

Energy gaps: Slight, uneven progress still leaves many Africans without electricity

Afrobarometer Dispatch No. 793 | Derick Msafiri and Richard Adjadeh

Summary

Electricity is an engine of economic and social development, highlighted in the call for universal energy access in United Nations Sustainable Development Goal 7 (United Nations Development Programme, 2019). Access to electricity facilitates progress in health care, education, technology, food security, and employment, reducing poverty and improving the quality of life (Blimpo & Cosgrove-Davies, 2019).

But according to the most recent "Tracking SDG 7" progress report, 567 million people in sub-Saharan Africa lacked access to electricity in 2021 – about the same number as a decade earlier (IEA, IRENA, UNSD, World Bank, & WHO, 2023). The COVID-19 pandemic reversed some gains in access and highlighted the fact that a majority of health facilities lack reliable electricity (IEA, 2023; Golumbeanu & Knuckles, 2022).



While off-grid renewable sources of energy are growing in importance, investment is limited and inadequate to achieve SDG targets (World Bank, 2023).

Afrobarometer survey findings from 39 African countries show that progress in electrification remains slow and uneven, leaving large swaths of the population – especially rural and poor households – without access to power. Experiences vary dramatically by country, but on average, fewer than half of households enjoy a reliable supply of electricity, and a majority of citizens are dissatisfied with their government's performance on electricity provision.

Afrobarometer survey

Afrobarometer is a pan-African, non-partisan survey research network that provides reliable data on African experiences and evaluations of democracy, governance, and quality of life. Nine survey rounds in up to 42 countries have been completed since 1999. Round 9 surveys (2021/2023) cover 39 countries. (See Appendix Table A.1 for a list of countries and fieldwork dates.)

Afrobarometer's national partners conduct face-to-face interviews in the language of the respondent's choice that yield country-level results with margins of error of +/-2 to +/-3 percentage points at a 95% confidence level.

This 39-country analysis is based on 53,444 interviews. The data are weighted to ensure nationally representative samples. When reporting multi-country averages, all countries are weighted equally (rather than in proportion to population size).

Key findings

- **Access:** On average across 39 countries, about two-thirds (68%) of Africans live in enumeration areas (EAs) served by an electric grid, ranging from just 29% in Madagascar to 100% in Tunisia and Seychelles.
 - Rural residents (44%) and the poorest citizens (56%) are far less likely to have access to an electric grid than their urban (94%) and well-off (91%) counterparts.
 - Across 30 countries surveyed consistently over the past decade, the share of EAs with an electric grid has increased by 4 percentage points.
- **Connection:** Six in 10 African households (60%) are actually connected to an electric grid. Citizens in Seychelles and Mauritius enjoy universal coverage, but fewer than one-fourth of households are connected in Madagascar (22%) and Malawi (17%).
 - Like access, connection shows huge disadvantages for rural households (35%, vs. 86% in urban areas) and poor households (45%, vs. 87% among the well-off).
- **Reliability:** Fewer than half (44%) of Africans enjoy a supply of electricity that works “most” or “all” of the time. On average across 33 countries surveyed in both 2014/2015 and 2021/2023, this proportion has increased by just 4 percentage points.
 - Only about one in 10 households in Malawi (10%), Sierra Leone (11%), and Nigeria (13%) report having a reliable supply of electricity.
 - Lower rates of reliable electricity among rural and poor households reflect not only less access to the national grid and fewer connections, but also lower-quality service for households that are connected.
- **Priority and government performance:** The provision of electricity ranks ninth among the most important problems that Africans want their government to address.
 - Fewer than half (44%) of Africans are satisfied with their government's performance on electricity provision.

Access to the electric grid

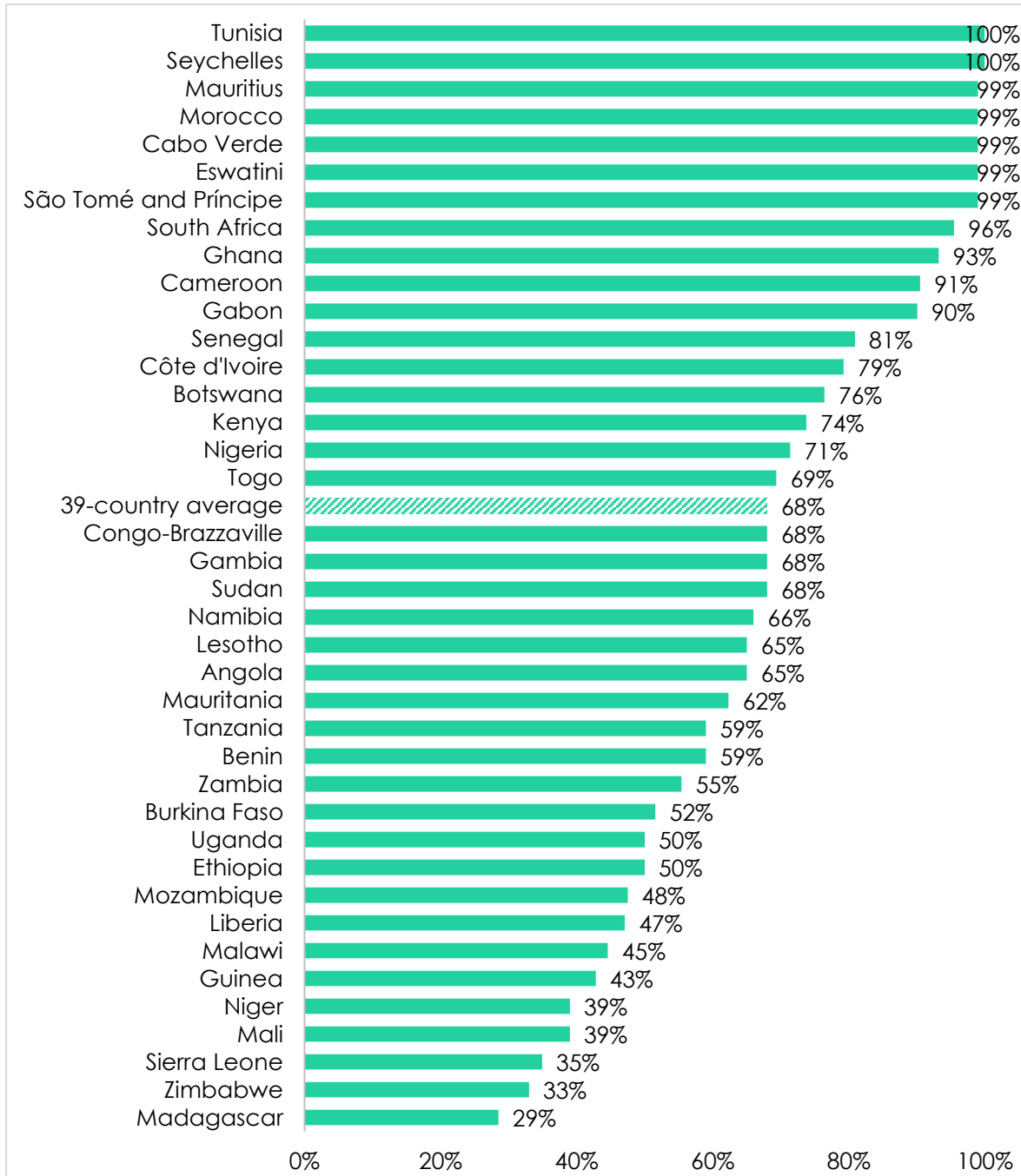
On average across 39 countries, Afrobarometer survey teams found that 68% of the enumeration areas (EAs) they visited had electric grids “that most houses can access.”¹ The presence of electric grids varies widely across countries. While all EAs in Tunisia and Seychelles are served by a grid, only about three in 10 in Madagascar (29%) and Zimbabwe (33%) enjoy the same access (Figure 1).

