saharan Africa. However, this report deems these targets to be deficient.
- **WBG has increased energy access rates** – According to recent WBG reporting, the number of absolute new connections associated with WBG operations appears to have increased substantially in the last few years reaching over 26 million from FY15 to FY17 compared to only 6.9 million during the previous three years. Most recently, in FY2017 and FY2018, the WBG approved several large-scale energy access projects, including $150 million for the Off-grid Solar Access Project for Underserved Counties in Kenya and $350 million for the Electrification Project in Nigeria that aims to reach rural communities through distributed solar power.
- **Some NDCs aim for universal energy access and distributed renewable energy**. In the two countries that contain the most people without access to energy, India and Nigeria, the NDCs clearly incorporate universal energy access as part of the NDC's objective. Accordingly, Nigeria commits to an unconditional target of 13 GW of off-grid solar by 2030 to address both its energy access and climate goals. More countries need to be assisted with their NDCs to follow Nigeria's example. (Unfortunately, Nigeria also has upcoming fossil fuel projects supported by the WBG that contradict its NDC goals.)

TROUBLING SETBACKS:

- **WBG does not adequately prioritize energy access and renewable energy**. Given the unsubsidized cost of solar and wind technologies are cost competitive with fossil fuels, and compared with the energy access and renewable energy pledges made by other international organizations, the WBG's 2020 targets are wholly deficient and must be replaced with meaningful targets (see Tables 1 and 2 below). Moreover, the WBG does not have any official investment criteria that provide clear guidance to staff on how to prioritize portfolio selection based on direct increase to energy connections, under-funded renewable energy opportunities, and proven reduction of GHG emissions.

- **Not enough WBG support for rural electrification**. Despite increases in electricity connections in the last three years, the overall rate of electrification for the poorest 40 percent of the population is not improving in countries with WBG operations. This may indicate that the WBG's efforts have focused more on urban access than rural access. Rural populations make up the vast majority (87 percent) of people without access to energy. The CCAP aimed for only 150,000 distributed solar systems in Sub-Saharan Africa over 5 years, when it will take well over 15 million new off-grid connections annually to reach universal access by 2030.[84] **Distributed Renewable Energy addresses both rural energy access and global climate goals.**

- **WBG operations hinder NDC climate goals.** Even though the CCAP states that WBG assistance must be consistent with NDCs and global climate goals, the WBG has not adopted clear guidance to incorporate this principle into Country Partnership Frameworks (CPFs) or criteria for portfolio selection. The cases of Nigeria and Kenya demonstrate that the WBG continues to support operations that are not consistent with countries' NDCs. For example, the WBG is channeling support to coal power plants including the Lamu Coal Power Plant in Kenya through PPP investment incentives and new captive generation plants associated with cement production. It is not enough for the WBG to have operations that support NDCs; the WBG must also ensure that it is not supporting actions that run counter to NDCs.

- **Increasing RE investments is not enough.** While the WBG continues to increase its investments in renewable energy every year, it also continues to provide high levels of public finance to fossil fuels (averaging $2 to $3 billion a year).[85] Much WBG support goes to infrastructure for fossil fuel exports, which do not address energy access or climate goals. Furthermore, the WBG does not measure the aggregate development outcomes from increased fossil fuel investments associated with WBG policy lending, advisory services, or financial intermediaries (FI). The CCAP does not provide a target to reduce WBG finance for fossil fuels. As such, the WBG's fossil fuel investments significantly diminish the WBG's net contribution to doubling the share of renewable energy in final energy consumption by 2030.

- **Increasing WBG support for gas is not a low-GHG development path.** Due to leakage, natural gas is the largest source of global methane emissions, a GHG with atmospheric warming 80 times greater than carbon dioxide.[86] This fact alone largely offsets the perceived climate benefits of gas relative to coal. In addition, gas development is often interconnected with oil development. For example, the WBG has provided over $900 million to the Sankofa Gas Project in Ghana. This WBG gas finance enabled the development of the "super-giant" Sankofa oil fields (500 million barrels).

