TRANSFORMING ELECTRICITY MARKETS TO DELIVER UNIVERSAL ENERGY ACCESS

A discussion paper on the role of multinational development banks in redesigning electricity markets to scale up finance for off-grid renewable energy

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A discussion paper on the role of multinational development banks in redesigning electricity markets to scale up finance for off-grid renewable energy

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Kamla, age 33, is Rajasthan's first female solar engineer

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SUMMARY

The latest *Energy progress report* from the International Energy Agency shows that globally we are not on track to deliver universal electricity access for all, as called for by Sustainable Development Goal 7 (SDG 7).[1] This has a knock-on impact on meeting other SDGs, as a lack of access to electricity is often a major constraint to inclusive economic growth and reducing poverty. Off-grid and mini-grid renewable electricity solutions are often the least-cost, quickest and cleanest option for delivering basic electricity access to many households, especially in rural areas. And yet the poorest households in sub-Saharan Africa and Asia aren't being sufficiently reached. This briefing argues that in order to deliver electricity access to the poorest households at the necessary scale, **mini-grid and off-grid renewable energy solutions should be fully integrated into inclusive national electrification strategies, and electricity markets need to be redesigned to facilitate the deployment of on-grid and off-grid energy access solutions on equal terms in harder-to-reach geographies where electricity access remains low**.

This paper explores the idea that subsidies and cross-subsidies could be used to improve the viability of electricity access investments in more remote regions.[2] Subsidy and cross-subsidy schemes **can be designed without undermining the innovation that has been led by the private sector in recent years**. Indeed, subsidies and cross-subsidies have been used to drive universal access to electricity in most developed countries where this goal has already been achieved.

The good news is that such subsidies are affordable. Existing subsidies for fossil fuels and on-grid expansion often exceed the levels of subsidies that would be needed to dramatically accelerate mini-grids and stand-alone solar. This paper recommends that subsidy schemes need to be designed to meet three core principles:

- **SYSTEMIC:** a clear process is defined by which projects and companies can apply for or obtain funds – moving away from a piecemeal, project-by-project approach
- **STANDARDISED:** funds are allocated with terms that are consistently applied across all projects and companies
- **SCALABLE:** the scheme is designed so that it can be scaled up and replicated more widely

Multilateral development banks (MDBs) such as the World Bank Group (WBG) have a critical role to play in developing these solutions, given their ability to influence policy and regulation across the sector. The WBG can be a key actor in developing an effective enabling environment for investment in off-grid electricity access. One example of this support would be the promotion of integrated national energy planning and the facilitation of robust consultation with civil society groups working on energy access as part of its Country Partnership Frameworks. A further example would be working with national governments and regulators to develop the framework of policy and regulation required to underpin the sustainable cross-subsidies that this discussion paper proposes. There is no need to reinvent the wheel when designing these solutions. Cross-subsidy mechanisms and financial instruments can be deployed similar to those already embedded in the grid-based electricity system, with these same principles being extended to off-grid solutions.

Getting the enabling framework right will make the sector more investable. A sustainable market design that improves the viability of off-grid renewable energy projects and companies will mean that the sector is more attractive to investors with access to lower-cost capital. This is key, because the sector needs more finance so that it can scale. The financial instruments required will differ depending on the solution: working capital facilities for companies deploying stand-alone systems; for mini-grids, even project finance (at a portfolio level) might be possible. The WBG and other MDBs again have a critical role in contributing towards this requirement for finance and crowding in private sector investment.

1 International Energy Agency; International Renewable Energy Agency; United Nations; World Bank Group; World Health Organization (2018) *Tracking SDG 7: The energy progress report 2018*.

2 Cross-subsidies are defined as where some customers pay more than their costs of supply in order to subsidise other customers who pay less than their costs of supply.

