



ENERGY. CLIMATE.
DEVELOPMENT.

Tracking SDG7: The Energy Progress Report 2026

DEEP DIVE PERSPECTIVE 2026

JULY 2026



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ENERGY. CLIMATE. DEVELOPMENT.

SECTION ONE

Executive Summary

Snapshot: SDG7 Tracking Report data from 2010 to the latest available data (2023 / 2024)

This slide establishes the baseline for the SEforALL analysis for Tracking SDG7 2026, consolidating the global time series for each SDG7 indicator from 2010 to the latest available year (2024 for 7.1; 2023 for 7.2 and 7.3). Presenting all four targets on one timeline makes the level and pace of progress directly comparable across the goals.

Indicator values were compiled from the World Bank/ESMAP Tracking SDG7 database accompanying the 2026 Tracking SDG7 report. Average annual growth rates were calculated by SEforALL from the year-on-year change. For clean cooking access deficits, the numbers were aggregated from country-level data, which yields a total slightly below the report's headline figure, reflecting countries without published access rates in the dataset and the use of World Bank rather than UN population data.

SDG7	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Goal 7.1.1: Universal Electricity Access, million of people without access	1,141	1,081	1,063	1,022	999	958	882	829	772	757	742	675	685	666	655
Average Annual Growth Rate		-5.3%	-1.6%	-3.9%	-2.3%	-4.1%	-7.9%	-5.9%	-6.9%	-2.0%	-2.0%	-9.0%	+1.5%	-2.7%	-1.7%
Goal 7.1.2: Universal Access to Clean Fuels & Technologies for Cooking, million of people without access	3,014	2,966	2,895	2,833	2,748	2,668	2,574	2,490	2,396	2,331	2,242	2,173	2,094	2,044	1,991
Goal 7.2A: Increase Share of Renewable Energy, % share energy consumption from renewables	15.0%	14.9%	15.2%	15.5%	15.6%	15.6%	15.8%	16.0%	16.3%	16.5%	17.7%	17.4%	17.7%	18.0%	-
Goal 7.2B: Increase Share of Renewable Energy, % share energy consumption from modern renewables	8.9%	9.0%	9.4%	9.8%	10.0%	10.2%	10.5%	10.7%	11.1%	11.5%	12.5%	12.5%	12.9%	13.4%	-
Goal 7.3: Double Rate of Energy Efficiency, % Improvement, yearly rate of improvement of global primary energy intensity	--	2.3%	1.9%	1.7%	2.2%	3.0%	2.1%	1.4%	1.2%	1.7%	0.6%	0.6%	2.4%	1.5%	-



EXECUTIVE SUMMARY: MAIN FINDINGS OVERVIEW

7.1.1 Access to electricity

Progress continues, but momentum is fading.

- » 655 million people still lack electricity (almost 92% global access), about 11 million fewer than 2023, yet 2024 was among the weakest years of progress since 2010, and improvement has slowed across the largest-gap countries.

The deficit is now overwhelmingly African, concentrated, and structurally stuck.

- » Africa holds ~89% of the world's unelectrified population, with 80% living in just 22 countries (19 African). Access rates are rising - Africa is up 17 points since 2010 (45% → 62%) - but population growth keeps the absolute number flat (591M → 581M), and the gap is overwhelmingly rural (Sub-Saharan Africa is 83% electrified urban vs 33% rural).

On current trends we miss the 2030 goal, and closing the gap needs a step-change.

- » Roughly 644 million are projected to remain without access in 2030 (~92% in Africa). Universal access means connecting ~177 million people a year, backed by ~USD 30 billion in annual investment.



EXECUTIVE SUMMARY: MAIN FINDINGS OVERVIEW

7.1.2 Access to clean cooking

Progress is slow, and almost entirely carried by Asia.

- » Around 2 billion people still lack clean cooking, with the global deficit falling by only ~3% a year. Nearly all the gain comes from Asia (down ~57% since 2010), and India alone delivered roughly two-thirds of the world's net progress.

Africa is the largest deficit region, and the only one still rising.

- » Africa's deficit (~997M) has overtaken Asia's (~911M) - the centre of gravity has shifted to Sub-Saharan Africa. Asia has cut its deficit while Africa's has risen ~26% since 2010, with 40 of 54 countries going backwards. 75% of the global deficit now sits in just 20 countries.

The 2030 target is out of reach, and the unmet need is increasingly African.

- » About 1.6 billion are projected to remain without clean cooking in 2030, roughly two-thirds in Africa. Closing the gap requires ~400 million people gaining access each year and a 3.2x rise in investment to USD 8 billion/year - with eCooking able to address both deficits in the 13 electricity/clean-cooking overlap countries.



7.2 Renewable energy

Renewable energy deployment continues but the transition remains too slow.

- » Renewable energy accounted for 18.0% of total final energy consumption in 2023, of which 13.4% came from modern renewables. This represents increases of just 0.3 percentage points for total renewables and 0.5 percentage points for modern renewables compared with 2022. On current trends, the world remains off track to achieve SDG 7.2 by 2030.

The world's largest energy consumers and Africa will determine global progress

- » The world's 20 largest energy-consuming countries, which account for roughly three-quarters of global energy demand, have increased their renewable energy shares since 2010 and yet only derive 16% of their total energy from renewable sources. Africa is the only region whose modern renewable energy¹ share did not increase since 2010.

Clean energy finance remains well below what developing countries need.

- » International public financial flows for clean energy in developing countries reached USD 24.6 billion in 2024, just 1% above 2023 and still only 78% of their 2016 peak. Renewable capacity per person remains three times higher in developed countries than in developing countries (1,249 vs 405 Watts per capita) with Sub-Saharan Africa lagging furthest behind (43 Watts per capita).



¹ The term "modern renewable energy" includes modern bioenergy (excluding traditional use of biomass), solar PV, solar thermal, geothermal, wind, hydropower, and tidal energy.



EXECUTIVE SUMMARY: MAIN FINDINGS OVERVIEW

7.3 Energy efficiency

Global energy efficiency improvements are slowing.

- » Global energy intensity improved by only 1.5% in 2023, continuing the slowdown in progress. Achieving SDG 7.3 now requires annual improvements of around 4% through 2030.

