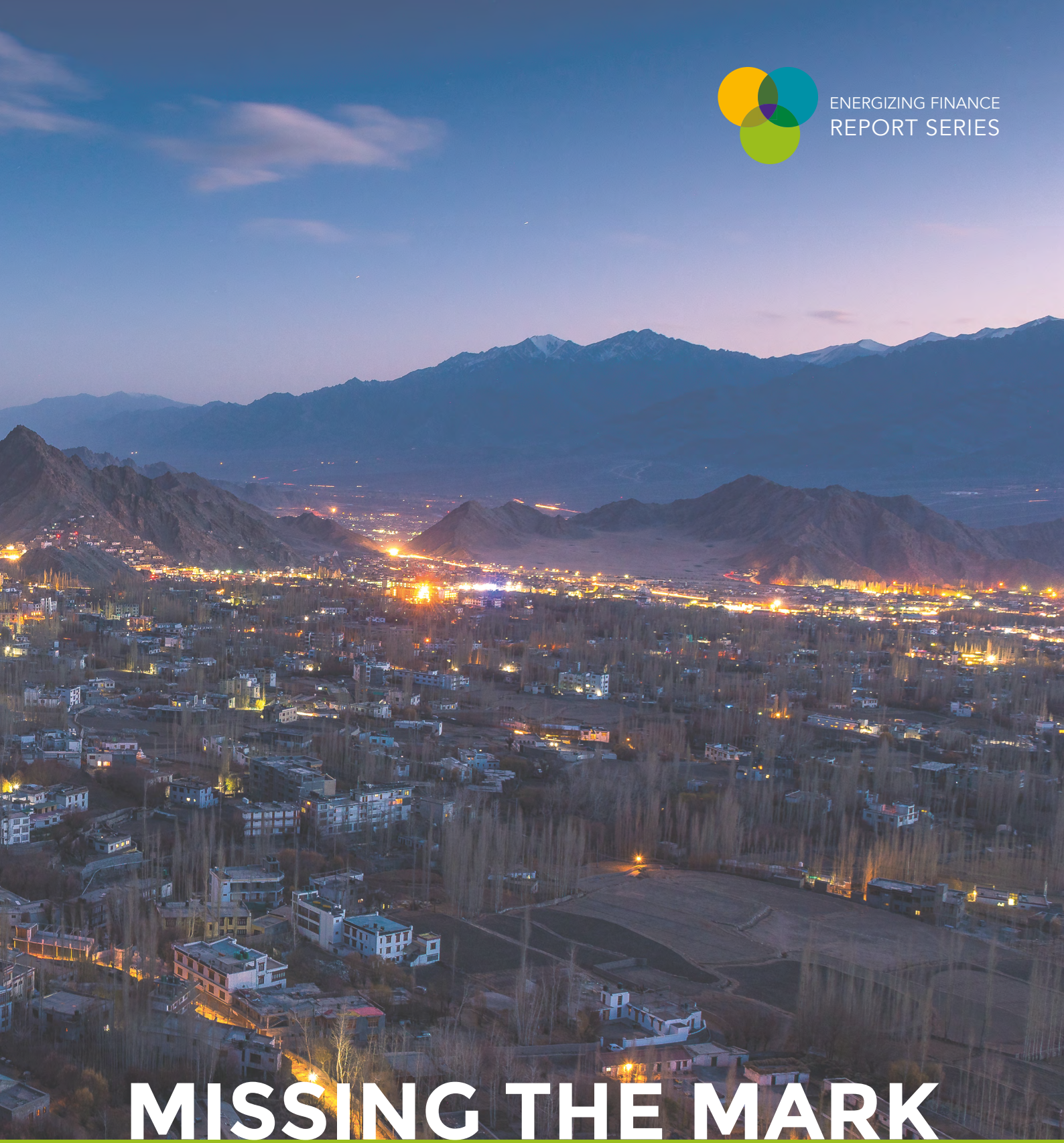

ENERGIZING FINANCE
REPORT SERIES

MISSING THE MARK

GAPS AND LAGS IN DISBURSEMENT OF DEVELOPMENT FINANCE FOR ENERGY ACCESS

SUSTAINABLE ENERGY FOR ALL

AFRICAN DEVELOPMENT BANK GROUP

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FOREWORD

This new report, Missing the Mark: Gaps and Lags in Disbursement of Development Finance for Energy Access, provides useful insights about the effectiveness of finance commitments for energy access projects in selected developing countries. The findings are focused on 20 selected 'high-impact' countries predominantly in Sub-Saharan Africa and Asia, which have significant energy access gaps and can least afford delays in putting finance to work for actual on-the-ground projects.

The report provides relevant information for government leaders, donors, development finance players and energy access providers, all of whom play critical roles in achieving the objectives of Sustainable Development Goal 7 (SDG 7) of universal access to affordable, reliable, sustainable and modern electricity and clean cooking by 2030 as well as the African Development Bank's New Deal on Energy for Africa which aims to fast-track achieving universal access to electricity in Africa to 2025 as an input into achieving the other SDGs.

This report is part of a broader research effort by Sustainable Energy for All (SEforALL), the World Bank, the African Development Bank, Climate Policy Initiative, E3 Analytics and Practical Action Consulting, to analyze what 20 so-called 'high impact' countries in Africa and Asia are committing to energy access, the types of projects they are funding and how effectively these funds are being transformed into actual on-the-ground energy access solutions. Disbursement delays of development finance are a widely-recognized challenge in developing economies, while little work has been done to date to analyze the underlying issues. This report, a joint effort by the African Development Bank's Sustainable Energy Fund for Africa (SEFA) and SEforALL, provides a first analytical effort to understand the magnitude of the disbursement problem for energy access projects. It looks at commitments, disbursement and absorption patterns of energy access finance in 20 countries in Asia and Africa, using financial transaction data collected from 2000 to 2015 for more than 3,000 energy access projects.

The report's most significant wake-up call is that between 2011 and 2015, only about a quarter of electricity access finance - 28 percent of commitments and 24 percent of disbursements - went to high-impact countries. In addition, the data shows that delays and under-disbursements are the norm, especially for large grid-based infrastructure, such as transmission and distribution, while renewable energy projects are doing better. Both findings taken together point to significant opportunities for improved targeting and efficiencies of finance flows for energy access. In this context, we can learn from those countries that displayed higher efficiencies, while additional research is required to better understand the reasons behind data divergences across countries.

This wake-up call comes at a critical juncture – the emerging data shows that the world is not yet on track to achieve SDG 7. Today, one billion people are still living without electricity and three billion without access to clean cooking fuels and technologies – the vast majority of these populations being in these 20 countries we evaluated, most of which are in Africa.

These numbers are astounding and unacceptable. Lacking access to electricity means people cannot be productive, food cannot be refrigerated, vaccines cannot be kept safe and school children cannot do homework at night. Similarly, indoor cooking pollution from burning charcoal, wood and other fuels kills millions every year. There is a larger economic toll, too. Countries that leave these populations behind undermine long-term economic development as well as national security. This is why the AfDB's New Deal on Energy for Africa aims to connect 130 million households on-grid, 75 million households off-grid and provide 150 million households with access to clean cooking energy by 2025.

We can and must do better to accelerate energy access progress. This report highlights the magnitude of the problem – now let's focus on the solutions. Opportunities lie in improved incentives to hold all development finance providers equally accountable for commitments and disbursements; in improving partnerships at the country, regional and global level to forge integrated 'energy access compacts' for coordinated and streamlined delivery of energy access programs; and in continuing to improve data collection, reporting and monitoring efforts.

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EXECUTIVE SUMMARY

Sustainable Development Goal 7 (SDG 7) calls for affordable, reliable, sustainable and modern energy for all by 2030. As of 2014, an estimated 1.06 billion people worldwide were still without electricity and 3.04 billion people still relied on the traditional use of solid biomass for cooking, posing widespread health risks for women and children especially.

How effectively development finance flows towards energy access is particularly important for countries with large, underserved populations that are located largely in Sub-Saharan Africa and Asia. Disbursement constraints are common but have been little analyzed. While they are by no means the only factor that influences the effectiveness and impact of development finance, they nevertheless serve as a crucial link between financial commitments and on-the-ground projects.

This analysis looks at development finance flowing towards the energy sector and the barriers to disbursement of these funds. The overall aim is to understand these flows (where are they going, to do what), to quantify possible delays or under-disbursement and to identify underlying patterns where possible.

The analysis uses data on development finance transactions for the period 2002-15 from the Creditor Reporting System (CRS) database of the Organisation for Economic Co-operation and Development (OECD). The data show that development finance commitments and disbursements for electricity (the clear majority of energy-sector finance) grew significantly over that period, rising to $30 billion and $20 billion in 2015 respectively. The share of development finance committed to the electricity sector peaked at 12 percent of total development flows in 2014. However, the share of development finance allocated to 20 high-impact countries—where efforts to increase access to electricity and clean cooking are most critical and which represent 80 percent of the global population without electricity and 84 percent without clean cooking—remains small.

Between 2011 and 2015, 27.9 percent of commitments and 23.5 percent of disbursements for electricity went to high-impact countries. India received around one-third of the commitments to high-impact countries for electricity over the same period; the share committed to Sub-Saharan Africa was less than 10 percent. Disbursement data shows less contrast, with high-impact countries in Asia and Sub-Saharan Africa representing 13.8 percent and 9.7 percent of electricity disbursements respectively. These levels of investment are not compatible with the current estimates of financing needed to reach universal access to electricity of $45 billion a year to 2030 (SEforALL, 2015). Most development finance in high-impact countries has gone to transmission and distribution projects and finance commitments for renewable energy generation—typically grid-level hydropower, geothermal and solar projects—were twice the level of commitments for fossil fuel projects, although this lead has been closing in recent years.

Importantly, development finance commitments for clean cooking fuels and technologies in high-impact countries represented just $600 million between 2002 and 2015, or around one percent of the amount committed for electricity projects during the same period to the same set of high-impact countries. However, 80 percent of the $600 million represents two large projects in Bangladesh coded in the CRS database as “gas distribution for end users” and for many countries it was not possible to identify any clean cooking projects. The low levels of funding reported may be partly due to clean cooking projects being less capital-intensive than investments in power generation and to the fact that the CRS is not properly designed to capture clean cooking projects. Nonetheless, it also points to the fact that investment falls short of the estimated needs to reach universal access to clean cooking solutions of at least $4.4 billion a year to 2030 (IEA, 2015).

This analysis found that delay and under-disbursement is common and affects 69 percent of finance committed and 52 percent of projects in the sub-set of transactions in high-impact countries for which complete data are available. Transmission and distribution projects are the most likely to be delayed, followed by fossil fuel generation projects. Projects for renewable energy generally perform better. Several countries performed well—such as Tanzania, Mozambique and Kenya—while others including India experienced more difficulty. The dataset shows that larger infrastructure projects are more likely to be delayed, but further research is needed to quantify the influence of the project size, type and other factors on the speed of disbursement.

A review of available project evaluation reports suggests that other factors influencing disbursement include legal and contractual issues at the country level, technical difficulties in executing projects and donor-side delays related to loan agreements. Interviews with beneficiaries in a select number of countries also confirm that disbursement lags exist and are caused by a range of policy, regulatory, finance, market and community factors on the recipient and donor sides.