Recommendations

Recommendations to WBG, and other donors and IFIs, are threefold:

- **Work with national governments to improve the off-grid enabling environment with systemic cross-subsidies.**
- **Scale up inclusive, integrated energy planning.**
- **Use existing instruments to step-up contributions towards the financing needs of the off-grid sector.**

BUSINESS AS USUAL WON'T DELIVER SDG 7

We are not on track to meet SDG 7's target of achieving universal access to clean and affordable energy by 2030, according to the latest energy progress report.[3] Despite encouraging developments in some areas, there are still roughly 1 billion people without access to electricity.[4] If progress on energy access does not accelerate, it is likely that 674 million people will remain without access to electricity in 2030.[5] Six hundred million of these people will be in sub-Saharan Africa, primarily in rural areas. This would not only represent a failure to meet SDG 7, it would also act as a major constraint on the development of countries where an energy deficit remained.

Electricity access can have a catalytic impact on achieving other SDGs, such as improving educational outcomes by allowing children to study in the evening or, through the productive use of energy, offering new opportunities for employment and learning to improve economic prospects.[6] Electricity access also improves the resilience of communities to economic and environmental shocks.[7] Universal access to electricity is therefore an important input to the inclusive economic growth that is required to reduce global poverty.

RECENT DEVELOPMENTS IN OFF-GRID RENEWABLE SOLUTIONS TO ELECTRICITY ACCESS ARE ENCOURAGING

While the current rate of improvement in energy access is insufficient to meet SDG 7, there have been significant success stories in some countries in recent years. One of the factors that has driven this success has been the rapid improvement in off-grid renewable electricity technologies. Off-grid solutions can deliver outcomes much more quickly than large-scale centralised power infrastructure, which may take many years to finance and build. Substantial reductions in the cost of these technologies, combined with the high cost of extending the grid over vast distances, makes decentralised systems the most cost-effective solution for delivering electricity access to more than 70 per cent of those living in rural areas who do not currently have access.[8]

This headline figure is increasingly supported by detailed geospatial analysis at the country level, much of which is being financed or supported by the WBG.[9] The optimal split between on-grid and off-grid solutions will vary within each country and can be highly sensitive to key assumptions. However, it is generally accepted that a

3 International Energy Agency; International Renewable Energy Agency; United Nations; World Bank Group; World Health Organization (2018) *Tracking SDG 7: The energy progress report 2018.*

4 This paper only deals with access to electricity but targets for access to clean cooking are also woefully off track.

5 International Energy Agency (2017) *Energy access outlook 2017. From poverty to prosperity. Special report.* IEA.

6 See, for example: Tearfund and ODI (2018) *Pioneering power. Transforming lives through off-grid renewable electricity in Africa and Asia*; and SE4ALL (2017) *Why wait? Seizing the energy access dividend.*

7 See, for example: ODI (2017) *How solar household systems contribute to resilience.* www.odi.org/sites/odi.org.uk/files/resource-documents/11955.pdf

8 International Energy Agency (2017).

9 See, for example: http://blogs.worldbank.org/energy/electrification-planning-made-easier-new-open-source-tool

combination of stand-alone solar home systems (SHSs) and mini-grids will represent the least-cost option for delivering electricity access to the most remote communities.[10]

The private sector has been instrumental in off-grid renewable electricity growth

Innovation that has resulted in the growth of off-grid renewable solutions, especially SHSs, has been driven by companies in the private sector in recent years. The industry has grown rapidly. GOGLA, the global association for the off-grid solar energy industry, along with WBG's initiative 'Lighting Global', predicts the solar off-grid market will grow at a rate of 25 per cent year on year.[11] Furthermore, 130 million off-grid solar devices have been sold since 2010, representing a 60 per cent per annum CAGR[12] in sales from 2010 to 2017.[13] These sales were made across a total of more than 300 companies in 2017, compared to only 60 in 2010.

These impressive sales figures clearly demonstrate that many households have both the ability and willingness to pay for clean, reliable electricity access. Some households will realise an immediate saving when compared against previous outgoings on traditional forms of energy such as kerosene, candles, or dry cell batteries.