A handful of major energy-consuming economies drive global efficiency performance.

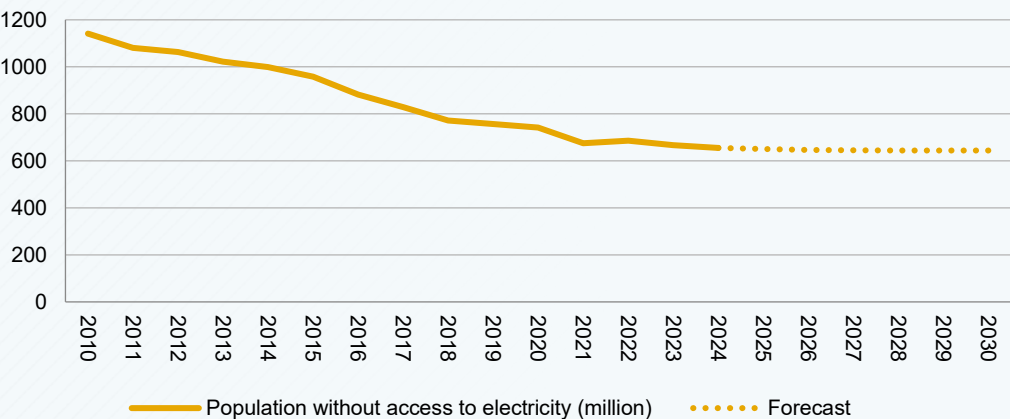
- » Six of the world's 20 largest energy-consuming countries have energy intensity above the global average and together account for about 35% of global energy use, making faster progress in these economies critical to improving the global trajectory.

Energy efficiency investment remains well below required levels.

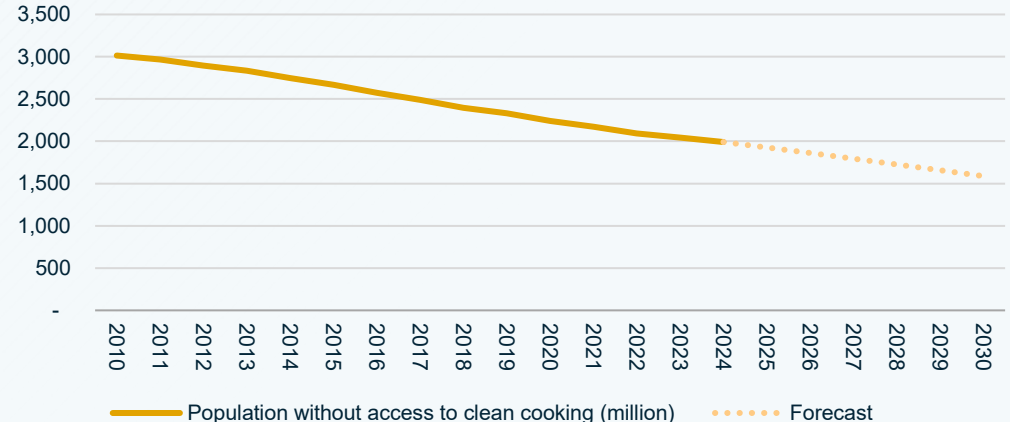
- » Global investment in energy efficiency reached USD 429 billion in 2025, only 1% above 2024 and around three-quarters of the annual investment required. Emerging and developing economies receive only one-third of global efficiency investment despite accounting for nearly two-thirds of global energy consumption.

SDG7 Projections

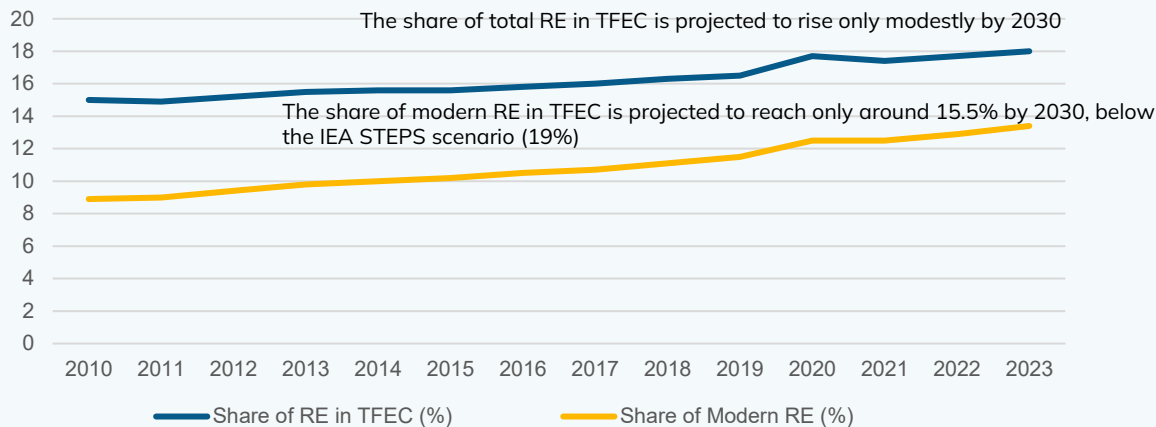
7.1.1 ELECTRICITY ACCESS: Based on the current trends, at least 644 million people will remain unelectrified in 2030



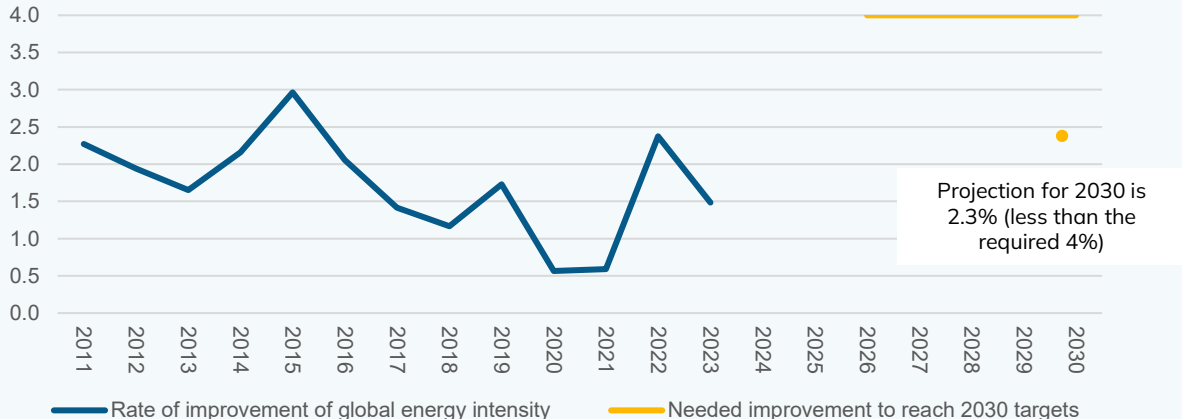
7.1.2 CLEAN COOKING ACCESS: Based on the current trends, around 1.6 billion people will not have clean cooking access in 2030