The analysis of energy access development finance could be further strengthened if:

1. More attention and resources are directed to data collection, reporting and checking of the OECD CRS database, with improvements in the classification of clean cooking projects.

2. Project evaluation reports across organizations provide more standardized information or metrics on the types of, and reasons for, disbursement delays.

Disbursement and absorption are complex phenomena, with drivers on the donor and recipient sides. Nevertheless, the data and analysis suggest that bilateral and multilateral donors should review their activities to strengthen the focus on energy access, particularly clean cooking, in high-impact countries; and measure and improve the timeliness of disbursements. Taking these actions urgently will help achieve SDG 7 in a timely and efficient manner.

ABBREVIATIONS

%	Percent
$	United States Dollar
ADB	Asian Development Bank
AfDB	African Development Bank
AFESD	Arab Fund for Economic and Social Development
APD	Average project delay
BMZ	German Federal Ministry for Economic Cooperation and Development
BPDB	Bangladesh Power Development Board
CRS	Creditor Reporting System
DEREC	The OECD's Development Assistance Committee Evaluation Resource Centre
EU-27	27 EU Member States
HIC	High-impact country
ID	Identification
IEA	International Energy Agency
IFC	International Finance Corporation
JICA	Japan International Cooperation Agency
LPG	Liquefied petroleum gas
MOU	Memorandum of Understanding
MW	Megawatt
NTPC	National Thermal Power Corporation
NVVN	NTPC Vidyut Vyapar Nigam Limited
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OOF	Other Official Flows
PGCIL	Power Grid Corporation of India Limited
PPA	Power Purchase Agreement
SDG 7	Sustainable Development Goal 7
SEforALL	Sustainable Energy for All
TA	Technical assistance

GLOSSARY

Average Project Delay – the intensity of disbursement constraints based on two elements: the share of commitments disbursed and the share of time passed between the start year and the expected project completion year.

Beneficiary – a recipient of development finance, including intermediaries.

Commitment – a firm written obligation by a government or official agency, backed by the appropriation or availability of the necessary funds, to provide resources of a specified amount under specified financial terms and conditions and for specified purposes for the benefit of a recipient country or a multilateral agency.

Development finance – Finance tracked in the Creditor Reporting System database of the Organisation for Economic Co-operation and Development, including both Official Development Assistance and Other Official Flows.

Disbursement – the placement of resources at the disposal of a recipient country or agency, or in the case of internal development-related expenditures, the outlay of funds by the official sector.

Disbursement constraint – the difficulty that development partners and beneficiaries have in meeting a commitment, either in terms of the amount of financing disbursed or the timeframe for disbursement. Pre-commitment delays are excluded from this analysis.

Donor – a government or official agency making a commitment to provide development finance.

High-impact countries: the 20 countries with the highest absolute gaps in access to electricity and/or clean fuels and technologies for cooking, measured by population, as identified in the 2015 Global Tracking Framework (IEA and the World Bank, 2015). For electricity access, the countries are: Afghanistan, Angola, Bangladesh, Burkina Faso, Congo (DR), Ethiopia, India, Kenya, Korea (DPR), Madagascar, Malawi, Mozambique, Myanmar, Niger, Nigeria, the Philippines, Sudan, Tanzania, Uganda and Yemen. For clean cooking access, the countries are: Afghanistan, Bangladesh, China, Congo (DR), Ethiopia, India, Indonesia, Kenya, Korea (DPR), Madagascar, Mozambique, Myanmar, Nepal, Nigeria, Pakistan, the Philippines, Sudan, Tanzania, Uganda, and Vietnam.

INTRODUCTION

Sustainable Development Goal (SDG) 7 calls for affordable, reliable, sustainable and modern energy for all by 2030. As of 2014, an estimated 1.06 billion people worldwide were still without electricity and 3.04 billion relied on the traditional use of solid biomass for cooking (IEA and World Bank, 2017). *The Global Tracking Framework 2017* clearly shows that the goal of universal access by 2030 will be out of reach unless we accelerate the pace and scale of delivery (IEA and World Bank, 2017).

This report explores how effectively development finance is flowing towards 20 high-impact countries with large underserved populations identified in the 2015 *Global Tracking Framework*, where efforts to increase access to electricity and clean fuels and technologies for cooking are critical.[1] These countries collectively represent 80 percent of the world population without access to electricity and 84 percent without access to clean cooking (Figure 1).

The report looks at the amount of development finance committed and disbursed by bilateral and multilateral partners for energy-sector projects every year from 2002 to 2015. A **development finance commitment** is a firm written obligation by a government or official agency to provide resources of a specified amount under specified financial terms and conditions and for specified purposes for the benefit of a recipient.

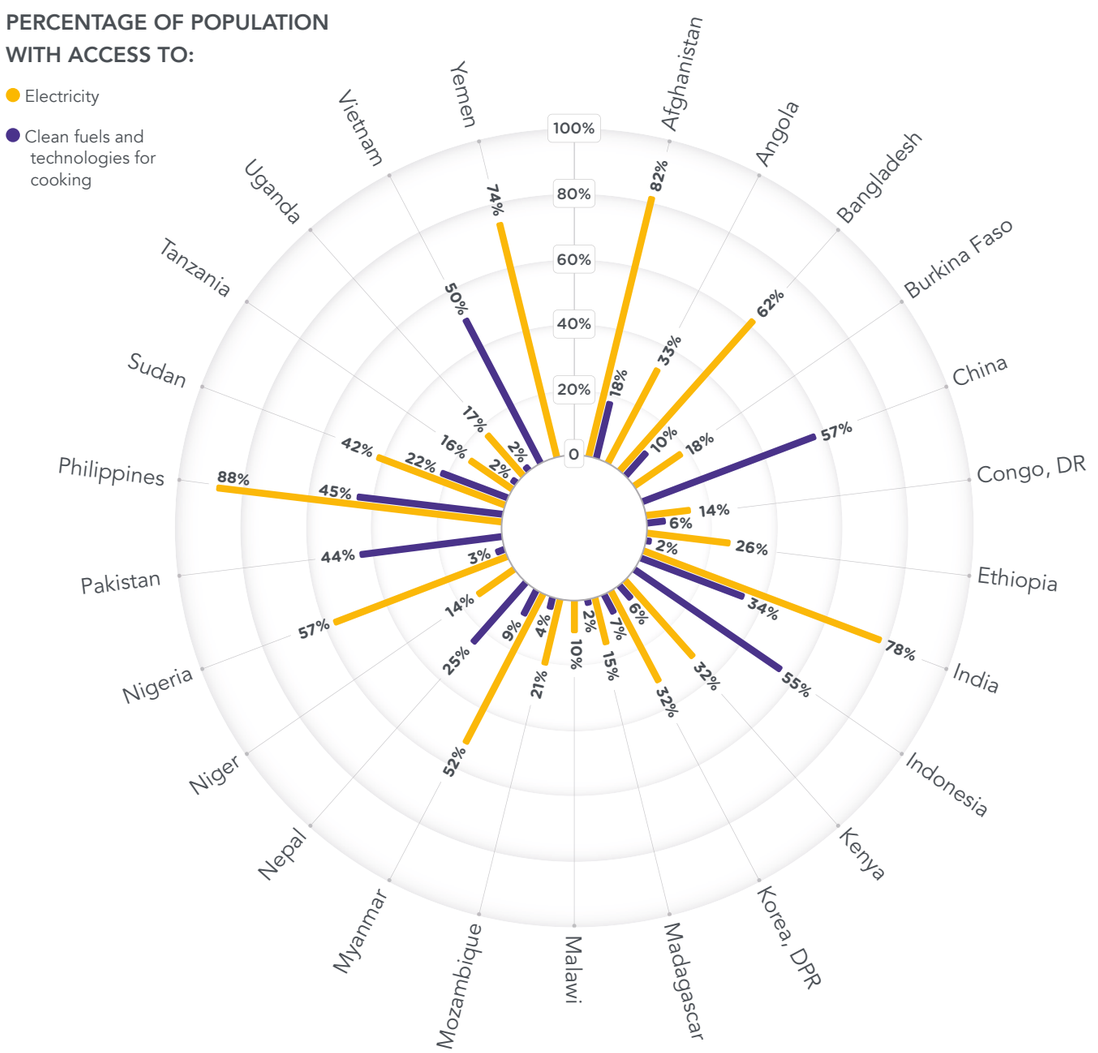
The analysis uses commitment and disbursement data published in the Creditor Reporting System database of the OECD. **Commitments** measure donors' intentions and permit monitoring of the targeting of resources to specific purposes and recipient countries. They fluctuate as aid policies change and reflect how donors' political commitments translate into action. They thus give an indication about future flows. **Disbursements** show actual payments to the recipient, following a commitment, in each year. They show the realization of donors' intentions and the implementation of their policies. They are required to examine the contribution of donors' actions in development achievements. They better describe aid flows from a recipient's point of view (OECD, 2017a).

Delays and under-disbursements of finance for any reason will slow down progress towards universal energy access and could have a knock-on effect on other SDGs.

The overall aim is to understand these flows (where are they going, to do what), to quantify possible delays or under-disbursement, and identify underlying patterns where possible. In doing so, the analysis aims to increase understanding of the capacity of donors to disburse—and high-impact countries to absorb—development finance for energy access.

[1] *The 2015 Global Tracking Framework was the most recent edition at the time this report was commissioned.*

Figure 1 - The high-impact countries covered in the analysis



Source: Global Tracking Framework (IEA and World Bank, 2017)

APPROACH

For this analysis, a **disbursement constraint** is defined as the difficulty that development partners and beneficiaries have in meeting a commitment, either in terms of the amount of financing disbursed or the timeframe for disbursement.

Disbursement can be constrained for a variety of reasons. For example, a development partner may not have the capacity to disburse funds in a timely manner or recipient countries or project developers may not be able to meet conditions or project milestones necessary to trigger payments. It is not possible to identify specific causes and attribute responsibility using statistics alone. Analyzing patterns in the data, however, hopefully provides some insight into underlying causes.

It is recognized that upstream project preparation and approvals can also take a significant amount of time and run behind schedule, especially for large and complex projects. However, since pre-commitment delays are not tracked in publicly available databases, they are excluded from this analysis.

The analysis uses a quantitative approach and complements this with qualitative information derived from in-country interviews and available evaluation reports. It is divided into two parts:

1. A **statistical analysis** of energy-sector development finance commitments and disbursements. The statistical analysis focuses on 20 high-impact countries for access to electricity and clean fuels and technologies for cooking. It covers:

    a. Trends over 2002-15 in development finance commitments and disbursements for electricity. A comparison is made between global flows and those targeted at the 20 high-impact countries.

    b. Trends over 2011-15 in development finance commitments and disbursements for access to electricity and clean fuels and technologies for cooking, disaggregated by country (or region) and sector.

    c. Quantification of disbursement constraints over 2002-15. The analysis looks at a subset of energy-sector development finance flows for which complete data is available. Data for access to electricity and clean fuels and technologies for cooking are considered jointly.