RECOMMENDATIONS – WBG POST-2020 COMMITMENTS

In order to contribute to avoiding climate disaster and sufficiently increase the provision of energy to the rural poor, the WBG must put forward and more ambitious targets for rural energy access and distributed renewable energy. The WBG has indicated that it plans to announce new commitments and targets for beyond 2020 at the COP24 in December 2018.[87] The WBG's post-2020 commitments should include:

- **Increase rural energy connections by 15 million households per year**. In Africa alone, the African Development Bank (AfDB) has pledged 75 million new off-grid connections for rural households and small businesses by 2025.[88] Per year, the AfDB's pledge equals 15 million households. The WBG should match the AfDB and increase rural energy connections by 15 million households per year until universal access is reached. In meeting this pledge, the WBG must be sure to avoid double counting for joint-agency initiatives.

- **Pledge $3.8 billion annually to distributed renewable energy (DRE).** Increasing global DRE capacity is important to meeting both rural electrification and NDC climate targets. The WBG has not yet adopted a sufficient commitment towards

increasing DRE. From FY14 to FY16, the WBG's energy sector budget averaged $11 billion a year. If the WBG provided 50% to energy access, it would equal about $5.5 billion. According to the IEA, 69% of energy access funding should go for off-grid solutions. Thus, the WBG should be spending about $3.8 billion a year on DRE.[89]

- **Assist the top 20 high energy deficit countries to integrate universal energy access into NDCs.** About 80 percent of those without electricity live in the top 20 largest energy access deficit countries.[90] However, few NDCs in these High Energy Access Deficit Countries directly link to the SDG7 universal energy access goal. The WBG should assist countries to integrate universal energy access into the objectives and mitigation measures of the NDC. [Nigeria could be used as an example]

- **Help countries meet their more ambitious conditional NDC climate goals.** In Sub-Saharan Africa, most NDC targets are conditional on receiving adequate international assistance. The WBG is one of the largest sources of international assistance to developing countries and as such, should ensure adequate funding and policy support for countries to reach their more ambitious conditional NDC climate goals.

- **Ensure all WBG operations are consistent with conditional NDC targets.** In keeping with the CCAP affirmation that WBG assistance should be consistent with NDCs, the WBG needs to require that operations prove that they will not endanger conditional NDC targets and GHG mitigation measures. In addition to all project investments, the WBG must ensure that development policy finance, infrastructure investment frameworks (PPP investment frameworks), technical assistance, and investments through financial intermediaries do not threaten conditional NDC targets.

- **Pledge to lower the share of fossil fuels in total final energy consumption.** As an indicator of WBG support for NDCs, the WBG needs to track and report total final energy consumption mixes for all countries with WBG operations. Development Policy Finance (DPF), Program for Results (P for R), Technical Assistance (TA) and IFC Advisory Services should only support policies that directly result in a lower share of fossil fuels/higher share of renewable energy in the total final energy consumption of a given country. This indicator will also measure support for the SEforAll goal of 35% renewable energy share of global final energy consumption.

- **End Support to Fossil Fuels by 2020 – End to Upstream oil and gas by 2020 is not enough.** In order to increase progress towards the SEforAll renewable energy target and access to affordable clean energy for all, the WBG should phase out support to fossil fuels by 2020. It makes no sense to use limited public money for fossil fuels, when there are so many cost effective renewable energy opportunities that remain under funded. Moreover, the WBG's pledge to end support for upstream oil and gas by 2020 is not meaningful unless it includes divesting from all existing equity in companies linked to upstream oil and gas and WBG assistance provided through financial intermediaries, development policy finance, and technical assistance/advisory services. This commitment should preclude support for associated infrastructure that directly enables the development of new oil and gas extraction (including, for example, financing for oil and gas pipelines that would expand takeaway capacity).