Rural residents are less than half as likely as their urban counterparts to have access to an electric grid (44% vs. 94%) (Figure 2). And while 91% of economically well-off households are

¹ Afrobarometer samples are based on a selection of enumeration areas (EAs) drawn randomly from the national census frame. In most countries, eight interviews are conducted in each selected EA, so interview teams usually visit between 150 (for surveys with n=1,200) and 300 (for surveys with n=2,400) EAs. In each EA, the team records the presence or absence of basic services, such as electricity supply, and infrastructure, such as schools. Because of the smaller sample sizes, the margin of error on the figures reported here for presence of an electric grid is higher than for findings captured in individual interviews.

in EAs served by an electric grid, the same is true of only 56% of those experiencing high lived poverty.²

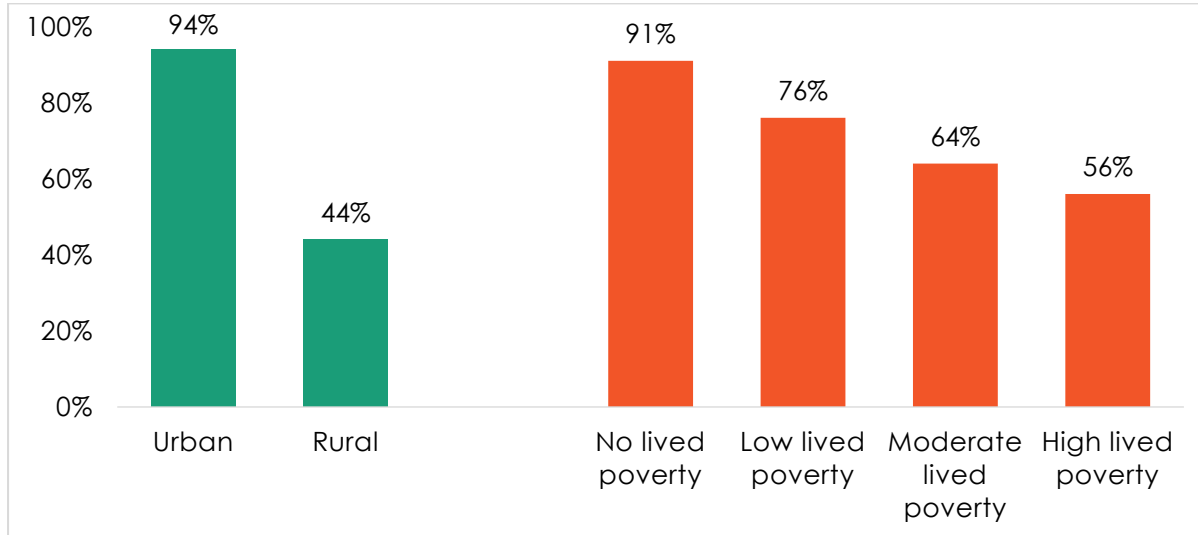
Figure 1: Access to the electric grid | 39 countries | 2021/2023



Surveyors recorded whether enumeration areas had an electricity grid that most houses could access. (% "yes")

² Afrobarometer's Lived Poverty Index (LPI) measures respondents' levels of material deprivation by asking how often they or their families went without enough food and water, medical care, enough cooking fuel, and a cash income during the preceding year. For more on lived poverty, see Mattes and Patel (2022).

Figure 2: Access to the electric grid | urban vs. rural location | 39 countries
 | 2021/2023

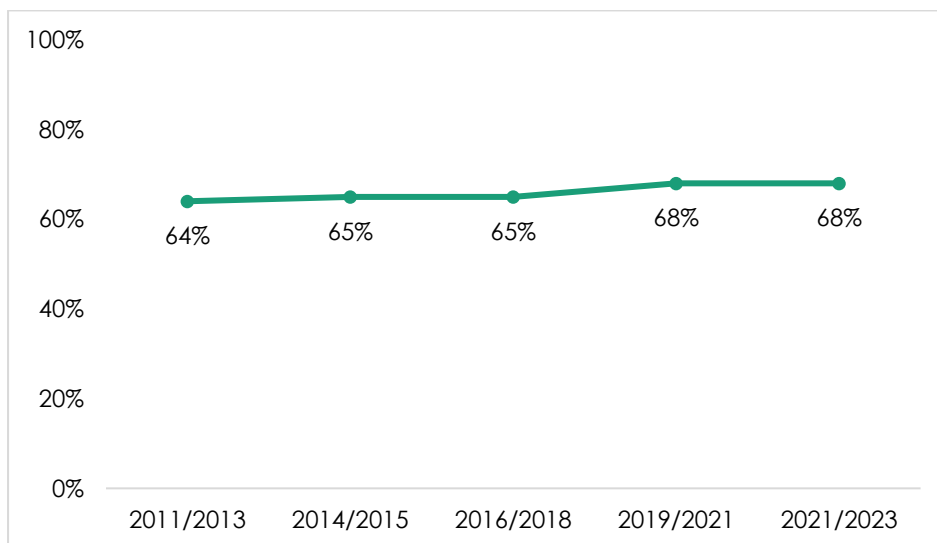


Surveyors recorded whether the enumeration area had an electricity grid that most houses could access. (% "yes")

The proportion of respondents living in zones served by an electric grid has increased only modestly over the past decade. Across 30 countries surveyed consistently since Afrobarometer Round 5 (2011/2013), the share of EAs with a grid has gained 4 percentage points (Figure 3).

But individual countries have seen major changes. The largest gains are recorded in Tanzania (+32 percentage points), Liberia (+29 points), and Burkina Faso (+25 points), while Zimbabwe (-25 points), Nigeria (-21 points), Botswana (-16 points), Mozambique (-13 points), and Sudan (-12 points) experienced significant declines (Figure 4).

Figure 3: Access to the electric grid | 30 countries | 2011-2023



Surveyors recorded whether enumeration areas had an electricity grid that most houses could access. (% "yes")

Figure 4: Changes in access to the electric grid | 31 countries* | 2011-2023

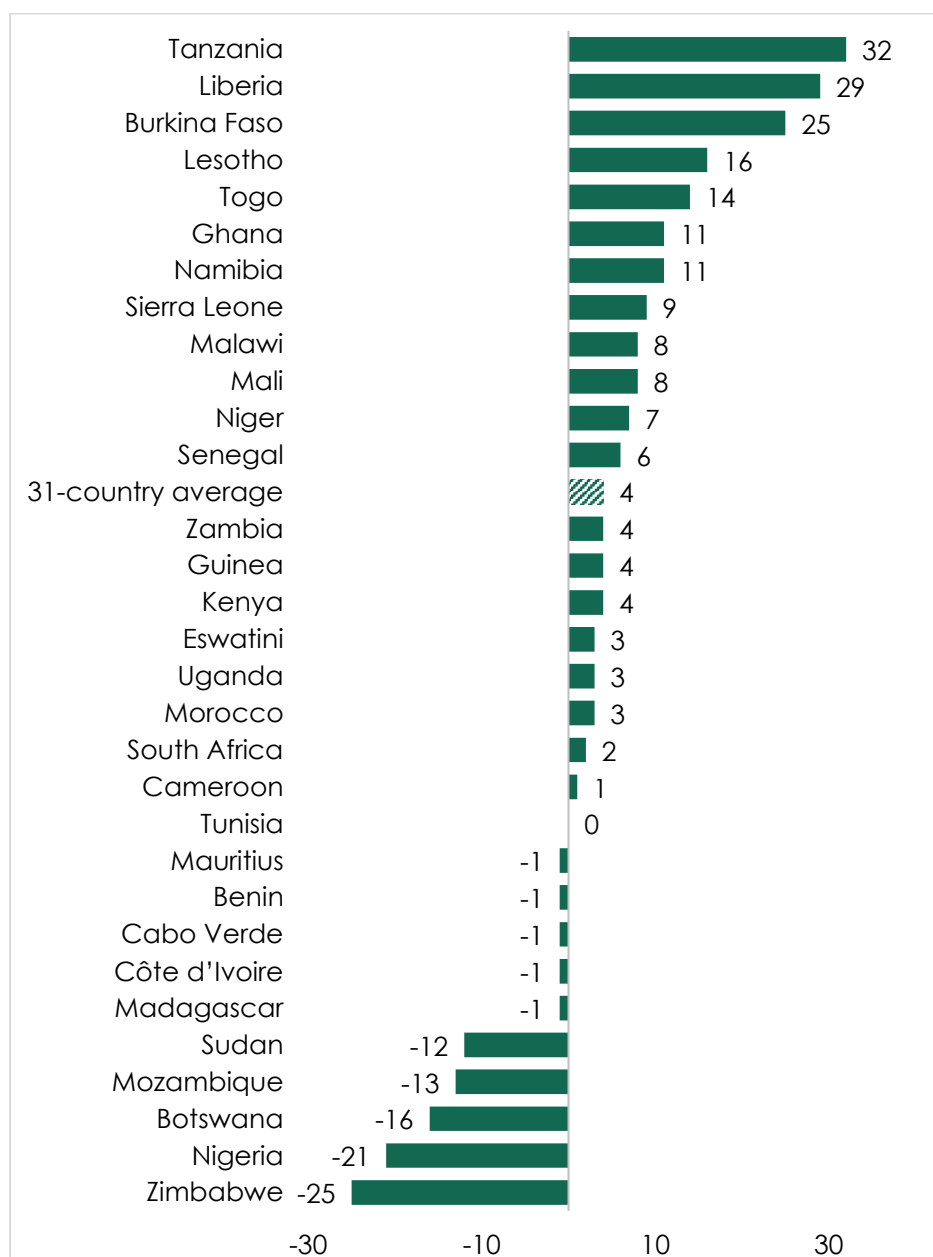


Figure shows the increase or decrease, in percentage points, between 2011/2013 and 2021/2023 in the proportion of respondents living in zones served by an electric grid.