2. A **qualitative analysis** delivered through a review of available project evaluation reports for the high-impact countries and in-country interviews of beneficiaries in three "deep-dive"countries (Bangladesh, Ethiopia and Kenya) to understand the reasons for delays in disbursement of development finance. [2]

STATISTICAL ANALYSIS

The statistical analysis is based on data published in the Creditor Reporting System (CRS) database of the Organisation for Economic Co-operation and Development (OECD). The CRS database contains detailed information on development finance commitments and disbursements mainly by OECD countries and multilateral organizations. Although the CRS is the most complete database available, some donors are not represented, notably China.

The statistical analysis considers all development finance for the energy sector tracked in the CRS database. The work is based on the methodology presented in Gualberti et al. (2013, 2014) that is further developed here.

The statistical analysis assesses more than 9,000 transactions from 2002 to 2015 and groups them into 3,500 projects representing a total of $62.4 billion in commitments. All data are presented in 2014 prices.

The CRS database identifies the purpose of each project with a code. All projects coded under "Energy generation and supply" (CRS code 230) are considered, as well as a limited number of clean cooking projects classified under other codes (e.g., forestry, health). All projects were reviewed, and non-relevant projects and projects erroneously categorized by donors were removed from the dataset to the extent possible, based on their titles and descriptions.

LIMITATIONS OF THE ANALYSIS

The analysis is limited by the completeness and quality of the data. For example, for the quantification of disbursement constraints, it is necessary to know many characteristics of each project, such as the amount originally committed, the amount disbursed, the dates of the transactions and the expected end-date of the project. These data are only available for a subset of projects in the CRS database.

The structure of the CRS database makes it well suited to tracking development finance flows for electricity, as it provides a classification of the intended purpose of each transaction (such as wind generation, transmission lines or energy policy). The classification is not well suited for identifying clean cooking projects. There is one CRS classification code that covers gas distribution to end users but no CRS codes to identify projects such as stove manufacturing (for any fuel), purchase and distribution of Liquefied Petroleum Gas (LPG) stoves and cylinders, production of fuels for cooking purposes, awareness campaigns or capacity building.[3] Projects in these categories have been identified through semantic analysis of the project titles and descriptions in the CRS, but it is recognized that the coverage may not be complete.

The CRS coding system is more suited to large infrastructure projects than smaller projects for small and medium enterprises in electrification and clean cooking. It does not cover some characteristics that have become increasingly important for electricity access projects, such as the distinction between mini-grid and off-grid systems or the level of energy service they target.[4] It is not possible on the basis of the CRS database alone to establish, for example, what part of a development finance flow targets residential users compared with industrial users, if a project is building new infrastructure or upgrading existing infrastructure, or if it is contributing to the SDG 7 access goals. The CRS does not contain data on additional co-finance mobilized.

[2] The "deep dive" countries have been selected as they: i. are high-impact countries for access to electricity and clean fuels and technologies for cooking, ii. represent different stages of energy sector market development, iii. have baseline multi-tier framework energy access surveys underway, and iv. provide some geographic diversity.

[3] The CRS code 23640 is described as: "Gas distribution: delivery for use by ultimate consumer." Upstream gas (and oil) is covered by other sector codes and it is excluded from this analysis. Gas projects for electricity generation are included in "electricity generation – fossil fuels sector."

[4] For a discussion of energy access Tiers, see Bhatia and Angelou, 2015.

TRENDS IN DEVELOPMENT FINANCE FOR ELECTRICITY

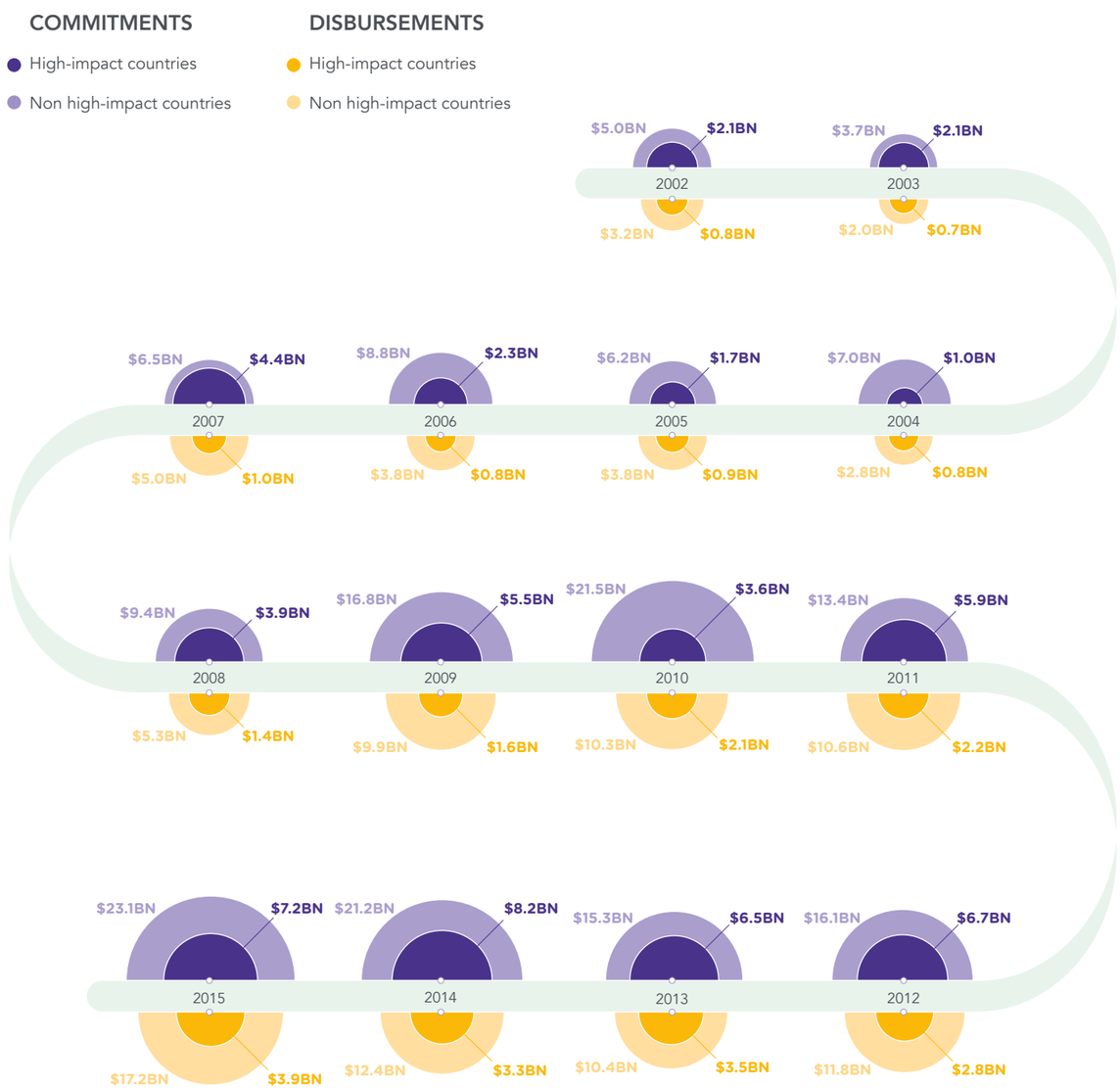
OVERALL TRENDS, 2002-15

In order to provide universal access to electricity, estimates suggest that investments of $45 billion a year would be required in the years to 2030 (SEforALL, 2015). To achieve similar results across more countries, greater investment would be needed. Alternative estimates vary greatly depending on the estimated average energy consumption of the newly connected households or the level (or Tier) of energy service provided.

Development finance commitments and disbursements for electricity have increased steadily since the early 2000s (Figure 2). While they still fall short of the estimated investment needed to address the electricity access gap, commitments had risen to $30 billion and disbursements to $20 billion in 2015. The share of commitments to the energy sector in overall development finance has also risen, peaking at 12 percent in 2014.[5]

[5] *Electricity sector development finance is approximated as development finance commitments to the energy sector minus gas distribution commitments. Although non-electricity components in multi-purpose projects have not been excluded from the analysis, the impact on the overall commitment numbers is negligible. Total development finance commitments exclude humanitarian aid and debt relief.*

Figure 2 - Development finance flows for electricity, globally and for high-impact countries (2002-15)



TRENDS OVER 2011-15 BY COUNTRY AND REGION

The data show that high-impact countries receive a smaller share of development finance allocated to the electricity sector globally: equivalent to 28 percent of commitments and 23.5 percent of disbursements between 2011 and 2015, or annual average commitments of $6.9 billion and disbursement of $3.7 billion (Figure 3 and Figure 4, and Annex B, Table B2).

Figure 3 - Electricity commitments by regional grouping, 2011-15

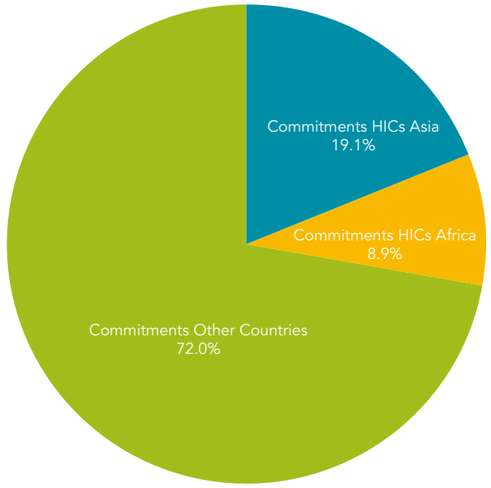
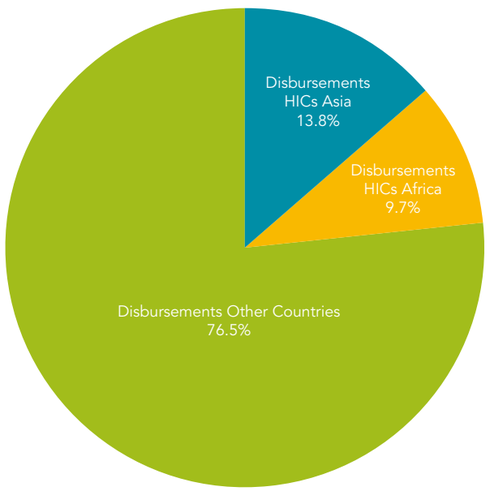


Figure 4 - Electricity disbursements by regional grouping, 2011-15



India attracts around one third of the commitments to high-impact countries for electricity, followed by Bangladesh (16.1 percent) and Afghanistan (7.8 percent) (Table 1). The highest level of commitments to high-impact countries for electricity in Africa was to Kenya (9.1 percent), followed by Tanzania (4.0 percent).