Photo courtesy of Carl Attard

ENDNOTES

1 About 87 percent of those without electricity are rural communities. See: World Bank Group, 2018. Tracking SDG7: The Energy Progress Report 2018. World Bank Group, International Energy Agency, IRENA, United Nations Statistics Division, and World Health Organization. https://trackingsdg7.esmap.org/data/files/download-documents/tracking_sdg7-the_energy_progress_report_full_report.pdf

2 https://unstats.un.org/sdgs/indicators/Global%20Indicator%20Framework%20after%20refinement_Eng.pdf

3 SEforAll specifies doubling the share of renewable energy in global final energy consumption to 36% by 2030.

4 See http://www.worldbank.org/en/topic/climatechange/overview

5 World Bank Group, 2018. Tracking SDG7: The Energy Progress Report 2018. World Bank Group, International Energy Agency, IRENA, United Nations Statistics Division, and World Health Organization. https://trackingsdg7.esmap.org/data/files/download-documents/tracking_sdg7-the_energy_progress_report_full_report.pdf

6 Climate Action Tracker. 2015. Rating Countries. Available online at: http://climateactiontracker.org/countries.html

7 SSNC, 2017. Funding Clean Energy Access for the Poor: Can the World Bank Meet the Challenge? Swedish Society for Nature Conservation (SSNC), Bank Information Center Europe, and The Big Shift Global, October 2017. https://www.naturskyddsforeningen.se/sites/default/files/dokument-media/energy_access_report_1.24.pdf

8 This was first stated in the WBG's Energy Sector Directions Paper, 2013.

9 Greater than 50 MW.

10 The SDG7 Progress Report (2018) states that from 2014-2016, 135.7 million people gained access per year (5 people per household equals 27.14 million households). The SDG7 indicates that this rate is too slow to reach universal access by 2030. Given rural populations equal 87 percent of people without access, there is a need for more than 23 million rural household connections annually.

11 Based on the author's collection of WBG energy operations data available on the World Bank's, IFC's and MIGA's websites.

12 http://www.ccacoalition.org/en/initiatives/oil-gas

13 http://www.worldbank.org/en/news/press-release/2017/12/12/world-bank-group-announcements-at-one-planet-summit

14 AfDB, 2017. New Deal on Energy for Africa: A transformative partnership to light up and power Africa by 2025. African Development Bank. April, 2017. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/Brochure_New_Deal_2_red.pdf

15 For comparison, REN21 reports that in 2017, $49 billion was invested in DRE globally.

16 World Bank Group, 2018. Tracking SDG7: The Energy Progress Report 2018. World Bank Group, International Energy Agency, IRENA, United Nations Statistics Division, and World Health Organization. https://trackingsdg7.esmap.org/data/files/download-documents/tracking_sdg7-the_energy_progress_report_full_report.pdf

17 Rural communities make up 87 percent of those without electricity. See: World Bank Group, 2018. Tracking SDG7: The Energy Progress Report 2018. World Bank Group, International Energy Agency, IRENA, United Nations Statistics Division, and World Health Organization. https://trackingsdg7.esmap.org/data/files/download-documents/tracking_sdg7-the_energy_progress_report_full_report.pdf

18 IEA, 2016. World Energy Outlook, 2016. International Energy Agency, 2016. Available at: http://www.worldenergyoutlook.org/resources/energydevelopment/energyaccessdatabase/

19 See http://www.worldbank.org/en/topic/climatechange/overview

20 https://unstats.un.org/sdgs/indicators/Global%20Indicator%20Framework%20after%20refinement_Eng.pdf

21 SSNC, 2017. Funding Clean Energy Access for the Poor: Can the World Bank Meet the Challenge? Swedish Society for Nature Conservation (SSNC), Bank Information Center Europe, and The Big Shift Global, October 2017. https://www.naturskyddsforeningen.se/sites/default/files/dokument-media/energy_access_report_1.24.pdf