7.2 RENEWABLE ENERGY: Based on current trends, renewable energy will increase only modestly by 2030, far below the IEA Net Zero Scenario requirement



7.3 ENERGY EFFICIENCY: Based on recent data, the energy intensity improvement rate is projected to be 2.3% in 2030, much less than the average 4 percent per year necessary to achieve SDG 7.3



Key Messages (2025-2030)

1

A new milestone proves the model; now triple the pace.

Mission 300 has connected over 50 million people since July 2023 at nearly double the prior rate - but that's one-sixth of the goal with four years left, so the pace must roughly triple to reach 300 million and outrun population growth.

2

Asia is closing its clean cooking gap while Africa's keeps growing.

The two regions carry similar deficits today, but their paths have diverged: Asia's is falling steeply while Africa's regional deficit is still rising. Closing the cooking gap through eCooking is important. Schools and public institutions are the fastest-scaling entry point to advance progress.

3

Rising electricity access rates aren't denting the rural deficit.

Africa's electricity access rate rose 17 points since 2010, yet the absolute number barely moved - the population trap - and the gap is overwhelmingly rural (83% urban vs 33% rural), so scale mini-grids and off-grid solar fast enough to outpace demographics.

4

The hardest electricity cases are falling further behind — target them deliberately.

12 of the 22 largest electricity-deficit countries* improved more slowly in 2019-24 than in 2014-19, and the lowest-access states (South Sudan, Chad, Malawi) are losing ground in absolute terms, whether through outright declines in access or because population growth and external shocks outstrip new connections - so the countries furthest behind need tailored, intensified support, not the same average effort.

5

Renewable energy growth and energy efficiency improvements are not keeping pace with the 2030 trajectory.

Modern renewable energy must grow 13.7% annually and energy intensity must improve 4% annually (nearly three times the 1.5% improvement achieved in 2023) to meet 2030 targets, thus requiring much faster deployment.

6

Global renewable energy and energy efficiency progress will depend on a handful of high-impact economies.

The 20 top energy-consuming countries account for 75% of global energy consumption yet most remain below the world average on renewable energy or energy intensity, making them the highest impact focus for policy, finance and technical support.

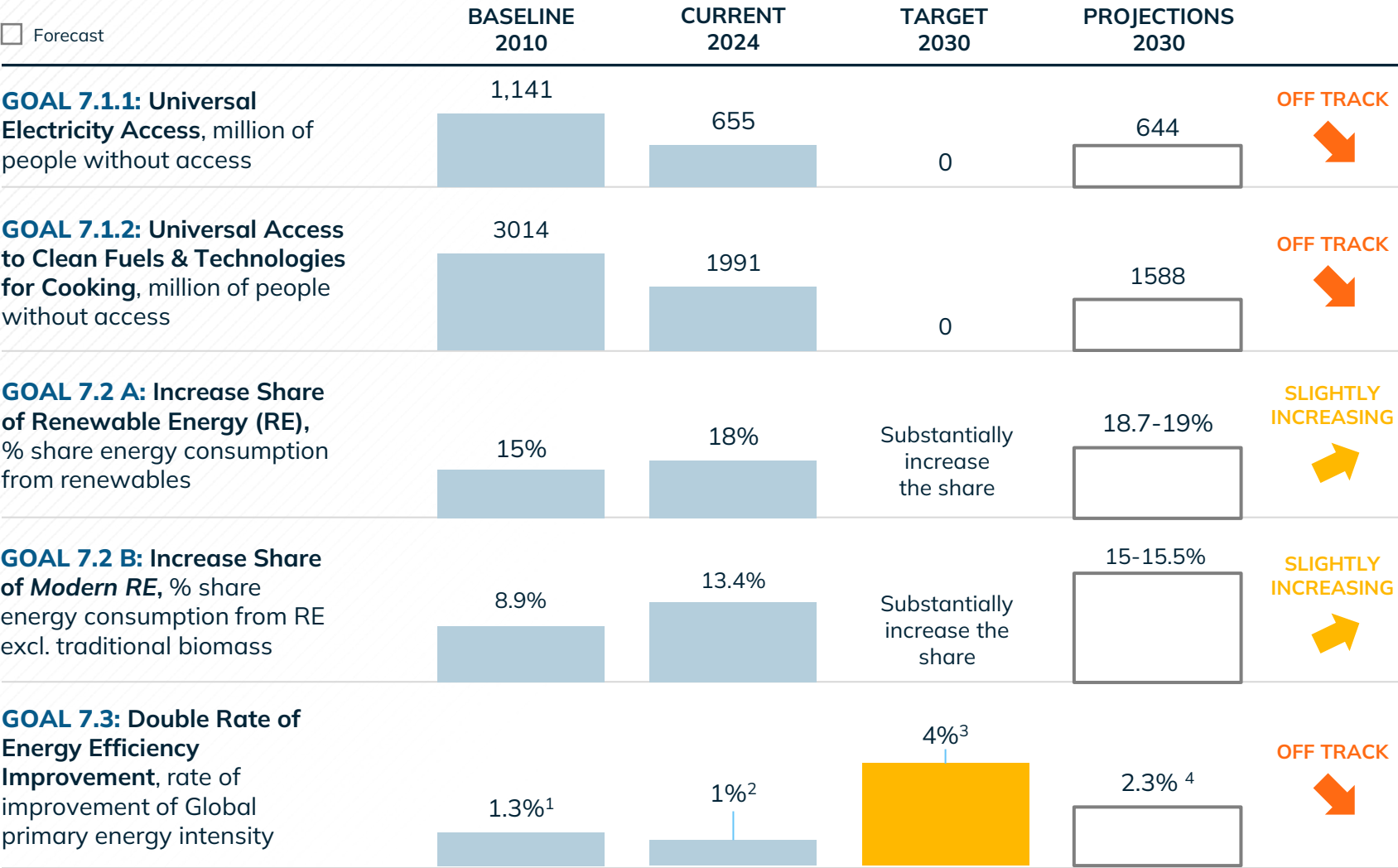
7

Higher investment in renewable energy and energy efficiency will be needed through 2030.