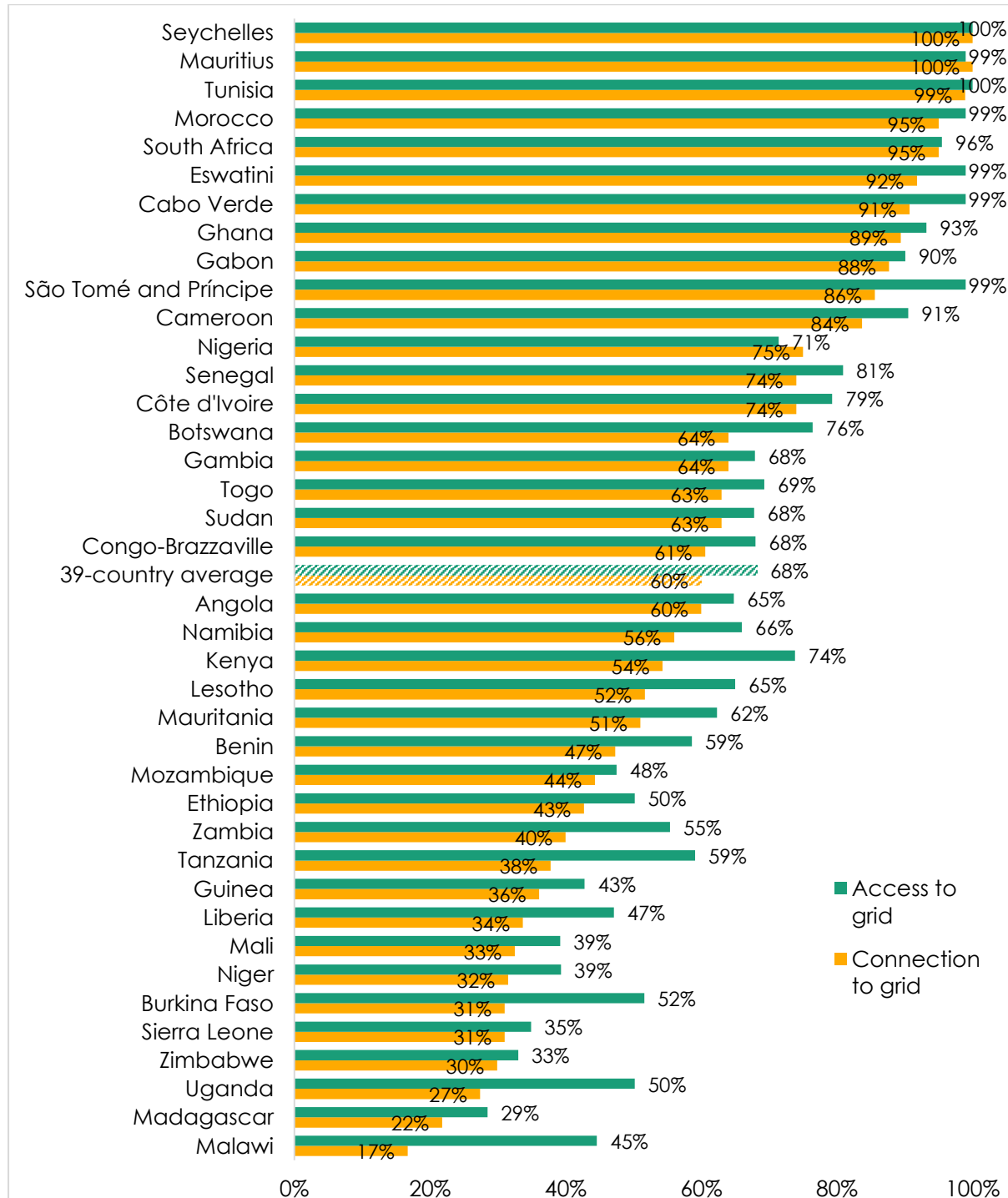
* Madagascar, included in this 31-country comparison between Round 5 and Round 9, is excluded from time series shown in Figure 3 and Figure 13 because it was not surveyed in Round 8.

Connection to the grid

Even if an electric grid is accessible, cost considerations may prevent some households from connecting to it (Jamasp, Nepal, & Timilsina, 2017; Golumbeanu & Barnes, 2013). On average across 39 countries, while 68% of EAs are served by an electric grid, only 60% of surveyed households are connected. So 40% of households lack an electricity connection, either because there is no electric grid or because they are not connected to an existing grid.

Connection to an electric grid is practically universal in Seychelles, Mauritius, and Tunisia, and exceeds nine out of 10 in Morocco, South Africa, Eswatini, and Cabo Verde (Figure 5). But fewer than one-third of households enjoy a connection in Niger (32%), Burkina Faso (31%), Sierra Leone (31%), Zimbabwe (30%), Uganda (27%), Madagascar (22%), and Malawi (17%).

Figure 5: Access vs. connection to the electric grid | 39 countries | 2021/2023



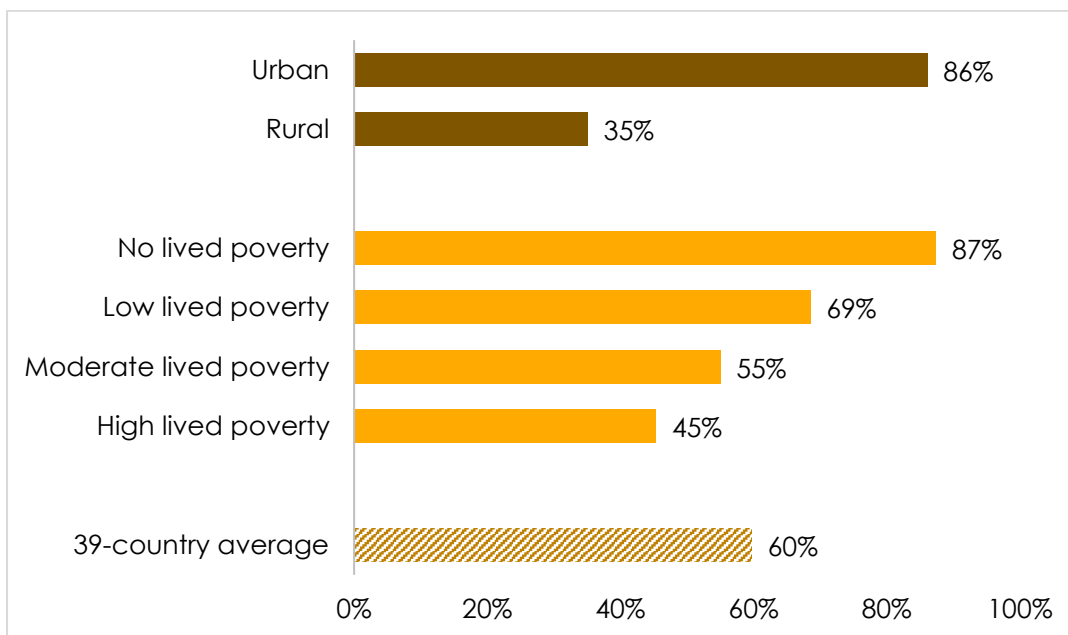
Surveyors recorded whether enumeration areas had an electricity grid that most houses could access. (% "yes")

Respondents were asked: Do you have an electric connection to your home from the mains? (% "yes")

In some countries, household connection rates are well below the proportion of EAs served by an electric grid. In Malawi, for example, while Afrobarometer teams found an electric grid in 45% of EAs, only 17% of survey respondents report having a connection – a 28-percentage-point difference. Similarly large gaps are seen in Uganda (23 points), Burkina Faso (21 points), Tanzania (21 points), and Kenya (20 points).

In line with our findings on the presence of an electric grid, rural households (35%) and households experiencing high lived poverty (45%) are roughly half as likely as those in urban areas (86%) and those with no lived poverty (87%) to enjoy an electricity connection (Figure 6).

Figure 6: Connection to the electric grid | by urban-rural location and lived poverty | 39 countries | 2021/2023



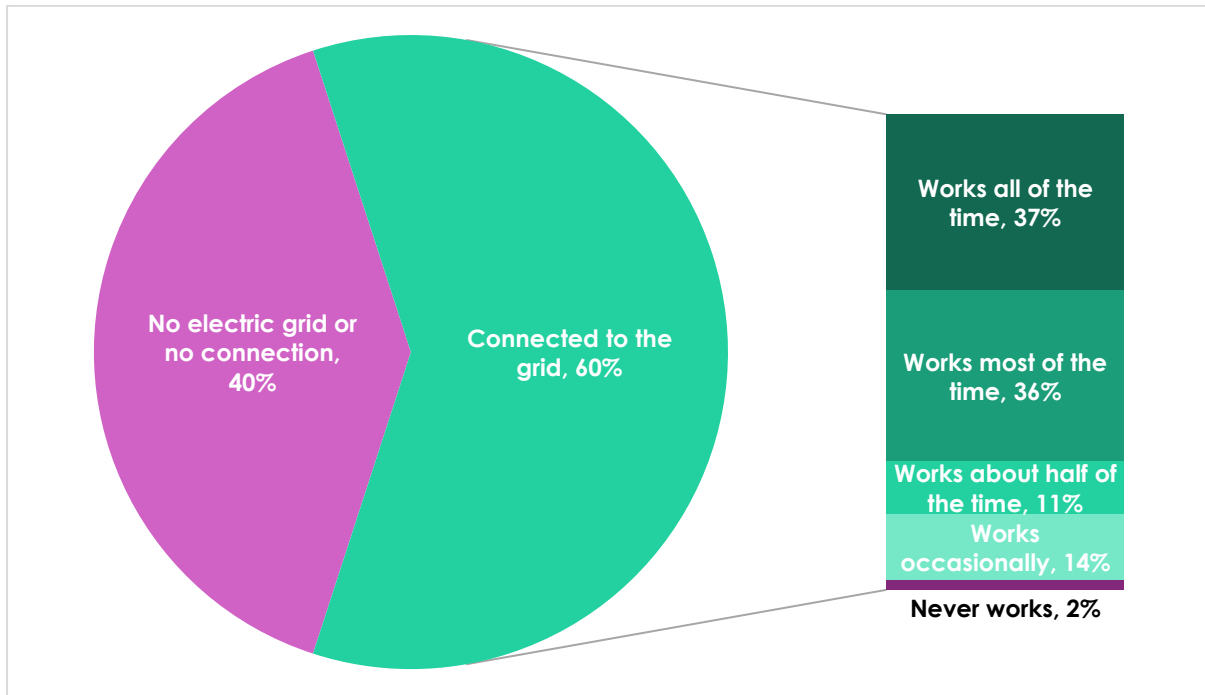
Respondents were asked: Do you have an electric connection to your home from the mains? (% “yes”)