22 The IEA report indicates that two out of every three dollars put into the sub-Saharan energy sector since 2000 have been committed to the development of resources for export. IEA, 2017. Africa Energy Outlook 2017. International Energy Agency (IEA). October 24, 2017. https://www.africa50.com/knowledge-center/article/african-energy-outlook-iea-2017-exec-summary-177/

23 Climate Action Tracker. 2015. Rating Countries. Available online at: http://climateactiontracker.org/countries.html

24 World Bank Group, 2018. Tracking SDG7: The Energy Progress Report 2018. World Bank Group, International Energy Agency, IRENA, United Nations Statistics Division, and World Health Organization. https://trackingsdg7.esmap.org/data/files/download-documents/tracking_sdg7-the_energy_progress_report_full_report.pdf

25 IEA, 2017. *Energy Access Outlook: from Poverty to Prosper*, A World Energy Outlook-2017 special report. OECD/IEA, Paris http://www.iea.org/publications/freepublications/publication/WEO2017SpecialReport_EnergyAccessOutlook.pdf.

26 See footnote 24.

27 See footnote 24.

28 From WBG website viewed on August 12, 2018. https://data.worldbank.org/indicator/EG.ELC.ACCS.RU.ZS

29 See footnote 24.

30 It is important to note that TFEC includes energy used for heat (48% of total use of energy), transportation (32%) and power (20%). In the power sector alone, renewable energy (RE) stands at 25%. (Source: REN21)

31 REN21, Renewables 2018: Global Status Report. Renewable Energy Policy Network for the 21st Century (REN21), Paris, France, 2018. http://www.ren21.net/wp-content/uploads/2018/06/17-8652_GSR2018_FullReport_web_final_.pdf

32 IEA, 2018. *Global Energy & CO2 Status Report 2017.* International Energy Agency (IEA), Paris, 2018. https://www.iea.org/publications/freepublications/publication/GECO2017.pdf

33 As such, the WBG activities under the Climate Change Action Plan are organized along four top-level priorities: (i) Support Transformational Policies and Institutions; (ii) Leverage Resources; (iii) Scale up Climate Action; and (iv) Align Internal Processes and Work with Others.

34 CCAP, paragraph 68.

35 See the WBG's Climate Change Action Plan 2016-2020, Page 34; Paragraph 66.

36 REN21, Renewables 2018: Global Status Report. Renewable Energy Policy Network for the 21st Century (REN21), Paris, France, 2018.

http://www.ren21.net/wp-content/uploads/2018/06/17-8652_GSR2018_FullReport_web_final_.pdf

37 *Ibid.*

38 *Ibid.*

39 Greater than 50 MW.

40 According to CCAP: DESCOs provide assets at below cost to customers who pre-pay for energy services. The model requires large sums of working capital and many DESCOs are struggling to finance rapid annual growth.

41 AfDB, 2017. New Deal on Energy for Africa: A transformative partnership to light up and power Africa by 2025. African Devel-

opment Bank. April, 2017. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/Brochure_New_Deal_2_red.pdf

42 https://www.usaid.gov/powerafrica/nigeria as consulted on August 24, 2018. It should be noted that both the WBG and the AfDB are listed as partners to the US government's Power Africa initiative. It is unclear how individual organizations are reporting contributions and outcomes related to this initiative and if/how double counting is being avoided.

43 Andrew Griffin, "Solar and wind power cheaper than fossil fuels for the first time", *The Independent* (UK), 4 January 2017. https://www.independent.co.uk/environment/solar-and-wind-power-cheaper-than-fossil-fuels-for-the-firsttime-a7509251.html

44 http://www.worldbank.org/en/news/press-release/2017/12/12/world-bank-group-announcements-at-one-planet-summit

45 WBG Climate Change Action Plan 2016-2020, page 20.

46 WBG Climate Change Action Plan 2016-2020, paragraph 11.

47 WBG Climate Change Action Plan 2016-2020, page 20.

48 http://www.worldbank.org/en/news/press-release/2017/12/12/world-bank-group-announcements-at-one-planet-summit

49 Operational policies, directives, procedures, WB Environmental and Social Safeguards, IFC Performance standards, Environmental Health and Safety guidelines, etc.