The progress being made is not focused on lower-income households

Private sector companies will, understandably, initially focus on regions and segments of the population that are easier to tackle. In many cases, sales are made to middle-class households as 'under the grid' backup to a main grid electricity supply. For example, impact investor Acumen has found through its latest report that only 35 per cent of customers served by its companies live below the 'moderate' poverty line of $3.10 a day income. If households with an income ranging from $3.10 to $6 a day are included, this rises to 75 per cent. However, those living in moderate or more extreme poverty are under-supported.[14] Acumen hopes to extend its reach to low-income households in the coming years, including through the role of 'smart subsidies' from private or government sources.[15] Progress is in the right direction but the market is not sufficiently focused on getting people from no electricity access to Tiers 1 and 2.[16]

Support tailored to local entrepreneurs is also urgently needed in 'high-impact countries' in sub-Saharan Africa and Asia. Even if a handful of European- or North American-based companies continue to expand their operations in the coming years, there will need to be a more diverse 'marketplace' that includes more viable sub-Saharan African- and Asian-owned companies in order to achieve SDG 7. Wolfgang Gregor, former CEO of GOGLA,[17] notes that liquidity remains a major challenge for small firms: 'the majority of local entrepreneurs live from hand to mouth. And it is precisely on this local basis that the financial industry and international development cooperation needs to act.'[18]

A recent GOGLA report on the economic impact of off-grid solar found that the average weekly energy spend of households with an SHS was about $3.50 (ranging from $2.90 per week for a 3–10 Watt system to $4.50 for a 50+ Watt system).[19] Many countries with the lowest rates of energy access have the highest rates of extreme poverty (see Figure 1). It seems likely that a large proportion of people without energy access today will continue to struggle to afford these systems.

10 Tearfund and ODI (2018).

11 Peters K and Sturm R (2018) *Global off-grid solar market report – semi-annual sales and impact data. July – December 2017. Public report*. GOGLA and Lighting Global.

12 CAGR refers to compound annual growth rate.

13 World Bank Group (2018) Off-grid solar market trends report 2018. Executive summary. International Finance Corporation.

14 We are using the World Bank poverty line definitions.

15 Acumen (2017) *Energy impact report*.

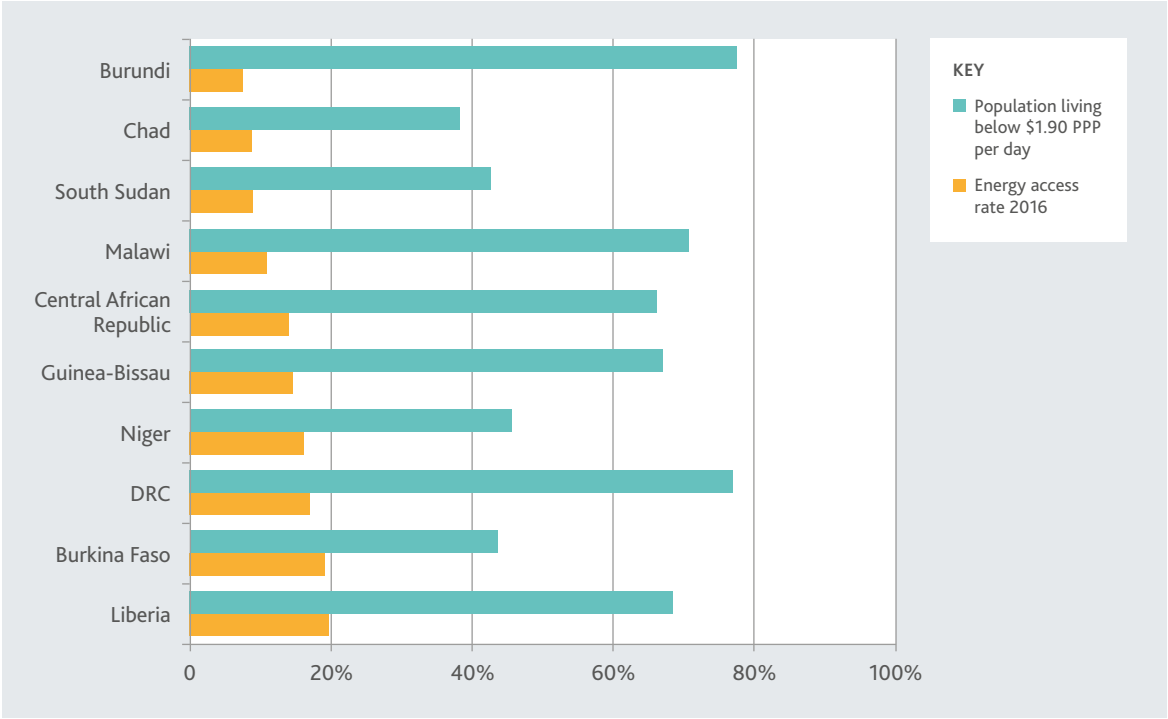
16 'Tier' here refers to the World Bank and SE4ALL's multi-tier framework, which defines a 5-tier system. With Tier 1, very basic electricity provision is supported, whereas with Tier 5, electricity access is available all day, is reliable, and can accommodate larger loads.