Renewable energy investment is projected to decline while energy efficiency investment grew just 1% requiring greater capital mobilisation particularly in developing countries.

*The 22 countries are Nigeria, DR Congo, Ethiopia, Tanzania, Uganda, Mozambique, Niger, Madagascar, Malawi, Chad, Sudan, Angola, Burkina Faso, Kenya, Mali, South Sudan, Burundi, Zambia, Côte d'Ivoire, Pakistan, Myanmar, and DPR Korea.

As the latest data shows slow or negative progress from the previous data year in all SDG7 areas, the off-tracking trends get worse



- Africa may not progress in reducing its absolute unelectrified population by 2030 with the current rate of improvement (7.1.1)
- The challenges in access to clean cooking (7.1.2) remain enormous with around 2 billion people without access.
- Progress in total RE and modern RE deployment is not sufficient (7.2)
- An energy intensity annual improvement rate of at least 4 percent per year from now through to 2030 is required, further increased from the originally required 2.6 percent due to recent weak progress. (7.3)

1: Baseline for Goal 7.3: Double Rate of Energy Efficiency Improvement is the value for the years 2006-2010
 2: Annual rate of improvement from 2022 to 2023
 3 Yearly rate of energy efficiency improvement required to meet 2030 Target 2023-2030
 4: 2030 projection: SEforALL linear projection analysis
 DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report and its Datasets



Recommendations

1. Scale infrastructure investments through coordinated initiatives like Mission 300.

Aggressively fund renewable energy generation, efficient transmission, last-mile distribution, mini-grids and standalone solar by leveraging coordinated frameworks to attract private sector investors.

2. Direct targeted de-risking capital to underserved developing country power grids.

Deploy blended finance, first-loss capital, and currency-risk mitigation to lower entry barriers for private developers, unlocking the capital needed for scale-ready solar and wind.

3. Scale electrification using energy storage, energy efficiency and demand flexibility.

Electrify cooking, transport, and heating by integrating energy storage, smart grids, and dynamic tariffs that incentivise energy-efficient technologies and demand flexibility to use surplus renewable generation.

4. Build the green workforce and manufacturing to capture the value of the transition.

Pair skills and technical training with efforts to scale regional value chains by anchoring domestic manufacturing of efficient lighting, air conditioning, solar PV, batteries, and e-mobility in national and regional policy.

5. Use impact metrics that are people-centred to drive decision-making.

Move tracking from binary connection counts to indicators that capture the impact on people, with milestones calibrated to projected populations so that neither population growth nor fossil fuel investment erodes access to sustainable energy gains.

ENERGY. CLIMATE. DEVELOPMENT.

SECTION TWO

Main Findings

ENERGY. CLIMATE. DEVELOPMENT.

SDG 7.1.1

Access to Electricity



SDG 7.1.1 Access to Electricity

1

2024 saw a reduction in total unelectrified population, consistent with the trend from 2010-2021, yet 655 million people still lack electricity access.

- The world's unelectrified population fell by ~486 million between 2010 and 2024, with 95% of that gain (~462 million) coming from Asia.
- In 2024, ~89 million people gained electricity access, but population growth and other factors offset much of this, so the global access deficit fell by just 1.7%. This represents the smallest absolute reductions in the number of people without access since 2010 (excluding 2022's increase) signalling that the pace of electrification is decelerating even as the overall trend remains downward.
- 2024 is the fourth straight year Asia's unelectrified share stayed below 2%, with India driving the largest regional gain (~293 million connected since 2010). Universal access is near, but the last mile is the hardest stretch.
- Yet, nearly all Asian countries short of 100% access (except Lao PDR and Tajikistan) have low renewable capacity per capita, signalling a need to improve electricity supply and quality (Tier level), not just reach.

2

Africa now holds the majority (88.8%) of the global unelectrified population, and 80% of all unelectrified people live in just 22 countries, with 19 in Africa and 3 in Asia.

- Africa's access rate rose 17 percentage points, from 45% to 62%, since 2010 (Kenya leading with ~21 million connected). Yet rapid population growth means the absolute unelectrified population (581 million in 2024) is only marginally below its 2010 level (591 million).
- Among the 22 largest-gap countries, Asian countries have higher electrification rates than their African counterparts; only 10 of the 19 African countries have access rates of 50% or higher. Nigeria has the largest unelectrified population, followed by DR Congo and Ethiopia.
- 10 countries with the lowest electrification rates are all located in Sub-Saharan Africa, led by South Sudan, Chad, and Malawi, and all three saw their unelectrified populations rise from 2023 to 2024. Except for Democratic Republic Congo, the countries in this group have comparatively small populations, showing that the region's most severe access gaps are not confined to its largest nations.

3

Looking forward, based on the current trends, we are not on track to achieve SDG 7.1.1 by 2030; the current trend projection and the IEA's scenario put between 644-645 million people without electricity access in 2030.

- Reaching universal access by 2030 requires electrifying roughly 177 million people based on the projected deficit between 2024 and 2030, while keeping pace with population growth.
- Under current trends Africa's unelectrified population rises to ~592 million by 2030 (~92% of the global total), because new connections are outpaced by population growth. Bending this curve requires connections to outrun demographic growth — a threshold Africa has not yet crossed at the regional level since 2010.

Methodology - Description

Data Sources



- The following data was gathered from the World Bank/ ESMAP's Tracking SDG 7 database ([download link](#))
 - Total electricity access rate and population without access to electricity per country
 - Urban electricity access rate and population in urban areas without access to electricity per country
 - Rural electricity access rate and population in rural areas without access to electricity per country
 - Renewable installed capacity per capita per country and region
- The following data was gathered from the World Bank open data source
 - Total population per country between 2010-2024.
 - Total population estimates per country from 2025 to 2030.