Service reliability

Among households connected to an electric grid, the reliability of their power supply may vary substantially. On average across 39 countries, considering only the 60% of respondents whose households are connected to the grid, about three-fourths (73%) say they enjoy a reliable supply of electricity, that is, electricity that works “all the time” (37%) or “most of the time” (36%) (Figure 7). One in four say their connection works “about half of the time” (11%), “occasionally” (14%), or “never” (2%).

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Figure 7: Reliability of connections to the electric grid | 39 countries | 2021/2023

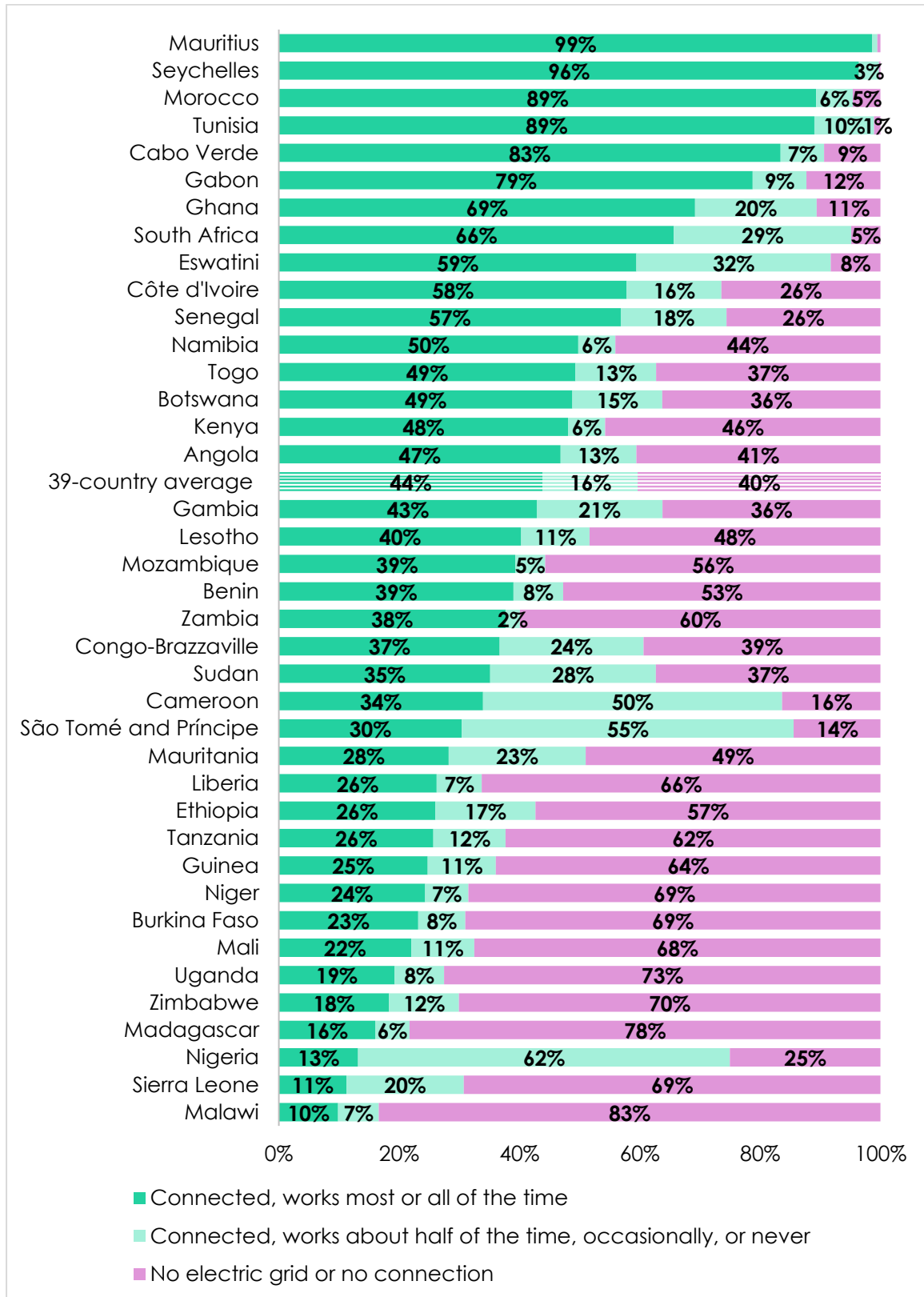


Respondents were asked: Do you have an electric connection to your home from the mains? [If yes:] How often is electricity actually available from this connection?

This means that when we consider all households – including those with no access to a grid or no connection to an existing grid – fewer than half (44%) of Africans enjoy a reliable supply of electricity. The variation across countries is vast, from just one in 10 households in Malawi (10%) and Sierra Leone (11%) to almost all of them in Mauritius (99%) and Seychelles (96%) (Figure 8).

The difference between having a connection and having a reliable power supply is strikingly illustrated in Nigeria, where 75% of respondents are connected to the grid but only 13% report having electricity that works most/all of the time. São Tomé and Príncipe (86% connected, 30% reliable) and Cameroon (84% vs. 34%) show similarly large gaps between connection and reliable service.

Figure 8: Who has a reliable supply of electricity? | 39 countries | 2021/2023



Respondents were asked: Do you have an electric connection to your home from the mains? [If yes:] How often is electricity actually available from this connection?

On average across 33 countries surveyed in both 2014/2015 and 2021/2023, the proportion of households enjoying reliable electricity has increased by a modest 4 percentage points. Nineteen countries have seen significant increases (of more than 3 percentage points), led by Ghana (a 32-percentage-point gain), Guinea (+21 points), and Lesotho (+20 points) (Figure 9). Six countries recorded significant declines: São Tomé and Príncipe (-34 points), Sudan (-22 points), Cameroon (-15 points), South Africa (-13 points), Côte d'Ivoire (-9 points), and Nigeria (-4 points).

Figure 9: Changes in proportion of households with electricity most/all of the time
 | 33 countries | 2014-2023