17 GOGLA is the global association for the off-grid solar energy industry.

18 See: www.sun-connect-news.org

19 GOGLA (2018) *Powering opportunity. The economic impact of off-grid solar*.

Figure 1 $1.90 PPP[20] poverty levels for countries with lowest energy access rates



Source: World Bank Group, *Tracking SDG 7: Energy progress report*, 2018, and UNDP, *Human development report*, 2016.

MORE INNOVATION WILL BE REQUIRED TO UNLOCK THE ADDITIONAL FINANCE NEEDED TO DELIVER OFF-GRID ELECTRICITY ACCESS

An estimated $45 billion in investment is required each year to meet the SDG 7 target of delivering universal access to clean and affordable electricity by 2030, according to the Sustainable Energy for All (SE4ALL) Finance Committee.[21] Existing flows of all finance (private and public funding) fall well short of this requirement. SE4ALL estimates that the annual commitment of finance reached $21.2 billion in 2014.[22] However, in the same year, disbursement of funds only reached $12.4 billion. Of the $21.2 billion of committed funding, it is estimated that only about $200 million was committed to decentralised electricity. The analysis also estimates that only $130 million (ie approximately 0.6 per cent) of the committed finance was to support Tier 1 and Tier 2 residential electricity access, with a further $2.7 billion being committed to Tier 3 residential access. It is also worth noting that of the funds raised during the period 2012–2017, about half was allocated to East Africa, suggesting that more geographical diversification in the deployment of funds is needed.

If off-grid renewable solutions are used to deliver access to 70 per cent of households currently without electricity, the finance flowing into the sector will need to step up significantly. It is estimated that $31–33 billion in capital is likely to be required over the period to 2030 for off-grid solar and mini-grids in sub-Saharan Africa alone to achieve SDG 7, according to recent analysis by the Shell Foundation.[23]

20 PPP refers to purchasing power parity, which takes into account the relative cost of living in different countries based on a common basket of goods and services.
21 Sustainable Energy for All (2015) *Scaling up finance for sustainable energy investments: Report of the SE4ALL Advisory Board's Finance Committee.*
22 Sustainable Energy for All (2017) *Energizing finance. Scaling and refining finance in countries with large energy access gaps*.
23 Shell Foundation and Catalyst Off-Grid Advisors *Achieving SDG7: The need to disrupt off-grid electricity financing in Africa*.

There are some signs of progress: WBG commitments for off-grid and mini-grid programmes markedly increased to $600 million in the financial year 2018, and there is more demand from countries for energy access programmes.[24] However, even if all of this committed capital is deployed, it is still likely to fall well short of the requirement: if repeated every year to 2030, this would total $8 billion.

If we are to get back on track to achieve SDG 7, finance needs to be scaled up significantly to mainstream off-grid renewable energy access, including catalytic finance for decentralised renewable energy (DRE) from the WBG and other MDBs. Tearfund and the Big Shift Coalition of NGOs have called on the WBG to rapidly scale up investments in energy access in energy-poor countries so that this accounts for at least 50 per cent of the WBG's energy lending portfolio, aiming to ensure that 70 per cent of that energy access finance supports distributed renewable energy (35 per cent of total WBG energy finance).[25] This should be reported as a share of the total energy portfolio annually. We welcome WBG's recent proposals to improve its reporting on allocation of funds that contribute towards energy access initiatives, and will be monitoring the reporting changes closely.