Table 1 - Average annual development finance commitments and disbursements for electricity in high-impact countries, 2011-15 (2014 $ millions, and share of total commitments or disbursements to high-impact countries)

	Total commitments	Share (%)	Total disbursements	Share (%)
Afghanistan	541.7	7.8	257.0	7.0
Angola	254.1	3.7	169.6	4.6
Bangladesh	1,110.9	16.1	473.1	12.9
Burkina Faso	53.4	0.8	33.4	0.9
Congo, Democratic Republic of the	131.0	1.9	164.7	4.5
Ethiopia	227.6	3.3	140.7	3.8
India	2,258.1	32.7	1,305.8	35.6
Kenya	630.8	9.1	344.3	9.4
Korea, Democratic People's Republic of	0.0	0.0	0.0	0.0
Madagascar	8.2	0.1	10.4	0.3
Malawi	96.2	1.4	19.1	0.5
Mozambique	177.8	2.6	115.8	3.2
Myanmar	333.4	4.8	17.4	0.5
Niger	75.3	1.1	6.3	0.2
Nigeria	206.5	3.0	132.1	3.6
Philippines	79.0	1.1	15.3	0.4
Sudan and South Sudan*	114.6	1.7	57.8	1.6
Tanzania	278.2	4.0	213.9	5.8
Uganda	224.2	3.2	103.9	2.8
Yemen	112.8	1.6	82.9	2.3
TOTAL	**6,913.7**		**3,663.6**	

* Given that the analysis considers transactions since 2002, Sudan and South Sudan are jointly considered in the analysis.

Disbursement data shows less contrast between Asia and Africa (Figure 4). For example, over 2011-15 Myanmar received a relatively large share of total commitments to high-impact countries (4.8 percent) due to a few large infrastructure projects, although these projects have not yet started to disburse at scale (0.5 percent). In contrast, the Democratic Republic of the Congo received a relatively small share of total commitments to high-impact countries (1.9 percent) while disbursements were dominated by a few long-standing projects committed before 2011 (4.5 percent). To a lesser extent, this is also valid for Tanzania, whose share of commitments (4.0 percent) does not

account for several large projects that were committed before 2011 but continued to disburse over 2011-15 (5.8 percent of total disbursements to high-impact countries).

TRENDS OVER 2011-15 BY DONOR

Over 2011-15, the most active development partners in terms of commitments to the electricity sector in high-impact countries were: the World Bank Group (International Bank for Reconstruction and Development, International Development Association, International Finance Corporation) with the largest share of commitments (27.2 percent), the EU-27[6] (20.3 percent, with half of this commitment from Germany), Japan (14.6 percent) and the Asian Development Bank (13.8 percent) (Annex B, Table B2).

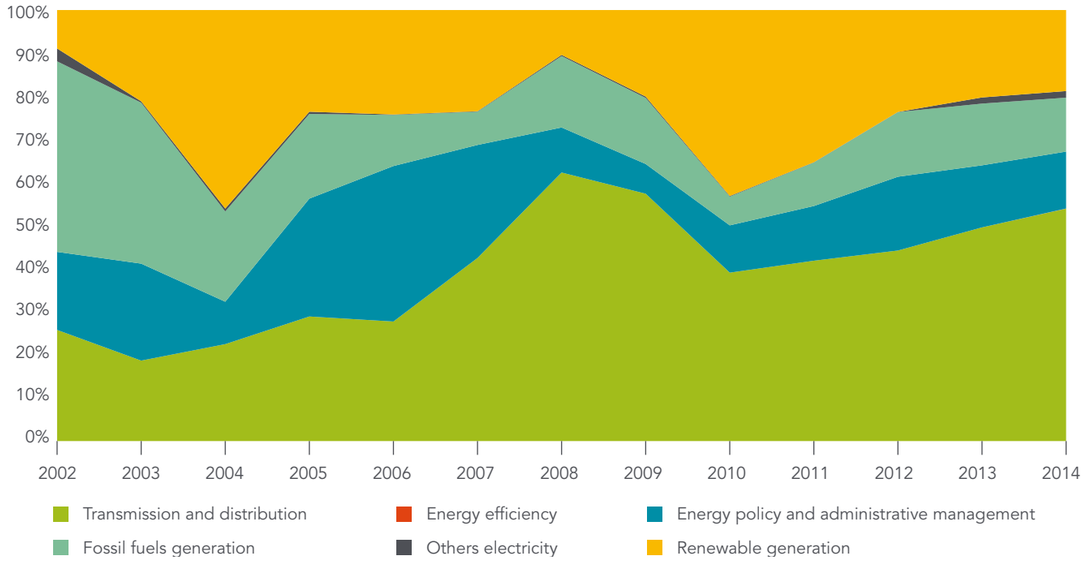
Donors that are not geographically restricted (e.g., bilateral and global multilateral donors) allocated an average of around 20 percent of electricity commitments to high-impact countries. Some larger bilateral donors concentrated electricity support on high-impact countries; these include Japan (42.4 percent) and the United States (59.8 percent).

TRENDS OVER 2011-15 BY SECTOR

Between 2011 and 2015, 46 percent of development finance commitments for electricity in high-impact countries were directed to transmission and distribution projects, followed by 25 percent to renewable energy generation, 15 percent to energy policy and administrative management and 13 percent to fossil fuel generation.

More generally, the electricity sector has seen growth in commitments for transmission and distribution projects over 2002-15. Commitments to fossil fuels dominated at the beginning of this period before leveling off, while the share of commitments for renewable energy has been more variable (Figure 5). Commitments for renewable energy peaked at $2.7 billion in 2010 because of five large projects in India totaling $1.9 billion, before declining to half of that amount in 2014.

Figure 5 - Electricity commitments by sector in high-impact countries (two-year moving average, %), 2002-14



[6] *EU-27 is the European Union of 27 Member States.*

TRENDS IN DEVELOPMENT FINANCE FOR CLEAN FUELS AND TECHNOLOGIES FOR COOKING

Purpose codes in the CRS database do not support a full analysis of project commitments and disbursements for clean fuels and technologies for cooking. The only purpose code that clearly refers to clean cooking is "gas distribution to end users". However, many projects for stove manufacturing, forestry, charcoal or biogas may be coded using other purpose codes. The analysis has attempted to address this by screening for projects that mention clean fuels and technologies for cooking in the project title or description and including them in the dataset. The number of projects and amount of finance identified is still very limited compared to electricity.

The data show that the clear majority of energy-sector development finance commitments went to electricity projects: between 2002 and 2015, only slightly more than $600 million was committed in the 20 high-impact countries for clean cooking). This represents 1 percent of the amount committed for electricity over 2002-15 for the same set of countries.[7] However, 80 percent of the $600 million is made up of two large projects coded as "gas distribution to end-users" in Bangladesh, supported by the Asian Development Bank (ADB) and Japan. For many high-impact countries it was not possible to identify any projects supporting clean fuels and technologies for cooking.

This data paucity prevents further analysis of trends and sub-sectors for projects supporting clean fuels and technologies for cooking. Less attention is being paid to clean cooking by development partners in terms of the number of projects, the amount of financing committed and the reporting of such information.

[7] *The amount of $600 million includes not only clean cooking projects categorized as energy but also those categorized as agriculture, forestry, health and other projects that refer to clean cooking in the project title or description. The amount of development finance for electricity committed to the same set of countries is $58 billion.*

DISBURSEMENT CONSTRAINTS

METHODOLOGY

Over 2011-15, $16 billion less was disbursed than committed for electricity projects in high-impact countries. In countries such as Myanmar and Niger, disbursements represented less than 10 percent of commitments, while in others such as the Democratic Republic of Congo and Madagascar, disbursements were larger than commitments. Energy-sector projects often disburse over multiple years while most, or all, of the commitment is recorded in the first year. Therefore, project-level information is needed to assess whether development finance is delayed and, if so, by how much. Results can then be aggregated by sector and country.

DATA

More than 9,000 energy-sector transactions between 2002 and 2015 for 20 high-impact countries in the OECD CRS database were assessed. These were then grouped into 3,500 projects representing $62.4 billion in commitments. A subset of 1,632 projects (53 percent of the total number of projects) had sufficiently complete data to allow an analysis of disbursement constraints. This subset represented $48.1 billion in commitments (77 percent of the total commitments).

Some countries and donors are under-represented in the final sample for the disbursement constraint analysis. Donors excluded due to insufficient data include the African Development Bank (6.1 percent of total commitments), the Islamic Development Bank (2.5 percent), the IFC (1.7 percent) and the Arab fund AFESD (1.2 percent) (Table A1, Annex A).

INDICATORS

The methodology for each project considers commitments, disbursements, transaction dates, project start and completion dates, and basic flow characteristics (donor, recipient country and purpose).

Using these elements, two indicators are constructed: binary and non-binary. The **binary indicators** assess whether a project is on time or late. They are based on three elements: the difference between the expected completion date and the last disbursement; the proportion of total commitments that have been disbursed; and the difference between the share of funds disbursed and the share of time that has passed compared to the project plan.

Projects are sorted using the following steps (see Annex A for further details):

1) Any project with transactions after the expected project completion date is late.

2) Any project with the last transaction in the same year as that of the expected project completion date is late if it had a share of disbursement lower than 95 percent of commitments.

3) Any project with the last transaction before the completion date is late if the difference between the share of time passed and the share of disbursement is greater than 10 percent.

Aggregating these results provides (by country and sector):

a) the share of projects delayed.

b) the share of financing delayed.

These indicators do not distinguish between projects that are slightly late and ones with more severe disbursement delays.

A **non-binary indicator, Average Project Delay (APD)**, quantifies the intensity of disbursement constraints based on two elements: the share of commitments disbursed and the share of time passed between the start year and the expected project completion year.

Aggregating the results, the following measure is obtained: the APD is the average difference between the share of commitments disbursed and the share of time that has passed compared with the project plan, for each project. The APD ranges from -100 percent to +100 percent.

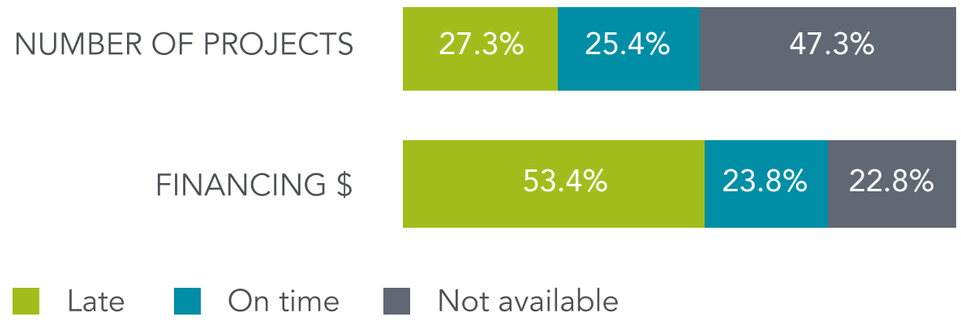
For example, take a project that has disbursed 20 percent of commitments while 50 percent of the project implementation timeframe has elapsed. In this case, the APD is calculated to be -30 percent (or 20 percent minus 50 percent). The APD does not consider the amount of finance in US dollars.

RESULTS

Based on an analysis of transactions over 2002-15 with complete data, a large majority of the finance for electricity in high-impact countries (69.2 percent) and a small majority of projects (51.8 percent) were delayed. The average size of delayed projects was $35.8 million compared to $17.4 million for projects on time. The non-binary indicator for the set of projects is -14.6 percent, meaning that disbursements lag compared to the percentage of the planned project implementation time that has passed.