Projections



- Straight line extrapolation projections were made via the following process:
 - The average annual change between 2021 and 2024 was calculated for each individual country. For countries with missing data, available data between 2010 and 2024 was used to calculate the change.
 - Each country's 2024 population without access to electricity was projected forward to 2030 (by 6 years) by adding the calculated average annual change to the 2024 population 6 times
 - If a country's deficit had spiked by more than 50% in a single recent year but remained above its 2021 level, it was held flat at the 2024 value. Likewise, if the recent data was unreliable (e.g. a zero or very small base year), the country was held flat at its 2024 value rather than extrapolated.
 - 0 was set as a minimum to prevent the unconnected population from being negative
 - The projected data was then summed up according to each country's regional classification
- IEA stated policy scenario was taken from the IEA's World Energy Outlook 2024 report.

Definition of electricity access

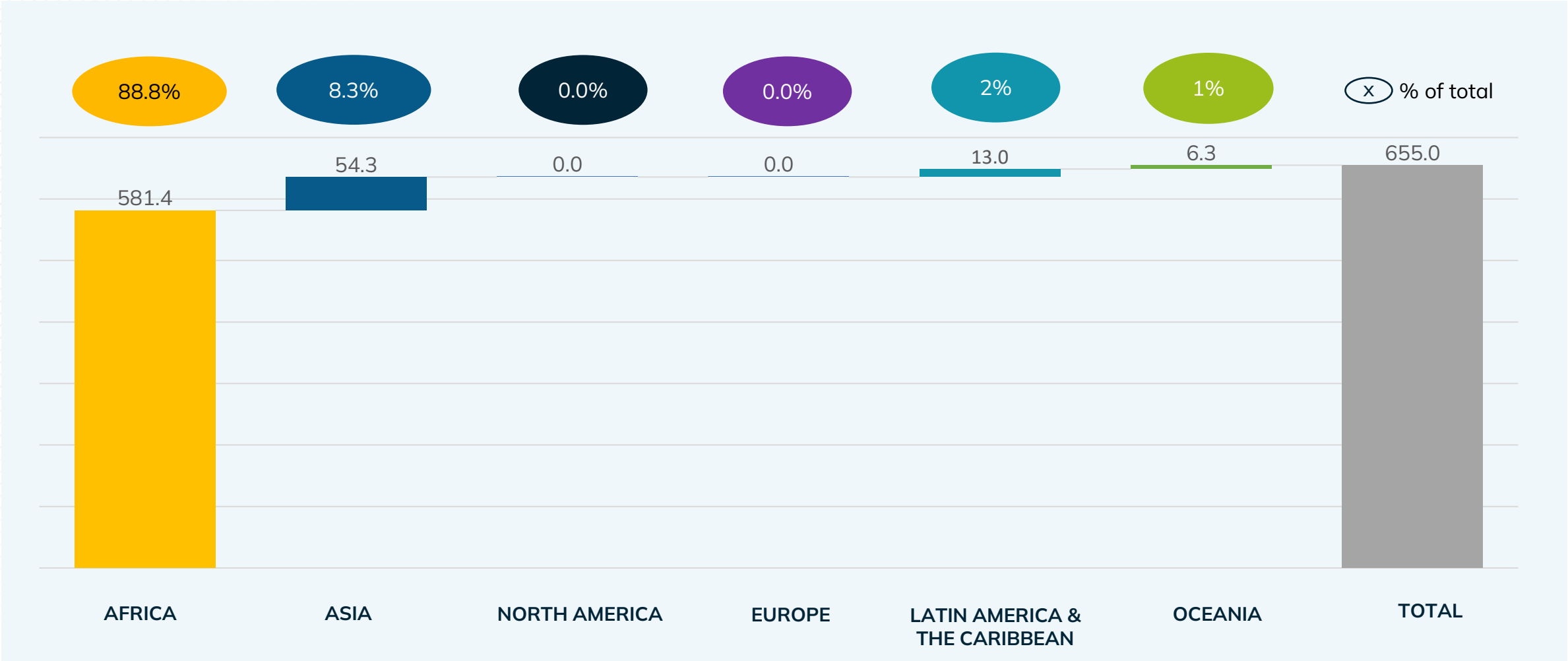
Electricity access is defined as a household being connected to an electricity supply at Tier 1 and above, aligned with the IEA’s “basic bundle” threshold

		ELECTRICITY ACCESS				
	TIER 0	TIER 1	TIER 2	TIER 3	TIER 4	TIER 5
						
MINIMUM HOURS AVAILABLE PER DAY	<4 hours	4 hours	4 hours	8 hours	16 hours	23 hours
MINIMUM POWER	<3 W	3 W	50 W	200 W	800 W	2,000 W
MINIMUM DAILY POWER CAPACITY	<12 Wh	12 Wh	200 Wh	1,000 Wh	3,425 Wh	8,219 Wh

- The numbers presented above are only to supply the absolute minimum of each stage to each household.
- **The Modern Energy Minimum advocates universal electricity consumption of at least 1,000 kWh** (of which approx. 300 kWh at the residential level), if we aspire for all people to reach an income of at least USD 2,500 per capita per year (or about USD 6.85 per day, midpoint for lower-middle income status), based on historical data.
- Meanwhile, this historical data does not include the **impacts of energy efficiency improvement**, which can make the same income level correlate to much less electricity consumption in the future. Hence, this should be considered as an indicative historical number, not an absolute minimum. What really matters is **energy service contents** enabled by a certain consumption level and **their impacts on people’s lives**.
- Tracking SDG7 Report measures connection, not consumption. Understanding the quality of access therefore requires additional data on consumption levels across tiers, usage patterns, and how consumption evolves over time, since connection alone does not indicate the energy services households actually receive.

There are ~655 million people globally without access to electricity as of 2024.