Many of the barriers that prevent more finance from flowing into the sector relate to the sector's ability to scale

Off-grid renewable electricity companies are a very different investment proposition from investment in a renewable energy facility that generates electric power for sale to utilities and end users, such as an independent power producer. This project normally has a single purchaser or offtaker and pricing that is fixed or indexed over the long term. There are also tried-and-tested commercial structures that are used to maximise the use of private sector finance. This includes effective products from WBG such as Partial Risk Guarantees and political risk insurance that can be used to mitigate certain risks that might otherwise make it more difficult for the private sector to invest.[26]

Financing off-grid renewable projects is currently more complex and there are many barriers to scaling up finance in the sector:

- Credit risk is more dispersed (ie spread across many hard-to-predict individual consumers).
- There is an absence of common regulatory and commercial project structures that can be easily replicated, especially for mini-grid projects.
- The sector is still relatively immature with a limited (but growing) track record.
- The affordability gap for low-income households highlighted above undermines the potential for the sector to scale in the long term.
- The types of finance required are very different. Analysis by Lighting Global suggests that only about 10 per cent of the funding requirement is for up-front investments to cover setup costs.[27] The remaining requirement is to fund working capital (of which 75 per cent is to cover receivables; the remainder is to cover inventories).

As a result, the tried-and-tested solutions that have been used to scale up finance for on-grid power do not readily translate to the off-grid renewable sector. While there are private sector institutions investing in the off-grid sector, to a great extent the sector has been dependent on subsidy support and finance from donors and philanthropic and impact investors.

24 www.worldbank.org/en/news/feature/2018/07/10/the-race-for-universal-energy-access-speeds-up

25 The WBG spent $600 million on mini-grid and off-grid energy, which is 43 per cent of $1.4 billion on energy access finance in the past year. In order to meet SDG 7, the International Energy Agency recommends that 71 per cent of additional investments for energy access go towards mini-grid (48 per cent) and off-grid (23 per cent) renewable energy, compared to 29 per cent towards on-grid, which is often the default approach.

26 Partial Risk Guarantee: covers against the risk of a government (or government-owned entity) failing to perform its contractual obligations. Political risk insurance: insures against political risks that could lead to a loss.

27 Lighting Global (2018) *Off-grid solar market trends*.

We need to reach universal access without undermining private sector innovation

Some of the key barriers to attracting more finance to the sector could be addressed through well designed subsidy schemes. Specifically, a well designed subsidy scheme could both address the affordability gap and result in a more standardised commercial framework for off-grid projects and companies, making it easier to attract further funding. Introducing subsidies or cross-subsidies to ensure that no-one is left behind will require government to assume a greater role in the sector.[28] Any interventions (eg through explicit subsidies, new electricity sector regulation, or new tenders or concessions) need to meet the following requirements:

- **flexible**, allowing off-grid companies to innovate and bring forward new solutions to deliver energy access
- **rigorous**, ensuring that off-grid companies are held to account. For example, if market mechanisms are designed to partly underwrite key risks such as demand risk, standardised methodologies will be required to validate off-grid companies' business plans.
- **adaptive**, so that the solutions can evolve over time as companies learn and demand grows
- **financially sustainable**, so that projects remain fully funded over the long term. Capital subsidies by themselves, for example, will not meet this requirement.

PROVEN MECHANISMS ALREADY EXIST TO PROVIDE SUBSIDIES AND CROSS-SUBSIDIES TO HARD-TO-REACH COMMUNITIES

One example of a solution would be to extend tried-and-tested market structures that have been used for on-grid electricity for decades. Within the grid-based system there are huge inherent cross-subsidies from urban consumers to rural consumers, even in the most liberalised markets. An electricity consumer in the Highlands of Scotland, or in rural Kansas, or a remote part of any grid-based electricity system does not pay a cost-reflective tariff. Due to the costs involved, it would be politically unacceptable for them to do so. Although off-grid solutions are physically separate, this does not mean that they need to be commercially separate.