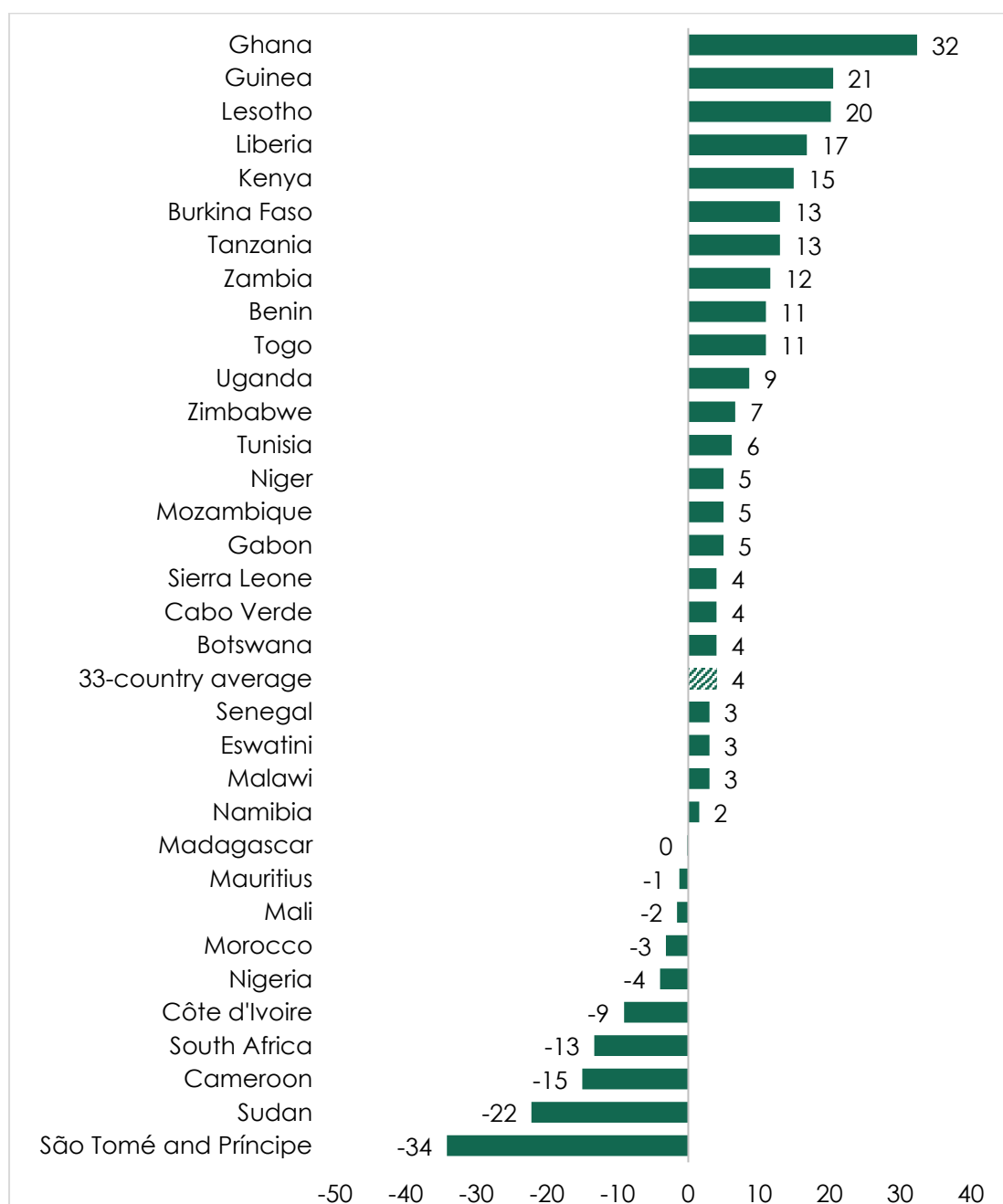
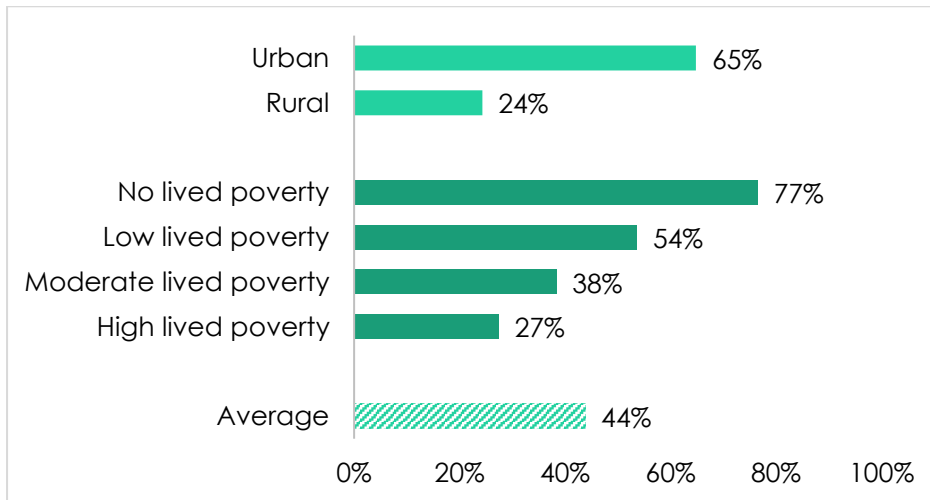


Figure shows the change, in percentage points, between Round 6 (2014/2015) and Round 9 (2021/2023) in the proportion of all respondents saying they have electricity that works “most” or “all” of the time.

On average across 39 countries, reliable electric service that works “most” or “all” of the time is far more common in cities (65%) than in rural areas (24%) and increases with respondents’ economic status, ranging from 27% of the poorest households to 77% of the wealthiest (Figure 10).

Figure 10: Reliable electricity supply | by urban-rural location and lived poverty
 | 39 countries | 2021/2023



Respondents were asked: Do you have an electric connection to your home from the mains? [If yes:] How often is electricity actually available from this connection? (% of all respondents who say they have electricity that works “most” or “all” of the time)

The rural disadvantage is a reality in 35 of the 39 surveyed countries, reaching deficits of 50 percentage points or more in Gabon, Kenya, Mozambique, Namibia, Zambia, Angola, Guinea, Mali, and Ethiopia. In Sierra Leone, only 1% of rural residents report a steady supply of electricity (Figure 11).

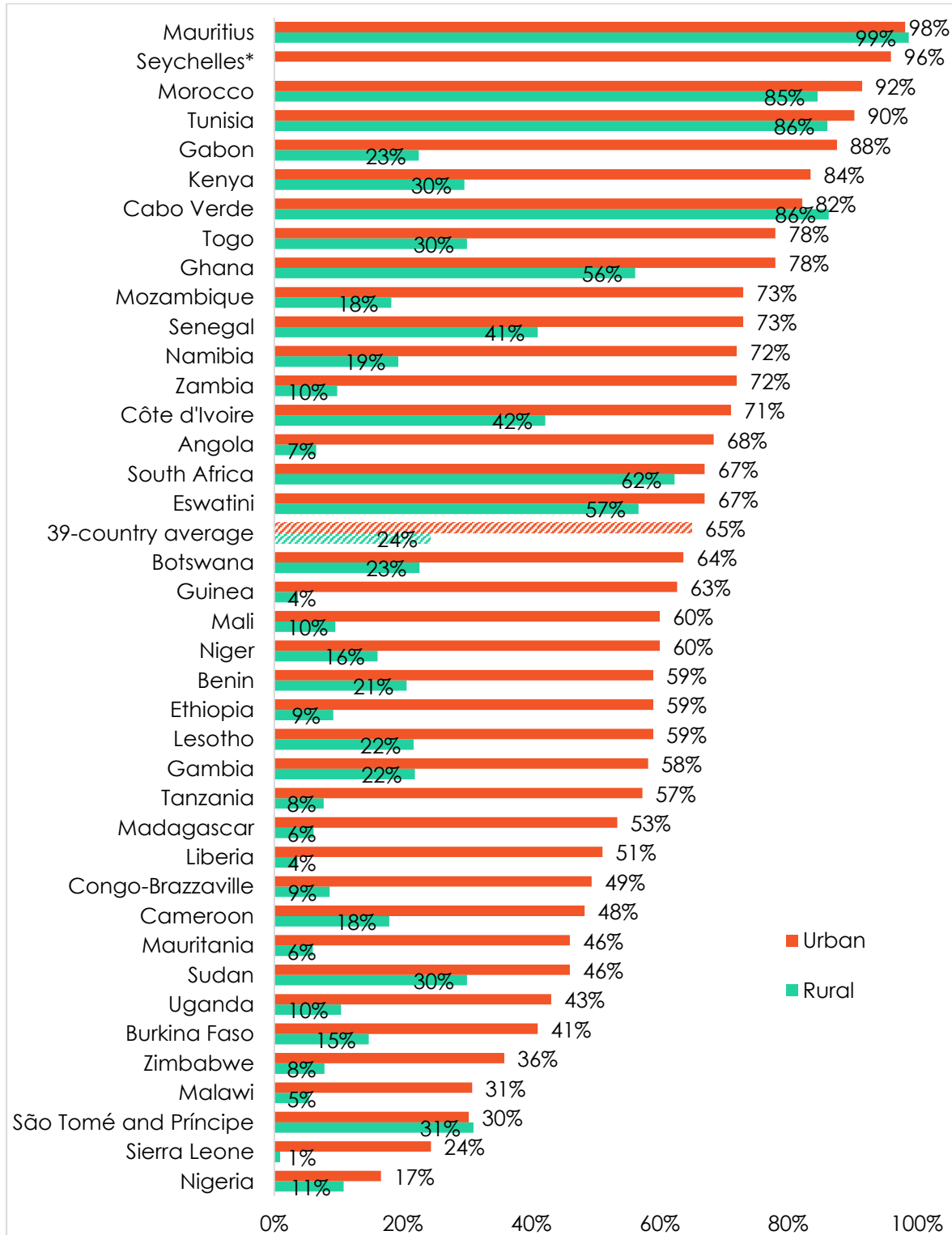
The exceptions are Mauritius and São Tomé and Príncipe, where the grids serve urban and rural areas about equally well, and Cabo Verde, the only country where more rural than urban residents report having reliable power from the grid (86% vs. 82%).

The disadvantage experienced by rural and poor households reflects not only less access to the national grid, but also lower-quality service. Among rural households that are connected, 69% report reliable power, compared to 75% of urban households. More strikingly, while 88% of connected wealthy households enjoy reliable electricity, only 61% of the poorest households that are connected can say the same (Figure 12).

Progress in the reliable provision of electric power has been painfully slow. On average across 31 countries surveyed consistently between 2014/2015 and 2021/2023, the proportion of Africans enjoying a reliable supply of electricity has increased by just 4 percentage points (Figure 13). The poorest households have benefited least from this very modest increase, gaining just 4 points over the period, compared to 8, 10, and 7 points gained by households experiencing moderate, low, or no lived poverty.³

³ The larger increases in reliable electricity supply among respondents with no or moderate lived poverty did not produce a larger overall increase in part because the number of respondents in the economically better-off categories decreased significantly over the time period, while the sub-groups with high or moderate lived poverty became larger.