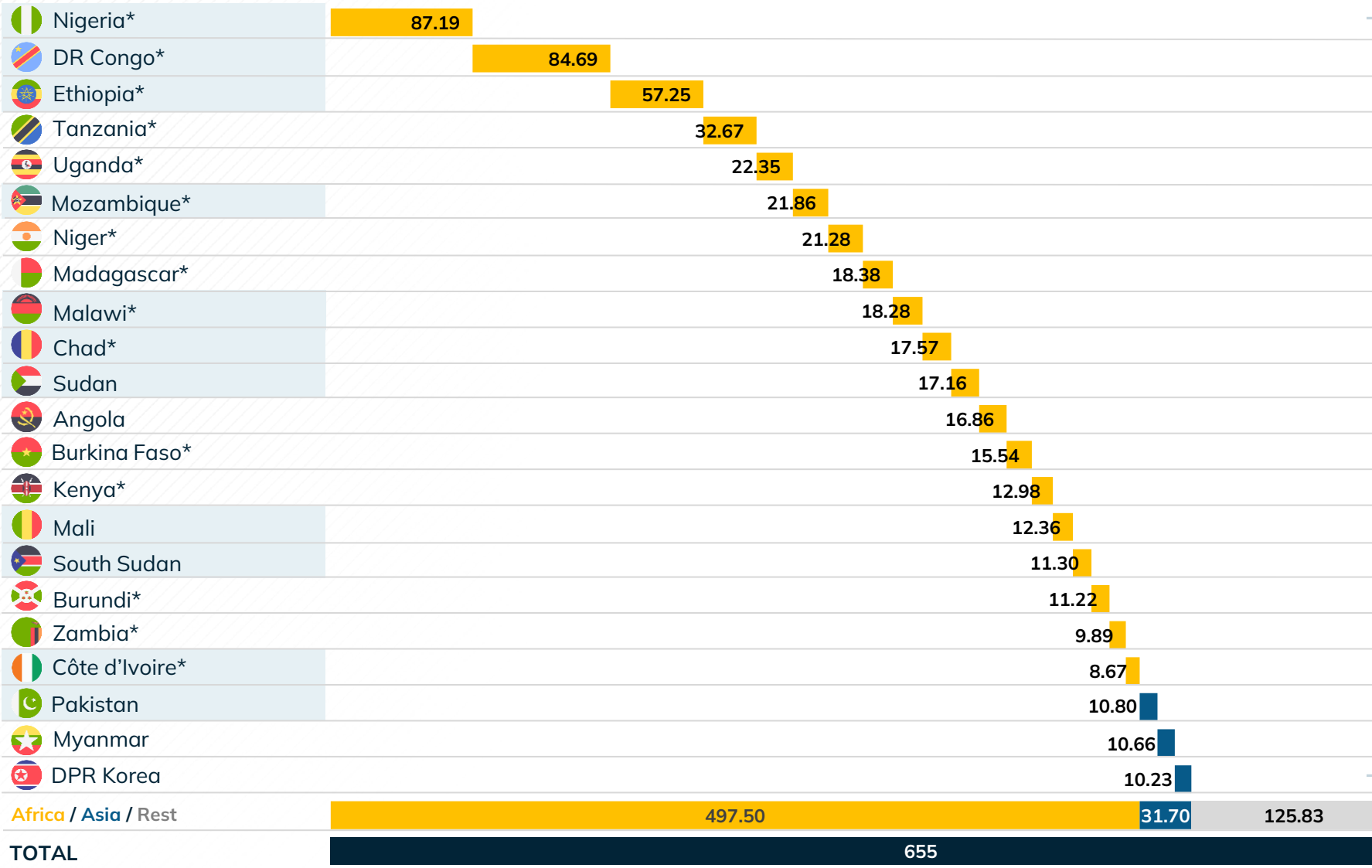
Population without electricity access¹ by region, millions, 2024



¹ Electricity access is defined as a household being connected to an electricity supply at Tier 1 and above
SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets

22 countries make up 80% of the electrification gap and 19 countries are in Africa

Population without electricity access, millions, 2024 Africa Asia Rest Countries with increasing population without electricity (2023-24)



- These 22 countries make up 80% of the electrification challenge (19 in Africa, 3 in Asia).
- The situation (country and ranking) largely remains same since last year's analysis.
- Compared to the previous year's analysis, Somalia and Papua New Guinea no longer appears on the list; Côte d'Ivoire has re-entered the list after not featuring in last year's analysis

* Countries have Mission 300 National Energy Compact by June 2026

SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets

Among the 22 countries with the largest access gaps, Asian countries have higher electrification rates than African countries