The binary indicators do not show large differences among the four main sub-sectors (transmission and distribution, renewables, fossil fuels and energy policy) for high-impact

Figure 6 - Share of electricity projects in high-impact countries that are delayed or on time, by number of projects and volume of financing, 2002-15



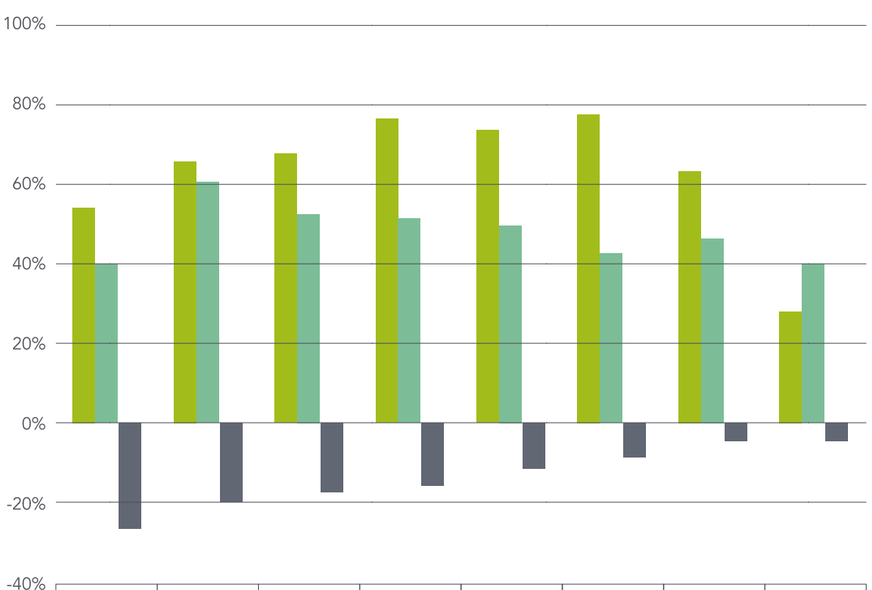
countries over 2002-15. Energy policy project disbursements are slightly more delayed than disbursements in other sub-sectors when the amount of financing is considered, suggesting that some larger energy policy projects are responsible for the average delay time. The non-binary indicator, APD, shows that transmission and fossil fuel projects have more severe disbursement delays, while the delays for renewable energy projects seem less severe.

Data coverage by country is patchier, particularly for high-impact countries that have a large portfolio from donors that do not report full details to the OECD. This is, for example, the case for Angola and Sudan, with only two percent or less of data with sufficient coverage to perform a disbursement constraint analysis. In addition, some of the high-impact countries receive a very small share of global electricity sector commitments, making the indicators apply to only a handful of projects. Figure 8 presents the indicators for countries with at least two percent of the total tracked finance. The full dataset can be found in Annex B (Table B4).

The binary and non-binary indicators give a mixed picture of disbursement performance by country. In terms of average number of projects with disbursement delays, India, Afghanistan and Bangladesh are three countries that perform best. When considering the share of financing that is delayed, the countries performing best are the Philippines, Ethiopia and the Democratic Republic of Congo. Data for the Democratic Republic of Congo seem to be influenced by the below-average performance of a few large projects. For the Philippines and Ethiopia, there is a prevalence of projects from sub-sectors that are more likely to be delayed, such as transmission and distribution projects. The three countries with the lowest shares of financing delayed and moderate APDs are Mozambique, Kenya and Tanzania.

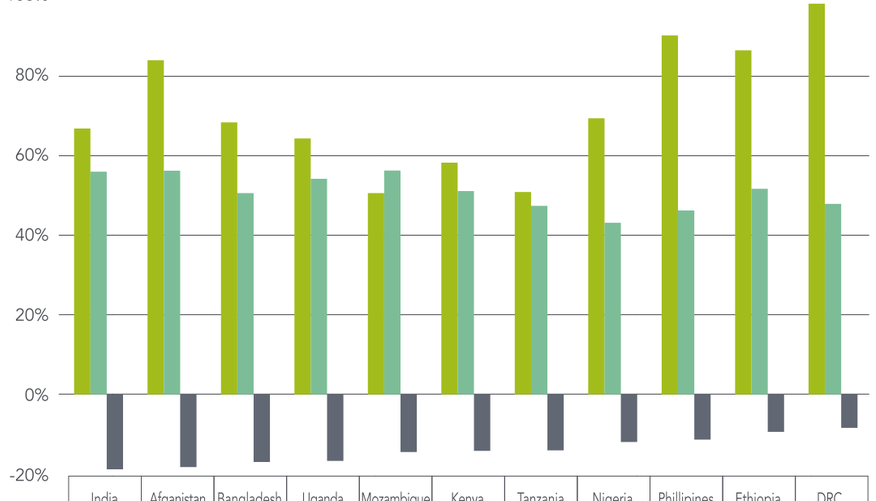
Figure 9 combines the size of the project, the sector and the APD. It shows that larger projects are more likely than not to be delayed—in particular, transmission and distribution and fossil fuel generation projects. Further research is needed to better understand the relationships between the project size, sub-sector and country, and project disbursement delays.

Figure 7 - Share of electricity projects and finance in high-impact countries delayed over 2002-15, and APD, by sector



	Gas distribution	Electric power transmission and distribution	Generation - fossil fuels	Energy policy and administrative management	Generation - Renewable energy	Other electricity (training, research, nuclear safety)	Other Clean cooking	Energy efficiency
Share of financing delayed (%)	54.1	65.8	67.8	76.5	73.6	77.6	63.3	28
Share of delayed projects (%)	40.0	60.6	52.5	51.4	49.6	42.5	46.4	40.0
APD (%)	-26.7	-20.4	-17.6	15.8	-11.7	-9.0	-4.7	-4.7

Figure 8 - Share of electricity projects and finance in high-impact countries over 2002-15 that are delayed, and APD, by country



	India	Afganistan	Bangladesh	Uganda	Mozambique	Kenya	Tanzania	Nigeria	Phillipines	Ethiopia	DRC
Share of financing delayed (%)	67.2	84.4	68.7	64.7	50.9	58.6	51.1	69.8	90.7	86.9	98.7
Share of delayed projects (%)	56.3	56.5	50.9	54.5	56.6	51.4	47.6	43.4	46.5	51.9	48.1
APD (%)	-18.9	-18.3	-17.0	-16.8	-14.5	-14.2	-14.1	-12.0	-11.4	-9.4	-8.4

Figure 9 - Project size, sector and APD for electricity projects in high-impact countries over 2002-15

Note: Disbursements are the placement of resources at the disposal of a recipient country or agency, or in the case of internal development-related expenditures, the outlay of funds by the official sector.

QUALITATIVE ANALYSIS OF DISBURSEMENT CONSTRAINTS

REVIEW OF EVALUATION REPORTS

Forty-five evaluation reports of energy projects in high-impact countries were reviewed for discussion of disbursement constraints. The reports were collected from the Evaluation Results Database of the African Development Bank (AfDB, 2017), the World Bank's Independent Evaluation Group (World Bank, 2017), Japan International Cooperation Agency (JICA, 2017), the Asian Development Bank (ADB, 2017), OECD DEREC (OECD, 2017b) and the German Federal Ministry for Economic Cooperation and Development (BMZ, 2017). These organizations publish evaluation reports online, with some sorting and search functions. These reports were cross-referenced to projects in the OECD CRS that underpin this analysis. Nevertheless, it is difficult to obtain a complete set of evaluation reports—especially from smaller organizations—making it difficult to generalize conclusions by donor or country. In most reports, there is clear information on the project and loan dates, but the reasons for time delays are not always discussed in detail and are often grouped with information on project budgets. Three projects are provided as examples in Table 2, one each from Bangladesh, Ethiopia and Kenya where qualitative interviews were also held. More details are in Annex C.

As Table 2 suggests, the evaluations present quite a diverse range of issues that hold up disbursement. Sometimes these relate to the disbursement process itself—such as difficulty in meeting loan conditions or delays at various grant approval stages. More often—or at least more important in terms of the length of the resulting delay—are issues in implementing the project itself. The evaluation reports include good information on milestones and timing but a better distinction could be made between the types of delay to better identify and reduce lags in disbursement. It may also be worth noting that disbursement lags can have a knock-on effect—a loan that is disbursed late could have a negative effect on project implementation; conversely, a delay on the implementation side could negatively impact the rest of the disbursement schedule as well as the overall economic viability of the project. Both cases result in delays in improved access to energy services. Analysis could be strengthened in the future if there was more standardization of at least some elements of evaluation reports across organizations or if some standardized metrics were introduced. In some cases, there appears to be a need for more—and more timely—information to support the drafting of evaluation reports.

INTERVIEWS WITH BENEFICIARIES

To provide additional qualitative context, in-country interviews were conducted on the human and institutional constraints that limit disbursement from the perspective

Table 2 - Examples of disbursement delays discussed in evaluation reports

Project	Key mention of disbursement delay	Link to statistical analysis of OECD CRS database
"Bangladesh-India Electrical Grid Interconnection Project" (Bangladesh)	"Based on due diligence in 2010, disbursements from ADB under the Bangladesh–India Electrical Grid Interconnection Project loan could commence only on the successful completion of a Memorandum of Understanding (MOU) between the electricity seller in India and the electricity buyer in Bangladesh. This MOU would be followed with the timely signing of a PPA for the transfer of electricity. Advance procurement of ADB loan-funded contracts commenced in 2010 and the two turnkey contracts for the high voltage direct current sub-station and transmission line were signed in 2010 and 2011. Delays in signing the MOU resulted in construction work commencing using counterpart funding for advance payments in place of planned ADB funding." (ADB, 2015)	This is an example of a project where the expected completion date was pushed back several times. It is assessed as "late" because 100 percent was not disbursed by 2015.
"Gilgel Gibe II Hydroelectric Power Project with a Generation Capacity of 420 MW" (Ethiopia)	"Compared to the foreseen commissioning date for the plant, the delays have certainly affected the profitability of the investment, due to both the increase in the specific operation costs (tunnel bypass in 2008 and tunnel collapse on 26 December 2010) and the postponement of the plant's actual start-up date. Even the monitoring reports confirm the overall influence of the delay on profitability." (Italsocotec, 2012)	In this example, the delay (five years) is longer than the initially expected project duration (four years). However, the reasons cited relate to project implementation issues (specifically, geological) rather than disbursement constraints. Nevertheless, the disbursement share is only 57 percent; this is not discussed in the evaluation report and could possibly be due to missing or misattributed transaction data in the OECD CRS database.
"Sondu-Miriu Hydropower Project Sang'oro Power Plant" (Kenya)	"The original planned period was January 1997 to July 2002 (67 months) for Phase I, and January 1999 to December 2001 (36 months) for Phase II; the period for Phase II was revised to October 2000 to June 2003 (33 months) at the time of appraisal for Phase II. The actual period was March 1997 to April 2004 (97 months) for Phase I with a 145% delay, while it was February 2004 to March 2010 (74 months), with a 224% delay for Phase II. With the two phases combined, the original plan (100 months) and actual (171 months) differed by 171% with the delays. In brief, the actual period significantly exceeded the original plan. Reasons for delays included the facts that (a) with the delay in the extension of Phase II, the executing agency had to stop work until the signing of the Phase II Loan Agreement because it was not possible to fund the project on their own; and (b) part of the civil work in Phase I was carried over to Phase II, requiring additional time. Other reasons included the additional time required for digging the raceway, as well as a delayed hand-over due to mechanical trouble with the turbine." (Daimon, 2012)	Delays in this project are attributed mostly to implementation issues but also partly to a delay in signing a new loan agreement when moving from one phase of the project to the next. Despite the extended completion date, the project is still significantly late although it achieved 95 percent disbursement.

of recipient institutions in Kenya, Ethiopia and Bangladesh.[8] The interviews assessed disbursement constraints from the perspective of 11 recipient enterprises and seven intermediary funding organizations over 2013-14 that largely delivered services in energy access Tiers 1-3. Eleven questionnaires were completed in Ethiopia, six in Kenya and one in Bangladesh. A full range of technologies was represented but the organizations in Bangladesh and Ethiopia focused mostly on clean cooking technologies, whereas the responses from Kenya focused exclusively on electricity. Fifteen of the 18 responding organizations provided information on their annual turnover, with an average of almost $43 million. The questions explored the process of obtaining public financing from intermediaries—such as local banks or government support programs—to assess the ease of accessing capital.