For example, where appropriate credit support is in place to support private sector on-grid power generation projects, the same structure could be used to underwrite off-grid projects. The operation of a community off-grid concession might receive payment from the same single buyer as the on-grid project.[29] This would then allow for the cost of off-grid renewable projects to be cross-subsidised by other system users, or subsidised through a government's budget.

There are examples of similar redistributions being used to cross-subsidise energy access. For example, in Thailand there are two separate distribution companies, and the company serving rural areas has much higher costs per unit of delivered electricity.[30] The rural distributor (MEA) purchases bulk wholesale power at a discount compared to the price paid by the distributor serving the Bangkok area (PEA). This is a more complex way of achieving the same objective: a universal tariff for all electricity consumers.

In Oman, the same universal electricity tariff is paid by electricity consumers connected to the Main Interconnected System operated by the Oman Power and Water Procurement Company and consumers connected to isolated systems operated by the Rural Areas Electricity Company.[31] In Oman's case, the universal

28 See, for example: https://medium.com/@Guay_JG/4-reasons-subsidies-are-not-a-dirty-word-in-energy-access-efforts-9d65a07a3227

29 This idea is explored further in the following blog: www.kuungana-advisory.com/the-mini-grid-tariff-dilemma-a-political-choice

30 See, for example: http://siteresources.worldbank.org

31 See, for example, the electricity regulator's website: www.aer-oman.org/aer/ConsumerTariffs.jsp?heading=2

tariff is primarily funded by direct government subsidy. These principles could also be applied to smaller-scale off-grid systems.

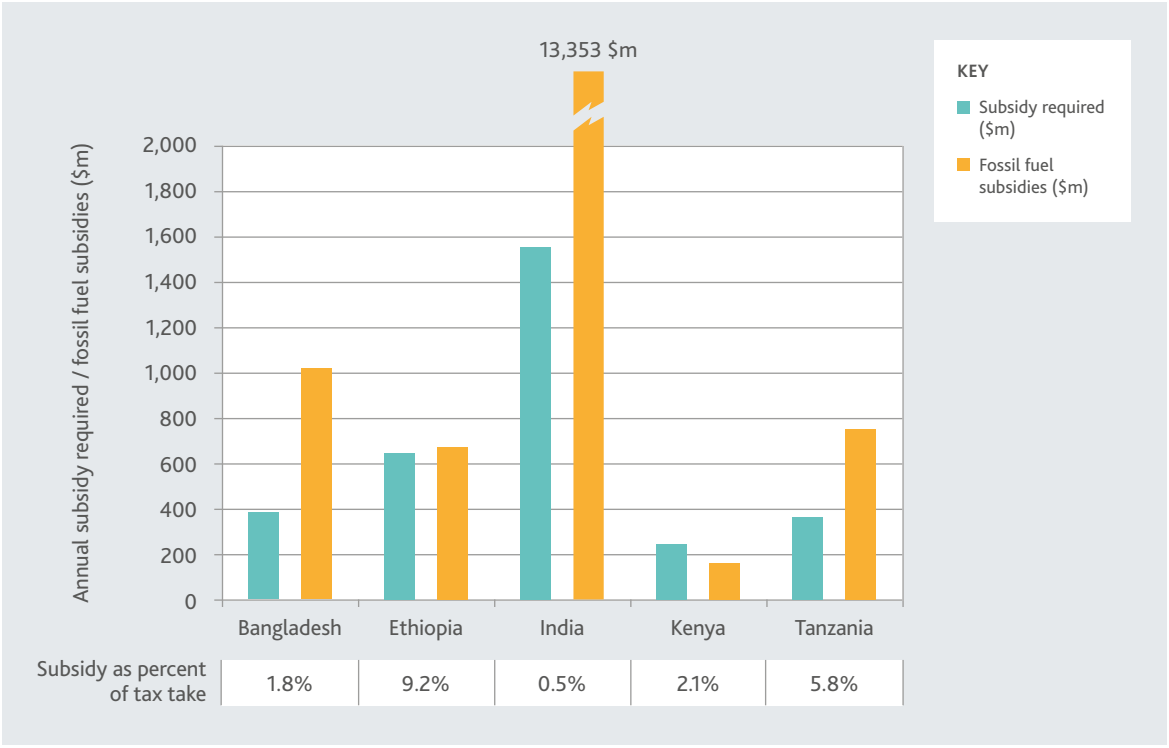
Some technical assistance being provided at present – especially concerning mini-grid regulation – is headed in the opposite direction. In some countries, regulations are being introduced that require cost-reflective tariffs to be charged for each individual mini-grid project. This not only creates an onerous tariff approval process for each mini-grid project; it also means that the affordability gap is not addressed. This is not scalable and risks impeding our progress towards achieving SDG 7.