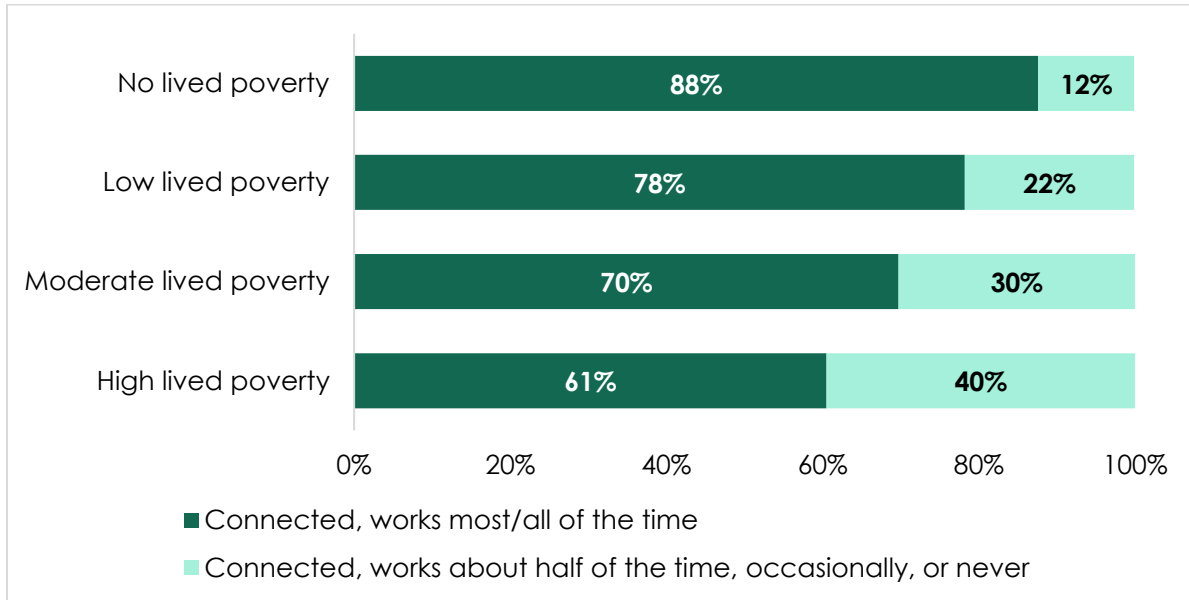
Figure 11: Reliable electricity supply in urban vs. rural areas | 39 countries
 | 2021/2023



Respondents were asked: Do you have an electric connection to your home from the mains? [If yes:] How often is electricity actually available from this connection? (% of all respondents who say they have electricity that works "most" or "all" of the time).

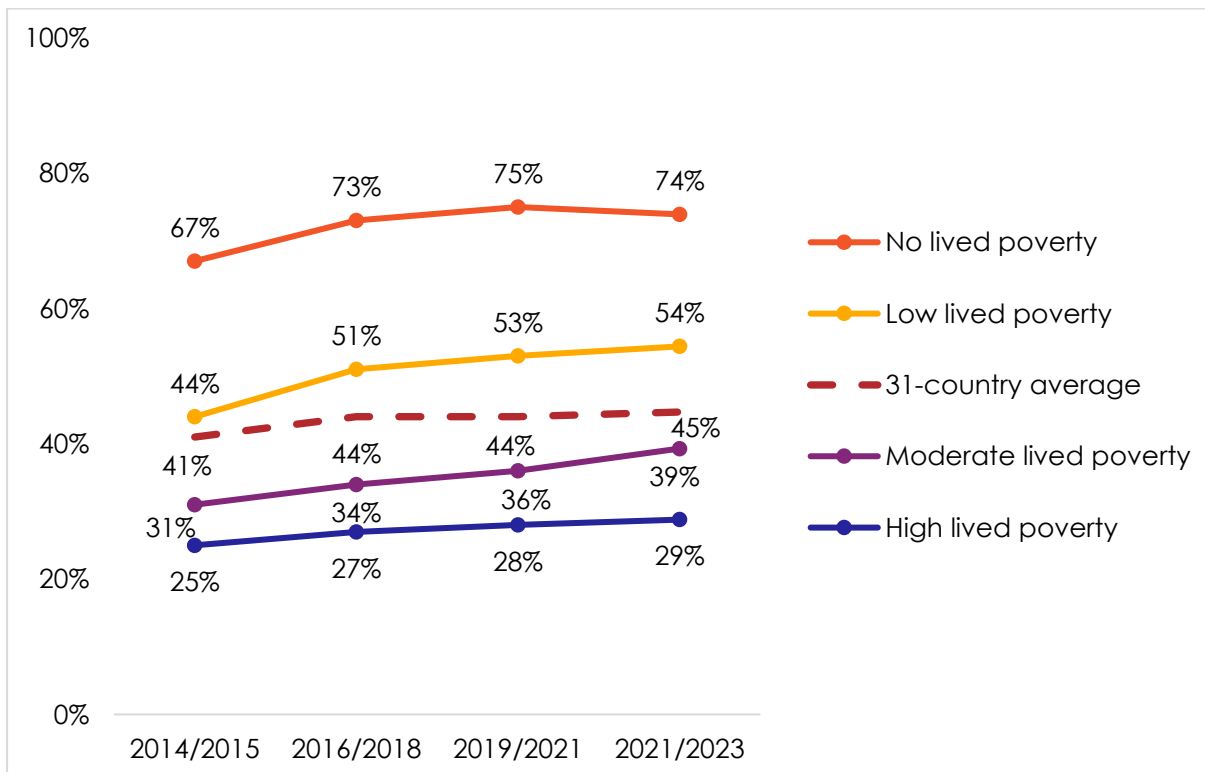
* In Seychelles, all surveyed EAs are considered urban.

Figure 12: Poverty and reliable electricity supply | 39 countries | 2021/2023



Respondents who have a connection to the electric grid were asked: How often is electricity actually available from this connection? (Respondents with no connection to the electric grid are excluded.)

Figure 13: Changes in proportion of households with electricity most/all of the time | by lived poverty | 31 countries | 2014-2023

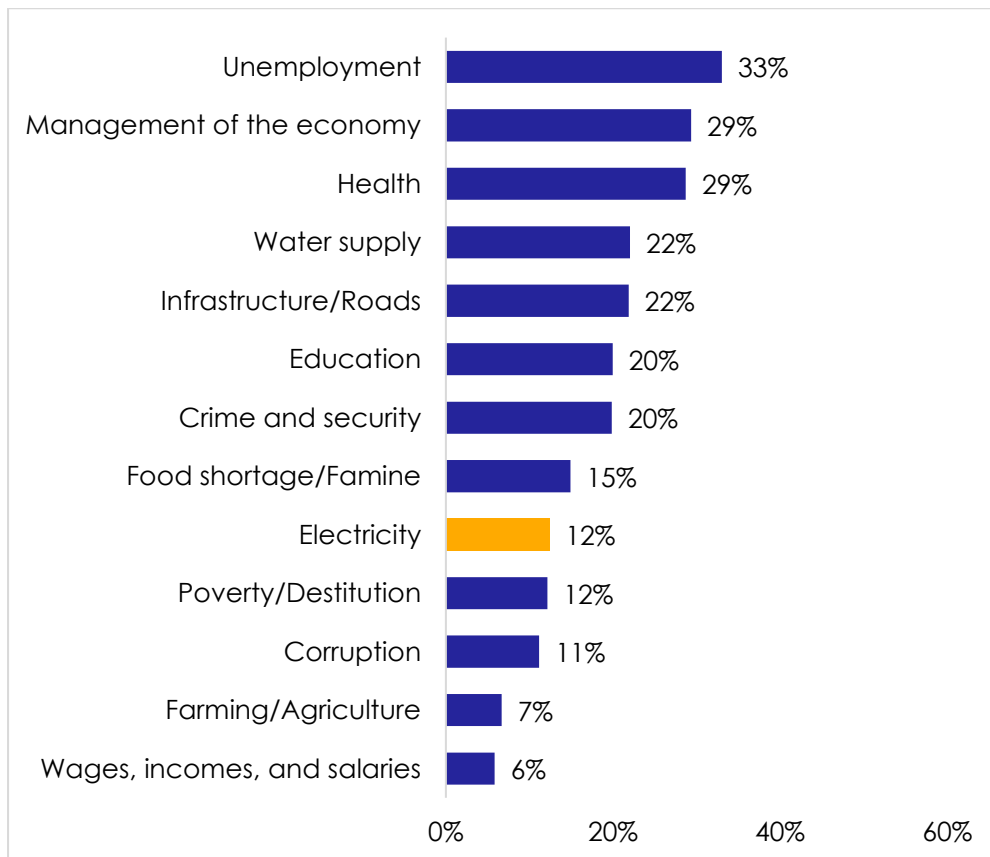


Respondents were asked: Do you have an electric connection to your home from the mains? [If yes:] How often is electricity actually available from this connection? (% who say "most of the time" or "all of the time")

Electricity supply: Popular priority and government performance

Among issues that Africans consider the most important problems that their government should address, the provision of electricity ranks at No. 9, well behind unemployment, management of the economy, and health but ahead of corruption and agriculture. An average of 12% of respondents across 39 countries cite electricity as one of their top three priorities for government action (Figure 14).