Organizations often receive funding from more than one donor. Respondents were asked to provide the average annual amount committed by each type of donor in 2013 and 2014. From this donor perspective, the responses to the questionnaires contain 24 donor-recipient pairs, with a median commitment amount of $260,033. Of the 23 disbursement percentages reported, 13 were less than 100 percent, ranging from 2 to 85 percent. Of 17 responses to the question on the average time lag by funding type, the average lag was 5.2 months.

Most responses said difficulties in disbursement were not linked to project size, although one response provided more detail: *"Yes. The size and complexity of the project financed has a direct correlation with the time lag. This is because of the documentation, conditions precedent required to be fulfilled before the actual disbursement of the funds."*

Respondents were asked whether they faced an obstacle in obtaining different types of funding and to rate the severity of the obstacle from 1 (lowest) to 5 (highest). Figure 10 presents aggregate responses. While these are quite mixed, loans from government agencies faced more severe barriers, scoring 4 or 5 on this scale.

Respondents also provided free-form comments on the obstacles faced. These included the political environment, delay in finalizing contracts, commitment fees that expedite disbursement but increase the financial burden, land deeds needed to get loans disbursed being held up by regulatory changes, imported products being held at customs, and human capacity in national office and regional energy offices.

Several respondents pointed out that disbursements are made in stages, based on the completion of project milestones, and those payments are not considered delayed. However, disbursement delays can still happen when additional conditions are put in place by funders or when regional offices do not report financial performance upon which further disbursement is based (Regional offices in turn experience delays because they must wait for reports from the district level).

External political (including policy and regulatory) obstacles and bureaucratic delays on the recipient side were among those rated most severe most often (Figure 11). The most commonly mentioned challenges were foreign currency requirements and a lack of sufficient market demand and capacity to pay among consumers. Respondents mentioned constraints related to:

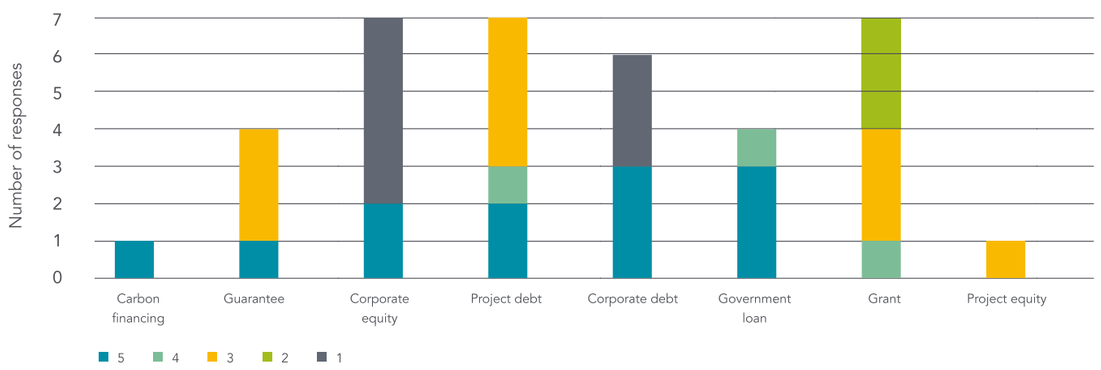
- Policy/regulation: changing government priorities, delays in policy implementation, and permitting and licensing procedures.

- Finance: tough loan conditions, competition from other organizations for the same funds and a lack of access to finance for consumers.

- Market: a lack of product or equipment suppliers, as well as enough trained personnel.

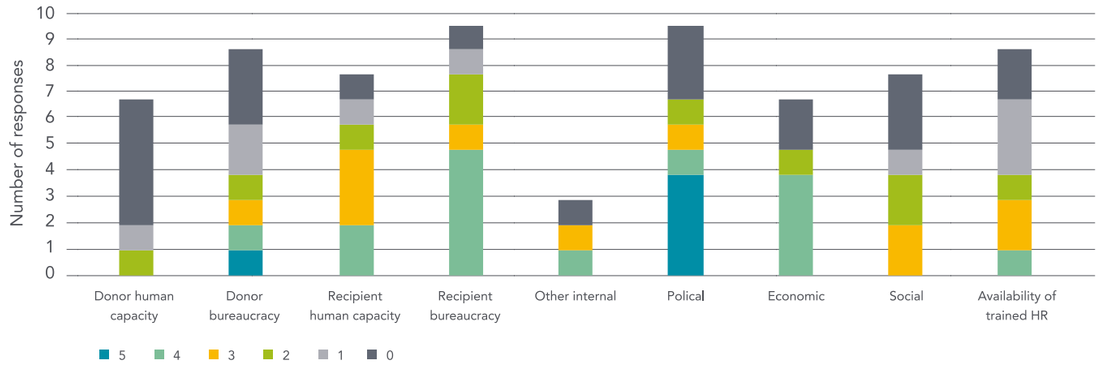
- Community: community hostility in project areas as well as social or cultural constraints.

Figure 10 - Severity of obstacle to disbursement (1= lowest, 5=highest) by funding type (number of interview responses)



Note: Data cover interviews conducted in Kenya, Ethiopia and Bangladesh for 2013-14.

Figure 11 - Severity of obstacle to disbursement (1=lowest, 5=highest) by obstacle type (number of interview responses)



Note: Data cover interviews conducted in Kenya, Ethiopia and Bangladesh for 2013-14.

[8] *For example, in Uganda in financial year 2015 - 2016, disbursement is reported to have been particularly poor (Shs 18 trillion or $5 billion unused), due to a lack of prior understanding of loan conditions. See http://allafrica.com/stories/201701160190.html.*

ANNEX A
METHODOLOGICAL NOTES

All the data analyzed came from the OECD CRS database, extracted in January 2017. All data is in constant 2014 prices, calculated by the OECD. The data was extracted and imported into a database manager for easier handling.

Financial transactions were regrouped by project based on the project ID, name of the project, and CRSid fields. A project was included if it had a unique donor, recipient and purpose combination. Some projects co-financed by different donors are therefore considered different projects.

Projects were checked for relevance. A few projects with non-energy access components, based on title and description, were excluded. This mainly concerned a few miscoded oil and gas projects.

The data points needed for each project were: amount originally committed, amount disbursed, the dates of the transactions, the expected end date of the project, the start date of the project, the purpose (CRS code). This data was available for a limited share of the projects (Table A1).

The binary indicators are determined on the basis of arbitrary thresholds based on the analysis of the underpinning data and of the sensitivity analysis (Figure A1, Table A2).

Projects are sorted using the following steps:

1) Any project with transactions after the expected project completion date is late.

2) Any project with the last transaction in the same year as that of the expected project completion date is late if it had a share of disbursement lower than 95 percent of commitments.

3) Any project with the last transaction before the completion date is late if the difference between the share of time passed and the share of disbursement is greater than 10 percent.

The above thresholds have been determined based on the analysis of the underlying data. The sensitivity analysis of the binary indicator is quite robust and indicates between 75 percent and 63 percent of the financing was late, while projects considered late are between 47 percent and 57 percent.

Table A1 - Projects considered in the analysis

	Share (%)	Number of projects	Share (%)	Finance commitments ($ millions)
Total projects examined	100	3,503	100	62,447
Relevant projects	93.0	3,257	99.9	62,392
Projects with complete information	46.6	1,632	77.1	48,143

Figure A1 - Flowchart of project analysis

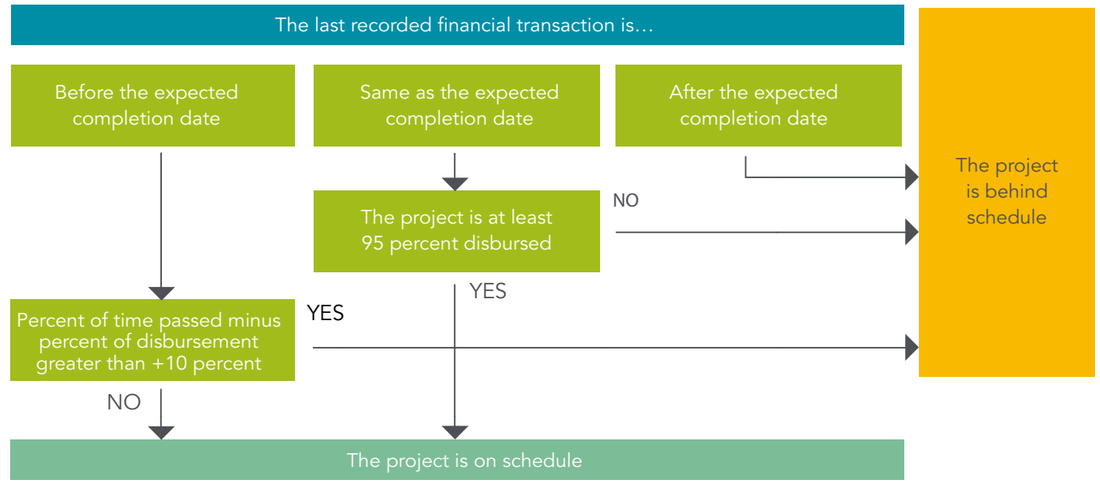


Table A2 - Binary indicator sensitivity analysis

Sensitivity analysis	Unit	Projects delayed			Unit	Finance delayed		
Scenario		A	B	C		A	B	C
Relevant projects with complete information	number	1,632			$	48,142.7		
LATE 1: based on time	number	244	244	244	$	7,678.9	7,678.9	7,678.9
LATE 2: share disbursed is at least	%	99	95	90	%	99	95	90
	number	392	328	276	$	8,334.6	6,620.9	7,678.9
LATE 3: (% of time passed – percent of finance disbursed) is greater than	%	5	10	15	%	5	10	15
	number	300	274	252	$	20,265.8	18,991.6	16,907.8
Delayed	%	57.4	51.8	47.3	%	75.4	69.2	63.2
	number	936	846	772	$	36,279.3	33,291.3	20,265.8