50 CCAP, paragraph 28. The WBG will align internal processes, metrics, and incentives to support the implementation of the Action Plan. Systematic Country Diagnostics (SCDs) and Country Partnership Frameworks (CPFs) will consider the risks and opportunities created by climate change and countries' climate priorities. Updates on country partnership strategies can be found on: http://www.worldbank.org/en/projects-operations/country-strategies#3

51 See WBG Climate Change Action Plan 2016-2020, paragraphs 66 and 68.

52 See paragraph 52 of the WBG's Energy Sector Directions Paper, 2013.

53 https://www.epa.gov/ghgemissions/overview-greenhouse-gases#methane

54 http://www.ccacoalition.org/en/initiatives/oil-gas

55 For example, see http://www.yaleclimateconnections.org/2016/08/is-natural-gas-a-bridge-fuel/.

56 This is mainly through the World Bank-led Global Gas Flaring Reduction Partnership.

57 For example, the World Bank commits to pay an agreed amount for each ton of CO2e in emission reduction achieved by the project implementer.

58 From Methane Finance Study Group Report: Pay-for-performance is a subsidy given to reduce methane emissions….By creating a predictable revenue stream, payments for CO2e reductions can be a powerful catalyst for private investment, especially when they come from a AAA credit rated (or similar) institution or fund, and are paid in hard currency. These payments help reduce emerging market financing risks for foreign investors and project implementers and facilitate raising equity and debt finance.

59 REN21, Renewables 2018: Global Status Report. Renewable Energy Policy Network for the 21st Century (REN21), Paris, France, 2018. **http://www.ren21.net/wp-content/uploads/2018/06/17-8652_GSR2018_FullReport_web_final_.pdf**

60 A proposed MIGA guarantee of $450 million is still listed as pending.

61 According to the WB – the IDA $500 million guarantee backstops the Government of Ghana's guarantee to repay the $500 million Letter of Credit issued to Eni and Vitol. This is in turn tied to the Escrow Account holding 4.5 months worth of payments for gas under the GSA (gas sales agreement). The IBRD $200 million guarantee backstops service of the commercial debt and shareholder loans up to $200 million issued to Eni and Vitol (private sector).

62 http://www.worldbank.org/en/news/press-release/2017/12/12/world-bank-group-announcements-at-one-planet-summit

63 https://medium.com/@OxfamIFIs/a-year-after-promising-to-improve-what-has-the-ifc-done-to-clean-up-their-financial-intermediary-a8c88f09bf81

64 Inclusive Development International, 2016. Outsourcing Development: Lifting the veil on the World Bank Group's lending through financial intermediaries. Inclusive Development International, Bank Information Center, 11.11.11, Urgewald and Accountability Counsel, October 2016. Available at: http://www.bankinformationcenter.org/wp-content/uploads/2016/10/Outsourcing-Developmnet-Introduction.pdf

65 The figure for individuals assumes 5 people per household.

66 Under a business-as-usual growth scenario, consistent with strong economic growth of 5% per year, Nigeria's emissions are expected to grow to around 900 million tonnes per year in 2030, which translates to around 3.4 tonnes per person (above 2 tonnes per person limit). The key measures listed could potentially reduce emissions by around [45**%]** compared to business as usual.

67 Key measures for conditional target: significant reduction in the use of generators, and providing energy access to all Nigerians.

68 More than 1.5 million Improved Cook Stoves and 4 million Solar Home Systems have already been distributed across the country.