Figure 14: Most important problems | 39 countries | 2021/2023

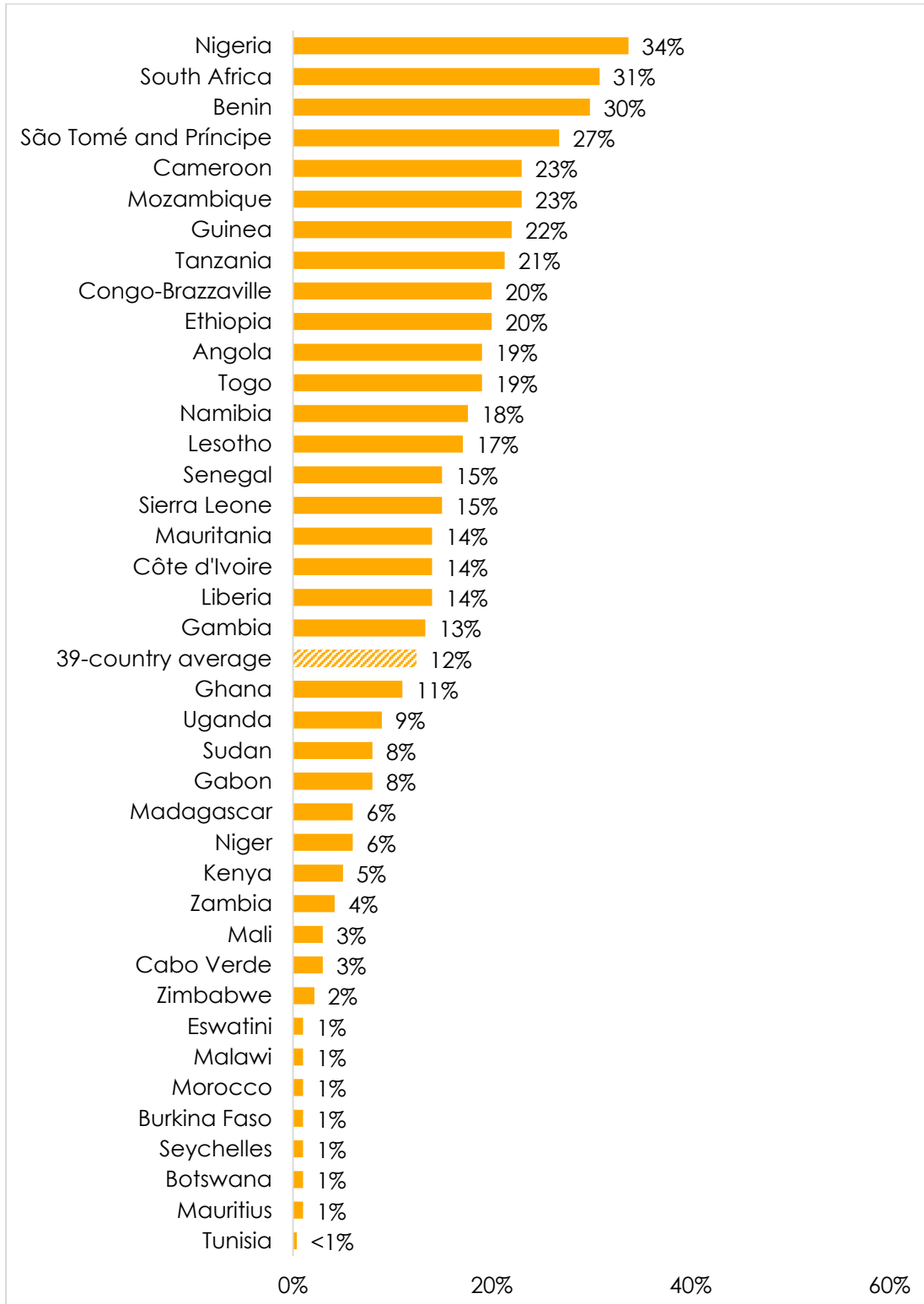


Respondents were asked: *In your opinion, what are the most important problems facing this country that government should address? (Note: Respondents could give up to three responses. Figure shows % of respondents who cite each problem as one of their three priorities.)*

But countries vary widely in their levels of concern about electricity. At least three in 10 citizens consider electricity supply a top priority for government attention in Nigeria (34%), South Africa (31%), and Benin (30%), while 1% or fewer share this concern in Tunisia, Mauritius, Botswana, Seychelles, Burkina Faso, Morocco, Malawi, and Eswatini (Figure 15).

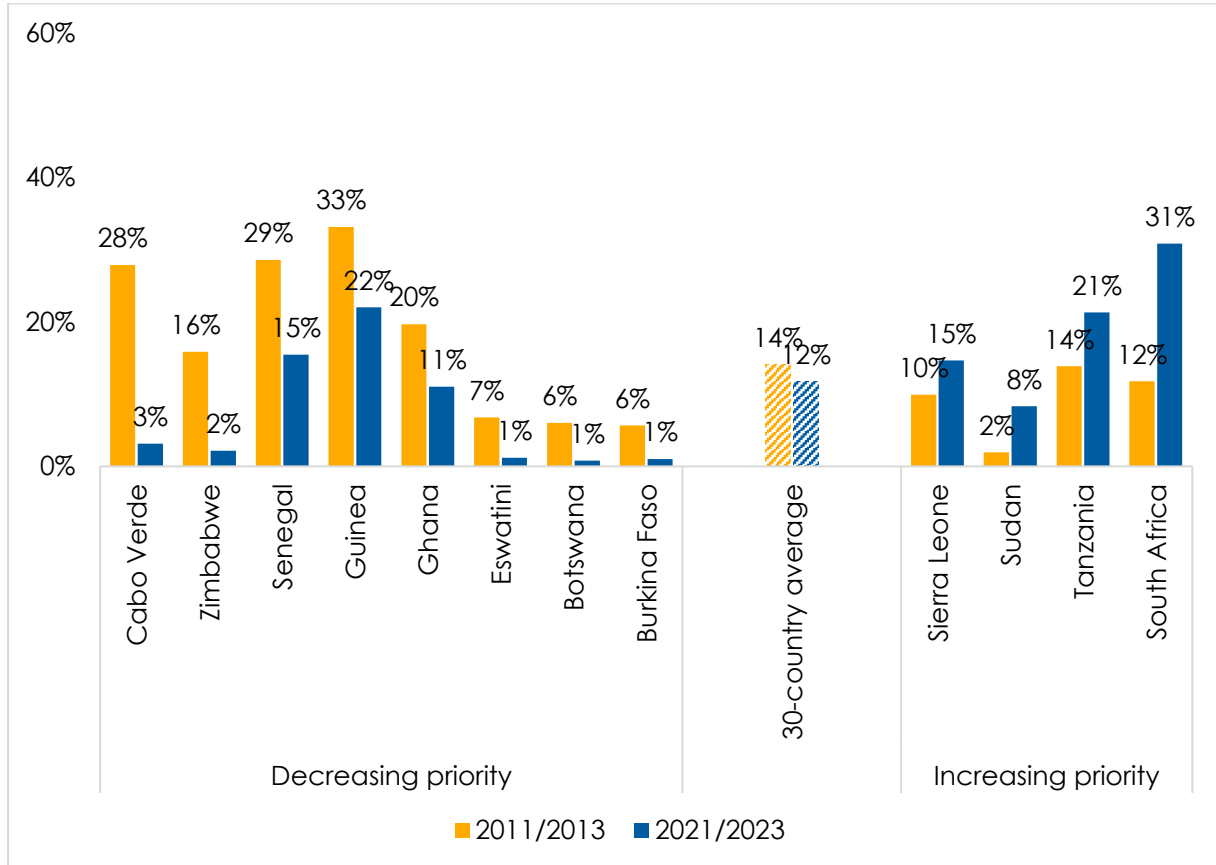
On average, citizens' prioritisation of electricity has remained almost unchanged compared to 2011/2013, when 14% of respondents cited it as a "most important problem." But assessments have changed in some countries, including heightened concern in South Africa (an increase of 19 percentage points), Tanzania (+7 points), Sudan (+6 points), and Sierra Leone (+5 points) (Figure 16). In contrast, concern has declined by at least 5 percentage points – or has been superseded by more urgent problems – in eight countries, led by Cabo Verde (-25 points) and Zimbabwe (-14 points).