ANNEX B
STATISTICAL TABLES

Table B1 - Commitments of development finance for electricity, 2011-15

Country	$ millions, 2014 prices	Share (%)
Afghanistan	2,708.6	2.2
Africa, regional	850.9	0.7
Albania	393.4	0.3
Algeria	9.3	0.0
America, regional	292.3	0.2
Angola	1,270.6	1.0
Anguilla	0.0	0.0
Antigua and Barbuda	11.8	0.0
Argentina	251.5	0.2
Armenia	538.3	0.4
Asia, regional	430.8	0.3
Azerbaijan	94.7	0.1
Bangladesh	5,554.3	4.5
Belarus	194.2	0.2
Belize	8.6	0.0
Benin	303.5	0.2
Bhutan	213.4	0.2
Bilateral, unspecified	2,289.5	1.9
Bolivia	284.7	0.2
Bosnia and Herzegovina	433.6	0.4
Botswana	5.0	0.0
Brazil	1,653.6	1.3
Burkina Faso	266.8	0.2
Burundi	355.2	0.3
Cote d'Ivoire	281.3	0.2
Cabo Verde	224.9	0.2
Cambodia	271.9	0.2
Cameroon	543.2	0.4

Table B1 - Commitments of development finance for electricity, 2011-15

Country	$ millions, 2014 prices	Share (%)
Central African Republic	0.2	0.0
Central Asia, regional	90.4	0.1
Chad	2.2	0.0
Chile	1,406.9	1.1
China, People's Republic of	2,441.9	2.0
Colombia	71.0	0.1
Comoros	37.6	0.0
Congo	140.3	0.1
Congo, Democratic Republic of the	655.0	0.5
Cook Islands	54.6	0.0
Costa Rica	918.5	0.7
Côte d'Ivoire	245.9	0.2
Cuba	23.9	0.0
Djibouti	111.3	0.1
Dominica	10.7	0.0
Dominican Republic	560.5	0.5
Ecuador	937.7	0.8
Egypt	6,541.9	5.3
El Salvador	191.2	0.2
Equatorial Guinea	3.7	0.0
Eritrea	15.8	0.0
Ethiopia	1,137.8	0.9
Europe, regional	86.0	0.1
Far East Asia, regional	135.3	0.1
Fiji	14.4	0.0
Gabon	34.2	0.0
Gambia	112.0	0.1
Georgia	583.5	0.5
Ghana	767.4	0.6
Grenada	9.1	0.0
Guatemala	28.5	0.0
Guinea	387.9	0.3
Guinea-Bissau	129.1	0.1
Guyana	16.5	0.0
Haiti	321.4	0.3

Table B1 - Commitments of development finance for electricity, 2011-15

Country	$ millions, 2014 prices	Share (%)
Honduras	985.4	0.8
India	11,290.4	9.1
Indonesia	8,311.2	6.7
Iran	312.9	0.3
Iraq	1,067.9	0.9
Jamaica	96.7	0.1
Jordan	1,511.3	1.2
Kazakhstan	440.6	0.4
Kenya	3,154.1	2.6
Kiribati	13.2	0.0
Korea, Democratic People's Republic of	0.1	0.0
Kosovo	180.4	0.1
Kyrgyzstan	267.3	0.2
Lao, People's Democratic Republic	449.8	0.4
Lebanon	109.5	0.1
Lesotho	21.9	0.0
Liberia	897.1	0.7
Libya	0.9	0.0
Macedonia, Former Yugoslav Republic of	199.5	0.2
Madagascar	40.9	0.0
Malawi	480.8	0.4
Malaysia	25.4	0.0
Maldives	76.1	0.1
Mali	122.2	0.1
Marshall Islands	9.6	0.0
Mauritania	763.0	0.6
Mauritius	264.8	0.2
Mexico	1,074.7	0.9
Micronesia	28.8	0.0
Middle East, regional	413.9	0.3
Moldova	181.3	0.1
Mongolia	93.5	0.1
Montenegro	269.9	0.2
Montserrat	33.5	0.0

Table B1 - Commitments of development finance for electricity, 2011-15

Country	$ millions, 2014 prices	Share (%)
Morocco	5,236.2	4.2
Mozambique	889.0	0.7
Myanmar	1,667.0	1.3
Namibia	34.4	0.0
Nauru	19.9	0.0
Nepal	1,299.9	1.1
Nicaragua	384.7	0.3
Niger	376.6	0.3
Nigeria	1,032.5	0.8
Niue	0.6	0.0
North & Central America, regional	924.6	0.7
North of Sahara, regional	35.7	0.0
Oceania, regional	56.4	0.0
Pakistan	7,035.1	5.7
Palau	23.3	0.0
Panama	184.8	0.1
Papua New Guinea	243.2	0.2
Paraguay	71.3	0.1
Peru	477.6	0.4
Philippines	395.1	0.3
Rwanda	607.8	0.5
Saint Helena	1.7	0.0
Saint Kitts and Nevis	0.0	0.0
Saint Lucia	3.8	0.0
Saint Vincent and the Grenadines	2.9	0.0
Samoa	57.4	0.0
Sao Tome and Principe	21.9	0.0
Senegal	840.1	0.7
Serbia	922.4	0.7
Seychelles	2.9	0.0
Sierra Leone	103.7	0.1
Solomon Islands	36.9	0.0
Somalia	7.9	0.0
South & Central Asia, regional	12.7	0.0
South Africa	1,976.2	1.6

Table B1 - Commitments of development finance for electricity, 2011-15

Country	$ millions, 2014 prices	Share (%)
South America, regional	75.8	0.1
South Asia, regional	5.6	0.0
South of Sahara, regional	1,064.4	0.9
South Sudan	45.6	0.0
Sri Lanka	969.9	0.8
States Ex-Yugoslavia	0.0	0.0
Sudan	573.1	0.5
Suriname	60.8	0.0
Swaziland	1.1	0.0
Syrian Arab Republic	176.3	0.1
Tajikistan	529.8	0.4
Tanzania	1,391.2	1.1
Thailand	449.7	0.4
Timor-Leste	5.8	0.0
Togo	100.8	0.1
Tokelau	6.1	0.0
Tonga	87.7	0.1
Tunisia	1,707.9	1.4
Turkey	5,139.6	4.2
Turkmenistan	7.8	0.0
Tuvalu	41.6	0.0
Uganda	1,120.8	0.9
Ukraine	2,615.8	2.1
Uruguay	967.5	0.8
Uzbekistan	3,087.4	2.5
Vanuatu	30.4	0.0
Venezuela	5.6	0.0
Vietnam	5,750.2	4.7
Wallis and Futuna	0.0	0.0
West Bank and Gaza Strip	37.6	0.0
West Indies, regional	28.5	0.0
Yemen	564.0	0.5
Zambia	811.8	0.7
Zimbabwe	32.7	0.0
TOTAL	**123,627.7**	

Table B2 - Commitments to electricity by donor (2014 $ millions), 2011-15

Donor	Commitments to all countries	Share (%)	Commitments to 20 high-impact countries	Share (%)	Share of commitments to 20 high-impact countries (%)
African Development Bank	3,544.1	2.9	1,473.4	4.3	41.6
African Development Fund	2,347.4	1.9	1,375.6	4.0	58.6
Arab Bank for Economic Development in Africa	92.8	0.1	40.0	0.1	43.1
Arab Fund (AFESD)	2,217.1	1.8	539.3	1.6	24.3
AsDB Special Funds	2,657.0	2.1	592.8	1.7	22.3
Asian Development Bank	12,542.9	10.1	4,754.1	13.8	37.9
Australia	96.4	0.1	4.4	0.0	4.5
Austria	107.0	0.1	5.1	0.0	4.8
Belgium	115.1	0.1	28.6	0.1	24.9
Canada	515.0	0.4	4.6	0.0	0.9
Caribbean Development Bank	0.1	0.0	0.0	0.0	0.0
Climate Investment Funds	2,617.5	2.1	583.5	1.7	22.3
Czech Republic	16.3	0.0	0.0	0.0	0.1
Denmark	260.0	0.2	56.9	0.2	21.9
Estonia	0.7	0.0	0.0	0.0	4.9
EU Institutions	10,633.9	8.6	1,698.4	4.9	16.0
European Bank for Reconstruction and Development	2,059.6	1.7	0.0	0.0	0.0
Finland	212.1	0.2	60.0	0.2	28.3
France	5,355.5	4.3	1,499.0	4.3	28.0
Germany	11,683.9	9.5	3,475.5	10.1	29.7
Global Environment Facility	541.5	0.4	119.8	0.3	22.1
Global Green Growth Institute	1.0	0.0	0.0	0.0	0.0
Iceland	18.6	0.0	0.0	0.0	0.0
IDB Special Fund	670.1	0.5	0.0	0.0	0.0
IFAD	0.4	0.0	0.0	0.0	0.0
Inter-American Development Bank	4,390.7	3.6	0.0	0.0	0.0
International Bank for Reconstruction and Development	11,081.2	9.0	689.8	2.0	6.2
International Development Association	11,062.5	8.9	5,716.0	16.5	51.7
International Finance Corporation	4,615.8	3.7	1,078.7	3.1	23.4
International Labour Organization	0.1	0.0	0.0	0.0	0.0

Table B2 - Commitments to electricity by donor (2014 $ millions), 2011-15

Donor	Commitments to all countries	Share (%)	Commitments to 20 high-impact countries	Share (%)	Share of commitments to 20 high-impact countries (%)
Ireland	1.4	0.0	1.1	0.0	82.7
Islamic Development Bank	6,886.7	5.6	1,351.6	3.9	19.6
Italy	92.1	0.1	21.6	0.1	23.4
Japan	11,881.0	9.6	5,035.8	14.6	42.4
Kazakhstan	0.0	0.0	0.0	0.0	0.0
Korea	4,398.7	3.6	204.0	0.6	4.6
Kuwait (KFAED)	1,141.7	0.9	317.4	0.9	27.8
Lithuania	0.2	0.0	0.0	0.0	0.2
Luxembourg	19.7	0.0	15.8	0.0	80.3
Netherlands	307.8	0.2	28.4	0.1	9.2
New Zealand	182.9	0.1	22.4	0.1	12.2
Nordic Development Fund	34.4	0.0	8.1	0.0	23.5
Norway	1,269.1	1.0	404.6	1.2	31.9
OPEC Fund for International Development	1,310.6	1.1	345.3	1.0	26.3
Poland	4.2	0.0	0.2	0.0	5.4
Portugal	89.8	0.1	10.9	0.0	12.2
Slovak Republic	0.5	0.0	0.0	0.0	7.8
Slovenia	1.2	0.0	0.0	0.0	1.1
Spain	40.3	0.0	0.6	0.0	1.5
Sweden	269.0	0.2	128.2	0.4	47.6
Switzerland	158.0	0.1	0.0	0.0	0.0
UN Peacebuilding Fund	0.0	0.0	0.0	0.0	0.0
UNDP	50.1	0.0	19.6	0.1	39.1
UNECE	1.3	0.0	0.0	0.0	0.0
United Arab Emirates	1,058.9	0.9	239.4	0.7	22.6
United Kingdom	1,160.2	0.9	339.5	1.0	29.3
United States	3,811.5	3.1	2,278.2	6.6	59.8
TOTAL	**123,627.7**	**100.0**	**34,568.7**	**100.0**	**28.0**
EU-27 Total	29,210.7	23.6	7,030.6	20.3	24.1
World Bank Group	26,759.5	28.3	7,484.6	27.2	28.0