Electricity market changes to subsidise energy access are affordable

The obvious next question is how much would a subsidy or cross-subsidy scheme cost? The results of some basic analysis to test the affordability of this approach for selected countries are presented in Figure 2. This assumes:

- To start with, all households living below the $1.90 a day poverty line acquire Tier 1 access, and a subsidy is required to meet at least the majority of this cost of $3 a month.[32]
- For all other households without energy access, it is assumed that, at first, Tier 2 energy access is required and that cross-subsidy is required to fund the difference between the unit cost of grid-based power, and the unit cost of power from an SHS, based on daily consumption of 250 Watt hours per day.

Figure 2 Indicative costing of subsidy required to deliver universal energy access, selected countries



Source: Kuungana Advisory analysis, based on IEA, WBG, SE4ALL, UNDP, and IMF datasets.

Figure 2 shows that the sums required are considerable, ranging from $246 million per annum in Kenya to $1.554 billion per annum in India. However, these sums are affordable, and can be funded using a range of different mechanisms:

- **Cross-subsidies embedded within a universal electricity tariff.** In a country like India, where the electricity access rate is already quite high, and where there is a large grid-based load across which the cost can be

32 This is based on an assumption of $6 a month in the Shell Foundation/Catalyst analysis referenced earlier. We have assumed that systems then last, on average, twice the period of time over which consumers repay SHS companies.

spread, the funding requirement could be met through a tariff uplift of only 0.15 $c/kWh. This is affordable. However, for a country with a higher access deficit and lower on-grid load, like Ethiopia, the surcharge would need to be much higher, which would not be affordable or politically acceptable.

- **Subsidies funded directly by government.** If a government would prefer to meet the subsidy from its main budget, instead of through electricity bills, the size of that commitment can again be calculated. The pattern is similar: in India, 0.5 per cent of total tax revenues are required each year, compared to 9.2 per cent in Ethiopia.
- **Funds can be reallocated from existing fossil fuel subsidies.** Annual fossil fuel subsidies are higher than the subsidy required to achieve universal electricity access in all countries apart from Kenya. The International Institute for Sustainable Development has recently published analysis proposing the use of 'subsidy swaps' whereby funds currently used to subsidise fossil fuels are used to accelerate energy access.[33]

These examples cover only three of the redistribution mechanisms that governments could use, but show that **all five countries** could afford to allocate funds, whether through electricity bills (which would be cost-reflective at the whole system level) or through existing tax revenues, to achieve universal electricity access delivered to end consumers using a universal tariff.

Of course, this funding would not be re-allocated overnight. In reality, a phased programme would spread the cost, which would further improve the affordability of any support mechanism. Companies could also compete for funds to drive down prices, for example bidding for a level of subsidy required to offer the universal tariff to their customers.

Subsidy and cross-subsidy mechanisms should ideally be systemic, standardised, and scalable

In additional to extending electricity access to hard-to-reach areas, a subsidy scheme should be designed to attract more of the capital that is required to scale the sector. This means that the subsidy or cross-subsidy mechanisms needs to be:

- **SYSTEMIC:** a clear process is defined by which projects and companies can apply for or obtain funds
- **STANDARDISED:** funds are allocated with terms that are consistently applied across all projects and companies
- **SCALABLE:** the scheme is designed so that it can be scaled up to cover the whole electricity system

An approach that is embedded in regulation (eg in the design of the electricity market) and that is not based on one-off subsidies or ODA is also likely to be more successful in attracting long-term, affordable, private sector capital.