Figure 15: Citizen prioritisation of electricity as a critical problem for government to address | 39 countries | 2021/2023



Respondents were asked: *In your opinion, what are the most important problems facing this country that government should address? (Note: Respondents could give up to three responses. Figure shows % who cite electricity as one of their top three priorities.)*

Figure 16: Change in perceptions of electricity as a priority problem
 | increase/decrease of 5 pts or more | 2011-2023

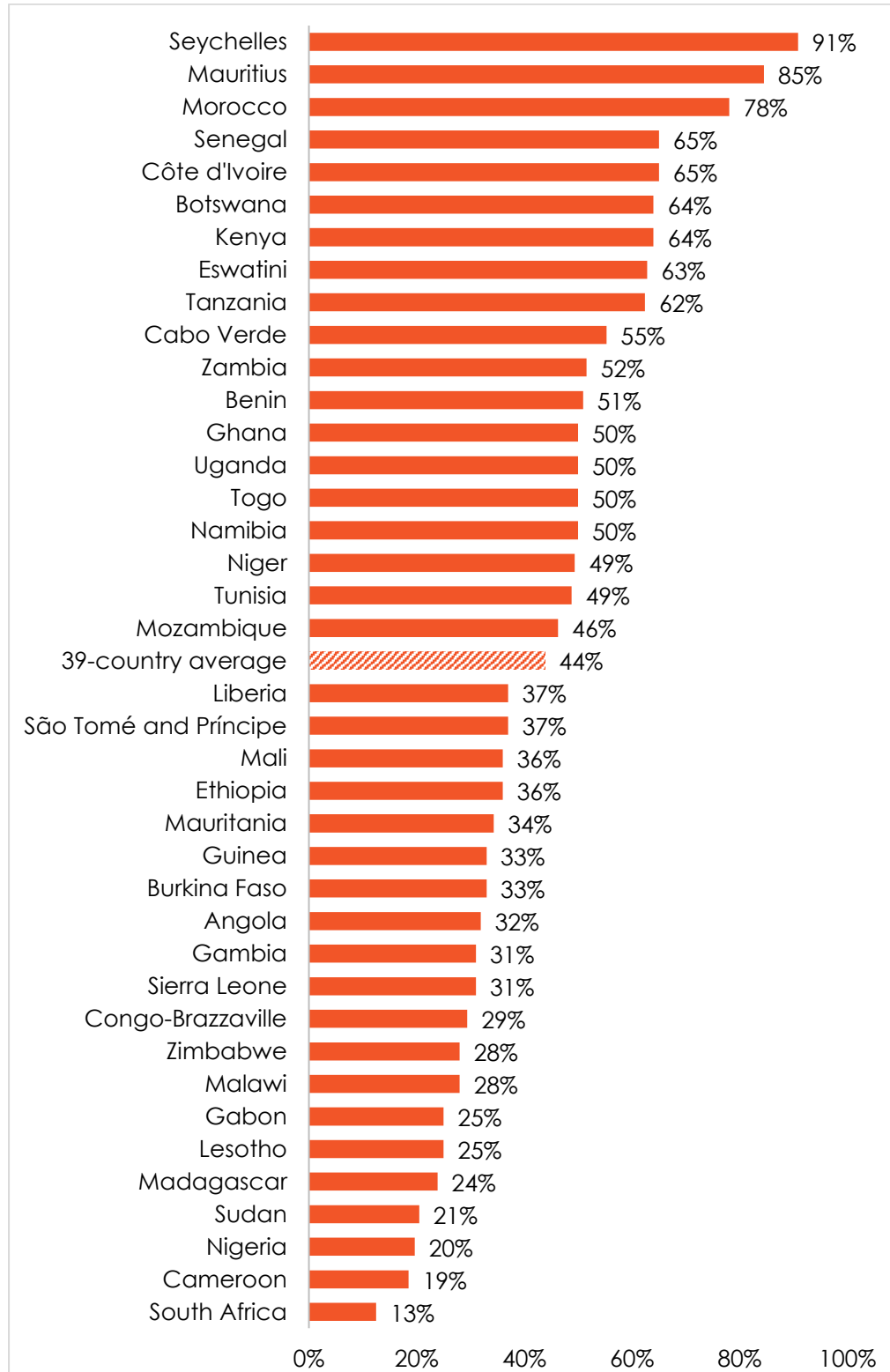


Respondents were asked: In your opinion, what are the most important problems facing this country that government should address? (Note: Respondents could give up to three responses. Figure shows % who cite electricity as one of their top three priorities.)
 * Figure shows only countries with increases or decreases of at least 5 percentage points between 2011/2013 and 2021/2023.

On average, fewer than half (44%) of respondents say their government is performing “fairly well” or “very well” on the provision of a reliable supply of electricity, while 54% say it is doing a poor job.

Seychelles (91%), Mauritius (85%), and Morocco (78%) stand out with high approval ratings (Figure 17). In contrast, fewer than one in four citizens give their government passing marks on electricity in Madagascar (24%), Sudan (21%), Nigeria (20%), and Cameroon (19%). South Africa, notorious for its load-shedding, brings up the rear with 13% approval.

Figure 17: Government doing a good job of providing electricity | 39 countries
 | 2021/2023



Respondents were asked: How well or badly would you say the current government is handling the following matters, or haven't you heard enough to say: Providing a reliable supply of electricity? (% who say "fairly well" or "very well")

Conclusion

Survey findings from 39 African countries show that progress in providing electricity remains slow and uneven. Very modest gains in access and connection still leave a majority of households without reliable electricity. Experiences vary dramatically by country, with rates of reported reliable supply ranging from just 10% in Malawi to 99% in Mauritius. Rural and poor households are particularly disadvantaged – with regard not only to access and connection, but also to service quality.

Overall, fewer than half of Africans are satisfied with their government's performance on electricity provision.

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Appendix

Table A.1: Afrobarometer Round 9 fieldwork dates and previous survey rounds

Country	Round 9 fieldwork	Previous survey rounds
Angola	Feb.-March 2022	2019
Benin	Jan. 2022	2005, 2008, 2011, 2014, 2017, 2020
Botswana	June-July 2022	1999, 2003, 2005, 2008, 2012, 2014, 2017, 2019
Burkina Faso	Sept.-Oct. 2022	2008, 2012, 2015, 2017, 2019
Cabo Verde	July-Aug. 2022	2002, 2005, 2008, 2011, 2014, 2017, 2019
Cameroon	March 2022	2013, 2015, 2018, 2021
Congo-Brazzaville	June-July 2023	NA
Côte d'Ivoire	Nov.-Dec. 2021	2013, 2014, 2017, 2019
Eswatini	Oct.-Nov. 2022	2013, 2015, 2018, 2021
Ethiopia	May-June 2023	2013, 2020
Gabon	Nov.-Dec. 2021	2015, 2017, 2020
Gambia	Aug.-Sept. 2022	2018, 2021
Ghana	April 2022	1999, 2002, 2005, 2008, 2012, 2014, 2017, 2019
Guinea	Aug. 2022	2013, 2015, 2017, 2019
Kenya	Nov.-Dec. 2021	2003, 2005, 2008, 2011, 2014, 2016, 2019
Lesotho	Feb.-March 2022	2000, 2003, 2005, 2008, 2012, 2014, 2017, 2020
Liberia	Aug.-Sept. 2022	2008, 2012, 2015, 2018, 2020
Madagascar	April-May 2022	2005, 2008, 2013, 2015, 2018
Malawi	Feb. 2022	1999, 2003, 2005, 2008, 2012, 2014, 2017, 2019
Mali	July 2022	2001, 2002, 2005, 2008, 2013, 2014, 2017, 2020
Mauritania	Nov. 2022	NA
Mauritius	March 2022	2012, 2014, 2017, 2020
Morocco	Aug.-Sept. 2022	2013, 2015, 2018, 2021
Mozambique	Oct.-Nov. 2022	2002, 2005, 2008, 2012, 2015, 2018, 2021
Namibia	Oct.-Nov. 2021	1999, 2003, 2006, 2008, 2012, 2014, 2017, 2019
Niger	June 2022	2013, 2015, 2018, 2020
Nigeria	March 2022	2000, 2003, 2005, 2008, 2013, 2015, 2017, 2020
São Tomé and Príncipe	Dec. 2022	2015, 2018
Senegal	May-June 2022	2002, 2005, 2008, 2013, 2014, 2017, 2021
Seychelles	Dec. 2022	NA
Sierra Leone	June-July 2022	2012, 2015, 2018, 2020
South Africa	Nov.-Dec. 2022	2000, 2002, 2006, 2008, 2011, 2015, 2018, 2021
Sudan	Nov.-Dec. 2022	2013, 2015, 2018, 2021
Tanzania	Sept.-Oct. 2022	2001, 2003, 2005, 2008, 2012, 2014, 2017, 2021
Togo	March 2022	2012, 2014, 2017, 2021
Tunisia	Feb.-March 2022	2013, 2015, 2018, 2020
Uganda	Jan. 2022	2000, 2002, 2005, 2008, 2012, 2015, 2017, 2019
Zambia	Aug.-Sept. 2022	1999, 2003, 2005, 2009, 2013, 2014, 2017, 2020
Zimbabwe	March-April 2022	1999, 2004, 2005, 2009, 2012, 2014, 2017, 2021

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