Table B3 - Absorption indicators by sector for high-impact countries, 2002-15

	Finance-based indicators				Project numbers-based indicators				
	Late	On time	Coverage of the indicator	Share of the sector tracked finance	Late	On time	APD	Coverage	Share of the sector tracked projects
Electric power transmission and distribution (%)	65.8	34.2	77.3	46.0	60.6	39.4	-20.4	54.3	21.1
Energy efficiency (%)	28.0	72.0	95.6	0.6	40.0	60.0	-4.7	64.1	1.5
Energy policy and administrative management (%)	76.5	23.5	84.0	14.6	51.4	48.6	-15.8	50.9	27.2
Gas distribution (%)	54.1	45.9	98.0	1.0	40.0	60.0	-26.7	55.6	0.9
Generation – fossil fuels (%)	67.8	32.2	72.4	13.9	52.5	47.5	-17.6	47.2	6.2
Generation – renewable energy (%)	73.6	26.4	75.8	23.7	49.6	50.4	-11.7	51.2	33.5
Other clean cooking (%)	63.3	36.7	53.5	0.1	46.4	53.6	-4.7	58.5	4.2
Other electricity (training, research, nuclear safety) (%)	77.6	22.4	32.0	0.1	42.5	57.5	-9.0	70.2	5.3
TOTAL (%)	**69.2**	**30.8**	**77.2**	**100.0**	**51.8**	**48.2**	**-14.6**	**52.7**	**100.0**
Total ($ millions, number of projects)	33291.3	14851.4			846	786		1463	3095

Table B4 - Absorption indicators for high-impact countries, 2002-15

	Finance-based indicators				Project numbers-based indicators				
Recipient	Late (%)	On time (%)	Coverage of the indicator	Share of the sector tracked finance (%)	Late (%)	On time (%)	APD (%)	Coverage (%)	Share of the sector tracked projects (%)
Afghanistan	84.4	15.6	91.7	7.8	56.5	43.5	-18.3	64.2	7.0
Angola	93.6	6.4	1.2	0.0	63.0	37.0	-24.4	56.3	1.7
Bangladesh	68.7	31.3	81.2	16.4	50.9	49.1	-17.0	52.3	7.1
Burkina Faso	85.7	14.3	72.1	0.9	61.5	38.5	-8.6	39.4	2.4
Congo, Democratic Republic of the	98.7	1.3	81.9	2.3	48.1	51.9	-8.4	45.0	1.7
Ethiopia	86.9	13.1	70.4	4.5	51.9	48.1	-9.4	47.8	4.7
India	67.2	32.8	89.0	41.7	56.3	43.7	-18.9	55.8	20.0
Kenya	58.6	41.4	68.8	7.1	51.4	48.6	-14.2	49.8	6.7
Korea, Democratic People's Republic of	62.1	37.9	3.4	0.0	33.3	66.7	-1.4	34.6	0.6
Madagascar	50.7	49.3	73.6	0.2	19.4	80.6	6.1	42.5	1.9
Malawi	92.9	7.1	96.1	1.1	51.3	48.7	-15.5	57.4	2.4
Mozambique	50.9	49.1	74.9	2.7	56.6	43.4	-14.5	48.6	7.5
Myanmar	40.1	59.9	53.7	1.9	52.5	47.5	-1.6	58.0	2.5
Niger	48.0	52.0	77.6	0.6	9.1	90.9	-2.3	28.2	0.7
Nigeria	69.8	30.2	62.4	2.2	43.4	56.6	-12.0	55.7	5.1
Philippines	90.7	9.3	82.4	2.7	46.5	53.5	-11.4	46.7	4.4
South Sudan	14.3	85.7	54.3	0.1	35.7	64.3	11.0	82.4	0.9
Sudan	80.1	19.9	2.0	0.0	64.3	35.7	-19.9	35.0	0.9
Tanzania	51.1	48.9	84.0	4.6	47.6	52.4	-14.1	62.0	13.0
Uganda	64.7	35.3	58.9	2.6	54.5	45.5	-16.8	57.5	8.2
Yemen	97.2	2.8	21.1	0.4	73.3	26.7	-42.6	24.2	0.9
TOTAL	**69.2**	**30.8**	**77.2**	**100.0**	**51.8**	**48.2**	**-14.6**	**52.7**	**100.0**
Total ($ millions, number of projects	33,291	14,851			846	786			

ANNEX C
REVIEW OF EVALUATION REPORTS

Where disbursement delays are discussed, most delays relate to project implementation but there are some mentions of loan (or grant) processes. Most disbursement-related delays are attributed to the recipient side, such as difficulties in meeting loan conditions. About half (22 out of 45) the evaluation reports reviewed include a qualitative rating of lender and borrower performance (e.g., satisfactory, unsatisfactory). In most cases, the bank and borrower are awarded the same rating, although in a few reports the borrower is given a worse rating.

Of the 45 reports analyzed, 21 can be linked to the statistical analysis of the OECD CRS database. Nineteen are "partially disbursed late," one is "fully disbursed on time," one is "partially disbursed on time" and none were "fully disbursed late." The set of projects for which evaluation reports were found may not be entirely representative of the full set of more than 3,500 projects covered in the statistical analysis. The share of projects with reports that are "partially disbursed late" is 90 percent compared to 54 percent for the full set of projects in the statistical analysis. However, it may be that projects with disbursement delays are more likely to be the subject of an evaluation report; the sample is too small to be representative.

Table C1 - Case study Bangladesh

Information based on analysis of the OECD CRS database	
Donor name	ADB Special Funds
Project title	Bangladesh-India Electrical Grid Interconnection Project
Purpose	Electric power transmission and distribution
Commitment ($ millions)	117
Disbursement ($ millions)	112
Disbursement (%)	96
Start year	2010
Expected completion year	2015
Last disbursement	2015
Disbursement analysis	Partially disbursed late
Information based on the evaluation report	
Report title	Completion report

Table C1 - Case study in Bangladesh, cont'd

Information based on analysis of the OECD CRS database	
Mention of disbursement (1)	"The Government of Bangladesh sought the Asian Development Bank's (ADB) assistance for the interconnection project within Bangladesh and a loan was processed for approval in 2010. The technical assistance (TA) was approved in 2010 to provide support on formalizing the power purchase agreement (PPA) as well as supporting safeguard implementation and reviews."
Mention of disbursement (2)	"Based on due diligence in 2010, disbursements from ADB under the Bangladesh–India Electrical Grid Interconnection Project loan could commence only on the successful completion of a Memorandum of Understanding (MOU) between the electricity seller in India and the electricity buyer in Bangladesh. This MOU would be followed with the timely signing of a PPA for the transfer of electricity. Advance procurement of ADB loan-funded contracts commenced in 2010 and the two turnkey contracts for the high voltage direct current sub-station and transmission line were signed in 2010 and 2011. Delays in signing the MOU resulted in construction work commencing using counterpart funding for advance payments in place of planned ADB funding."
Mention of disbursement (3)	"After several meetings between representatives of both countries, an understanding was reached and the electricity seller in India [the National Thermal Power Corporation (NTPC) Vidyut Vyapar Nigam Limited (NVVN)] and the buyer in Bangladesh [Bangladesh Power Development Board (BPDB)] signed a PPA for 250 MW of power transfer in March 2012. The two utilities decided to sign the PPA directly without the need to enter a MOU. Following this, ADB disbursement commenced in 2012. By this time, the interconnection agreement between BPDB and Power Grid Corporation of India Limited (PGCIL) had been signed."
Mention of disbursement (4)	"The TA completion date was extended to 31 December 2014 for a cumulative 32 months on periodic requests from the Government of Bangladesh in 2013 and 2014 to continue the support."
Comment	
This is an example of a project where the expected completion date was pushed back several times. In the end, however, it is assessed as "Late" in the statistical analysis because 100 percent of the loan was not disbursed by 2015. It is assessed as "Partially disbursed," although it has a very high level (96 percent) of disbursement of committed funds.	

Table C2 - Case study Ethiopia

Information based on analysis of the OECD CRS database	
Donor name	Italy
Project title	Gilgel Gibe II Hydroelectric Power Project with a generatin capacity of 420 MW
Purpose	Hydro-electric power plants
Commitment ($ millions)	336
Disbursement ($ millions)	191
Disbursement (%)	57
Start year	2004
Expected completion year	2008
Last disbursement	2013
Disbursement analysis	Partially disbursed late
Information based on the evaluation report	
Report title	Ex-post evaluation
Mention of disbursement (1)	"The use of the available resources has been in line with foreseen operating objectives and expected results. The technical difficulties that arose during construction and after the works had been completed have affected the delivery times of the operating output. All funding channels have been regular, ensuring a flow in line with project implementation schedules."
Mention of disbursement (2)	"Compared to the foreseen commissioning date for the plant, the delays have certainly affected the profitability of the investment, due to both the increase in the specific operation costs (tunnel bypass in 2008 and tunnel collapse on 26 December 2010) and the postponement of the plant's actual start-up date. Even the monitoring reports confirm the overall influence of the delay on profitability."
Mention of disbursement (3)	"Overall, one can estimate that the accumulated delays, totaling 29 months, have led to a loss of revenue of approximately €78 million."
Comment	
The disbursement delay (five years) is longer then the initially expected project duration (four years). However, the reasons cited are related to project implementation issues (specifically, geological) rather than disbursement constraints. Nevertheless, the disbursement share is only 57 percent. This is not discussed in the evaluation report and could possibly be due to missing or misattributed transaction data in the OECD CRS database.	

Table C3 - Case study Kenya

Information based on analysis of the OECD CRS database	
Donor name	Japan
Project title	Sondu-Miriu Hydropower Project Sang'oro Power Plant
Purpose	Hydro-electric power plants
Commitment ($ millions)	141
Disbursement ($ millions)	133
Disbursement (%)	95
Start year	2004
Expected completion year	2012
Last disbursement	2015
Disbursement analysis	Partially disbursed late
Information based on the evaluation report	
Report title	Ex-post evaluation report
Mention of disbursement/absorption (1)	"The original planned period was January 1997 to July 2002 (67 months) for Phase I, and January 1999 to December 2001 (36 months) for Phase II; the period for Phase II was revised to October 2000 to June 2003 (33 months) at the time of appraisal for Phase II. The actual period was March 1997 to April 2004 (97 months) for Phase I with a 145% delay, while it was February 2004 to March 2010 (74 months), with a 224% delay for Phase II. With the two phases combined, the original plan (100 months) and actual (171 months) differed by 171% with the delays. In brief, the actual period significantly exceeded the original plan. Reasons for delays included the facts that (a) with the delay in the extension of Phase II, the executing agency had to stop work until the signing of the Phase II Loan Agreement because it was not possible to fund the project on their own; and (b) part of the civil work in Phase I was carried over to Phase II, requiring additional time. Other reasons included the additional time required for digging the raceway, as well as a delayed hand-over due to mechanical trouble with the turbine."
Comment	
Delays are attributed mostly to implementation issues but partly to a delay in signing a new loan agreement when moving from one phase of the project to the next. Despite the extended completion date, the project is still significantly late although it achieved 95 percent disbursement.	

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