THE WORLD BANK GROUP AND OTHER DONORS HAVE A CRITICAL ROLE TO PLAY

The WBG has a critical role to play, especially with its ability to provide essential, catalytic finance to help drive such changes, as well as to influence policy and regulation across the sector. As already mentioned, increased finance is urgently needed in order to meet SDG 7 – and the World Bank can make a major contribution to this by increasing finance for DRE, in particular. While it's too soon to evaluate the effectiveness of recently introduced World Bank working capital facilities designed to support the roll-out of DRE infrastructure in East and West Africa, the recent increase in the WBG's off-grid finance in the financial year 2018 represents a positive first step towards mainstreaming finance for DRE in its energy lending portfolio.

33 Zinecker A et al. (2018) *Getting on target: accelerating energy access through fossil fuel subsidy reform*. International Institute for Sustainable Development and Global Subsidies Initiative.

Additionally, WBG could deploy technical assistance to design and implement an alternative electricity market design, as proposed above. This should accompany a scaling up of the valuable technical assistance that WBG already provides, for example in support of inclusive, integrated energy access plans, and building capacity in relevant government institutions. Investing in the technical assistance and capacity building required to create a scalable regulatory framework will increase the compatibility of the off-grid renewable energy sector's financing requirements with the investment instruments offered by WBG and other IFIs. It should also make the sector attractive to private sector investors who will be needed if the sector is to scale.

The financial instruments provided by the World Bank and other MDBs that are required to support cross-subsidies will vary depending on countries' differing approaches to financing them: working capital facilities for companies deploying stand-alone systems; for mini-grids, even project finance (at a portfolio level) might be possible. WBG will also be able to deploy the full range of instruments it already uses for other infrastructure projects, for example guarantee and insurance products might be required if there are credit-worthiness concerns regarding government-owned counterparties that allocate subsidies or cross-subsidies.

The key point here is that there is no need to reinvent the wheel. Countries can deploy similar cross-subsidy mechanisms and financial instruments to those already embedded in the grid-based electricity system and extend those principles to off-grid solutions. The result is that it is possible to develop commercial and financial models that leverage both IFI and private sector finance to extend energy access, whether using grid-based or off-grid solutions.

CONCLUSION AND RECOMMENDATIONS

The benefits that energy access and off-grid technologies can bring to communities and households are well documented. There is compelling evidence of the impact that off-grid renewable technologies can have on opportunities for employment and income generating activities. Countless other benefits have been analysed, including increased study time for children, health benefits where kerosene lamps are replaced, and even improved gender equality.

This discussion paper has highlighted that existing market structures are not delivering the financing flows that are required to reach the poorest and achieve SDG 7. If we are serious about achieving universal access to electricity, we need a new approach to address these financing gaps.

Recommendations to WBG, and other donors and IFIs, are threefold:

- **Work with national governments to improve the off-grid enabling environment with systemic cross-subsidies:** For example, the WBG should work with national governments to lead a transformative redesign of electricity markets which, combined with other sources of public finance (eg existing tax revenues, reallocated fossil fuel subsidies) can be used to deploy systemic cross-subsidies and create an enabling environment that supports off-grid development at scale, rather than project-by-project.
- **Scale up inclusive, integrated energy planning:** This should be accompanied by a scaling up of efforts to improve inclusive, integrated energy planning involving civil society and local entrepreneurs, for example through WBG Country Partnership Frameworks and capacity building in relevant government institutions.
- **Use existing instruments to step-up contributions towards the financing needs of the off-grid sector:** Such a systemic approach should support the emergence of a sustainable pipeline of bankable projects and companies for IFIs, such as the WBG and, importantly, for private sector investors. WBG can use its expertise in commercial and financial structuring to adapt its existing instruments (lending instruments, but also guarantee and insurance products) to be deployed more extensively in the off-grid sector.

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