69 According to the Kenya NDC, Business-as-usual (BAU) emissions are estimated to be 143 MtCO2eq) by 2030.

70 This plant also received an IBRD guarantee and IFC $150 million loan approved in 2014.

71 Open cycle gas turbine power plants are deemed inefficient because they do not capture waste heat. Combined cycle gas turbine power plants capture waste heat and utilize it to produce more electricity. Thereby maximizing efficiency and producing less GHG emissions per unit of electricity produced.

72 Nigeria's NDC GHG mitigation specifies efficient, i.e., combined cycle, gas plants.

73 7.5% equity by IFC's African, Latin American and Caribbean Fund LP.

74 In addition to the fuel used to heat the kiln (which can be fossil fuels and/or waste and/or biomass), cement plants also use large amounts of electricity for grinding the raw materials and finished cement. Article in *Business Daily Africa* (11/15/2016) discusses the new 15 MW captive generation coal power plant associated with National Cement's Kajaido cement factory. It also metions IFC funding for the cement factory. https://www.businessdailyafrica.com/corporate/Devki-Group-switches-on-15MW-Kajiado-coal-power-generator/539550-3453498-awufgfz/index.html

75 The *Daily Nation* newspaper reports the "IFC commits $97 million to National Cement Expansion" in April 2018. The IFC's webpage as of July 23, 2018 still lists the project as pending approval. https://www.nation.co.ke/business/IFC-commits-Sh9-7-billion-in-National-Cement-expansion/996-4371262-5dli3hz/index.html

76 This also includes expanding a cement plant in Uganda.

77 Article in *Global Cement* discusses National Cement's plans for an 8 MW captive generation coal power plant as part of the cement plant's expansion plans. It also states that the IFC is already providing $96 million to the project. *Global Cement*, 2018. International Finance Corporation invests US$96m in National Cement. April 5, 2018. http://www.globalcement.com/news/itemlist/tag/National%20Cement

78 Original $40 million adaptable program loan was approved on November 15, 2012 and closed on December 31, 2016.

79 World Bank Implementation Status and Results Report for Kenya Petroleum Technical Assistance (KEPTAP), June 2018.

80 https://www.businessdailyafrica.com/economy/Lamu-coal-plant-to-cost-power-users-Sh37bn-yearly-/3946234-4279366-i7ckagz/index.html

81 BIC, 2017. World Bank Development Policy Finance Props Up Fossil Fuels and Exacerbates Climate Change: Findings from Peru, Indonesia, Egypt, and Mozambique. Bank Information Cen-

ter, January 2017. http://www.bankinformationcenter.org/wp-content/uploads/2017/01/Exec-Summary-1.11.17-2.pdf

82 This was first stated in the WBG's Energy Sector Directions Paper, 2013.

83 Greater than 50 MW.

84 The SDG7 Progress Report (2018) states that from 2014-2016, 135.7 million people gained access per year (5 people per household equals 27.14 million households). The SDG7 indicates that this rate is too slow to reach universal access by 2030. Given rural populations equal 87 percent of people without access, there is a need for more than 23 million rural household connections annually.

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86 http://www.ccacoalition.org/en/initiatives/oil-gas

87 http://www.worldbank.org/en/news/press-release/2017/12/12/world-bank-group-announcements-at-one-planet-summit

88 AfDB, 2017. New Deal on Energy for Africa: A transformative partnership to light up and power Africa by 2025. African Development Bank. April, 2017. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/Brochure_New_Deal_2_red.pdf

89 For comparison, REN21 reports that in 2017, $49 billion was invested in DRE globally.

90 World Bank Group, 2018. Tracking SDG7: The Energy Progress Report 2018. World Bank Group, International Energy Agency, IRENA, United Nations Statistics Division, and World Health Organization. https://trackingsdg7.esmap.org/data/files/download-documents/tracking_sdg7-the_energy_progress_report_full_report.pdf

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