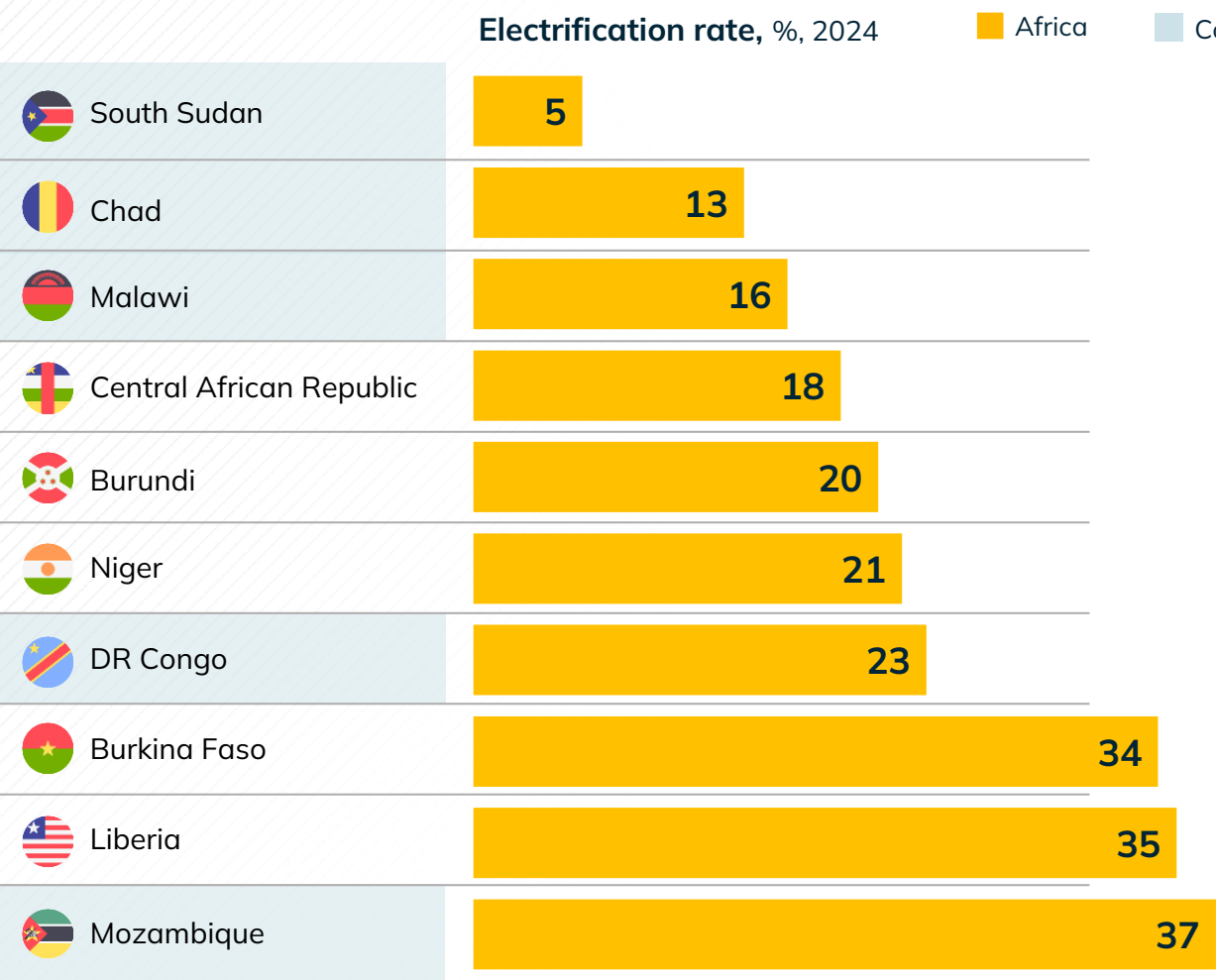
	Electrification rate, %, 2024	Population without electricity access, millions, 2024
 Pakistan	96	10.80
 Myanmar	80	10.66
 Kenya	77	12.98
 Côte d'Ivoire	73	8.67
 Sudan	66	17.16
 Nigeria	63	87.19
 DPR Korea	61	10.23
 Ethiopia	57	57.25
 Angola	56	16.86
 Uganda	55	22.35
 Zambia	54	9.89
 Tanzania	52	32.67
 Mali	50	12.36
 Madagascar	43	18.38
 Mozambique	37	21.86
 Burkina Faso	34	15.54
 DR Congo	23	84.69
 Niger	21	21.28
 Burundi	20	11.22
 Malawi	16	18.28
 Chad	13	17.57
 South Sudan	5	11.30

■ Africa ■ Asia

- Only 10 out of the 19 African countries have electricity access rates of 50% or higher.
- Nigeria has the largest unelectrified population, followed by DR Congo and Ethiopia.
- Although Asian countries have fewer people left to electrify compared to African countries, they face the difficulty of sustained last-mile electrification. The numbers for Pakistan, Myanmar, and DPR Korea have improved marginally from 2023-2024, thus validating the point above.

SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets

Top 10 countries with the lowest electrification rates

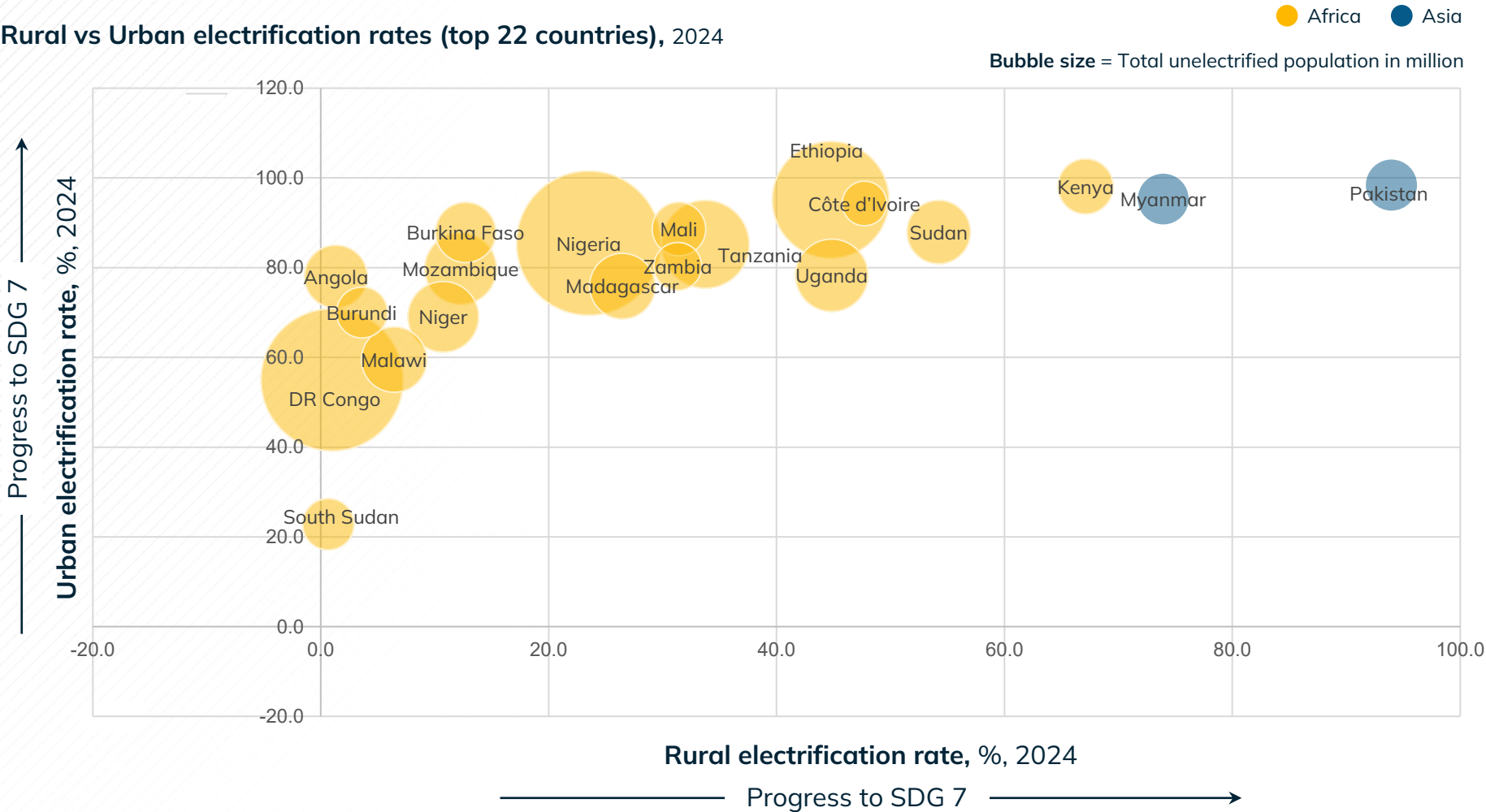


- Half of the top 10 countries with the lowest electrification rates have electrification rates of 20% or lower.
- Backsliding in the top 3 countries with the lowest electrification rates indicates that the most vulnerable populations are falling further behind, as population growth outpaces new access, highlighting the urgent need to accelerate access efforts.
- Significant overlap between relative and absolute gaps: 8 of the top 10 lowest-access countries are part of the 22 largest-gap countries.

SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO
(2026) Tracking SDG7 2026 Report Datasets

Both Asia and Africa need strong rural push, while most African countries also need urban electrification progress

Rural vs Urban electrification rates (top 22 countries), 2024



- As evident for Pakistan and Myanmar, focusing on last mile electrification, is the key for Asian countries to advance rural electrification.
- Sub-Saharan Africa has 83% urban electrification rate, but rural electrification rates of just 33%. Simultaneous urban push and massive roll-out of rural electrification schemes while stopping backsliding are required for all countries.

NOTE: Both urban and rural rates of DPR Korea were not available for any years from the 2026 database. Therefore, DPR Korea is not on this graph. Chad's rural rate was also not available for 2024, so it is therefore also excluded from this graph. Chad's urban rate is 50.96% in 2024.

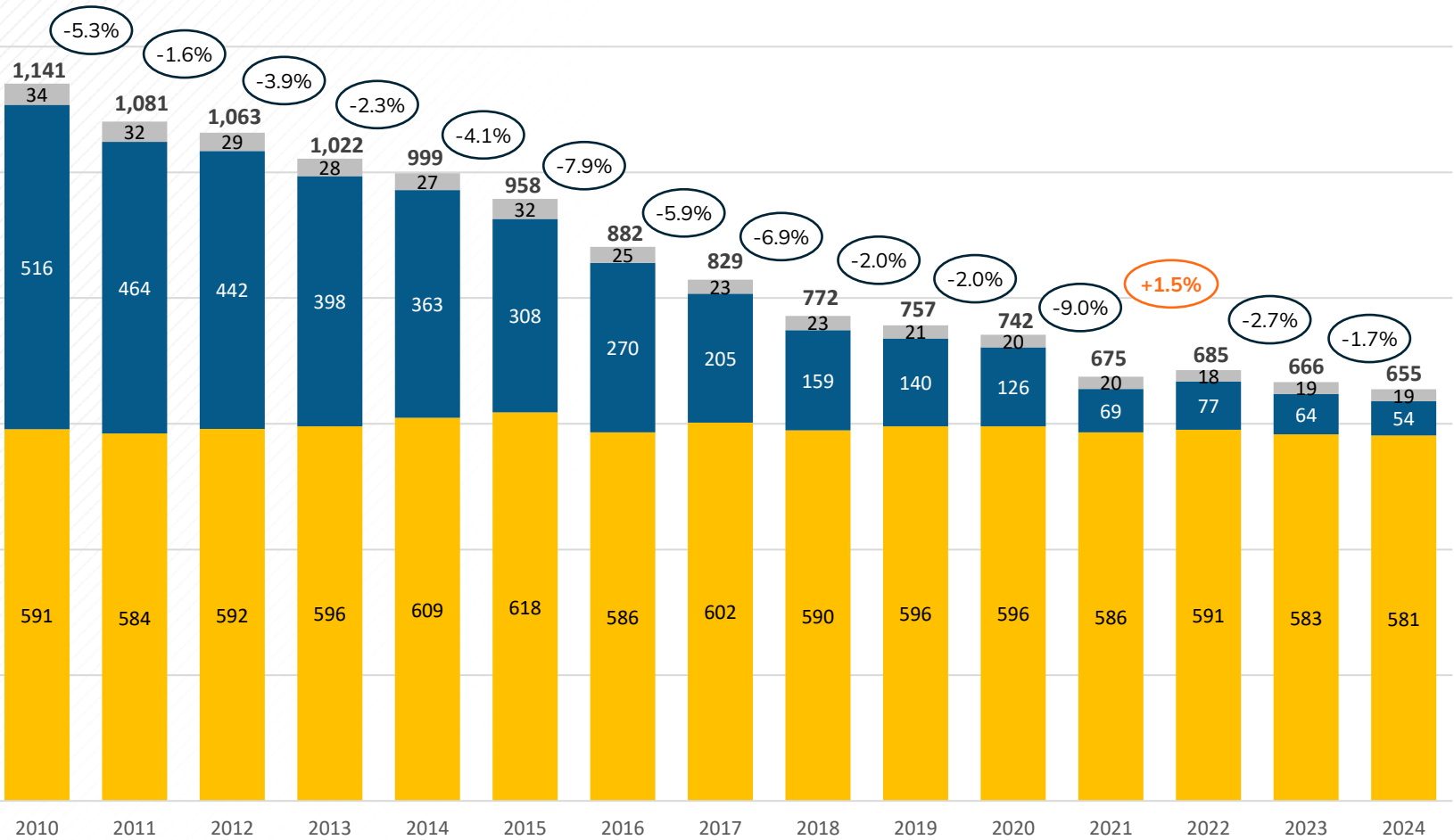
SOURCE: SEforALL Analysis

DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets

2024 saw a reduction in total unelectrified population, consistent with the trend from 2010-2021. While Asia has been significant reduction in unelectrified population, Africa is stagnant.

Population without electricity access, millions, 2010-2024

Africa Asia Rest of the world



Average Annual Growth Rate¹

-3.9%

-3.9%

-14.9%

0.1%

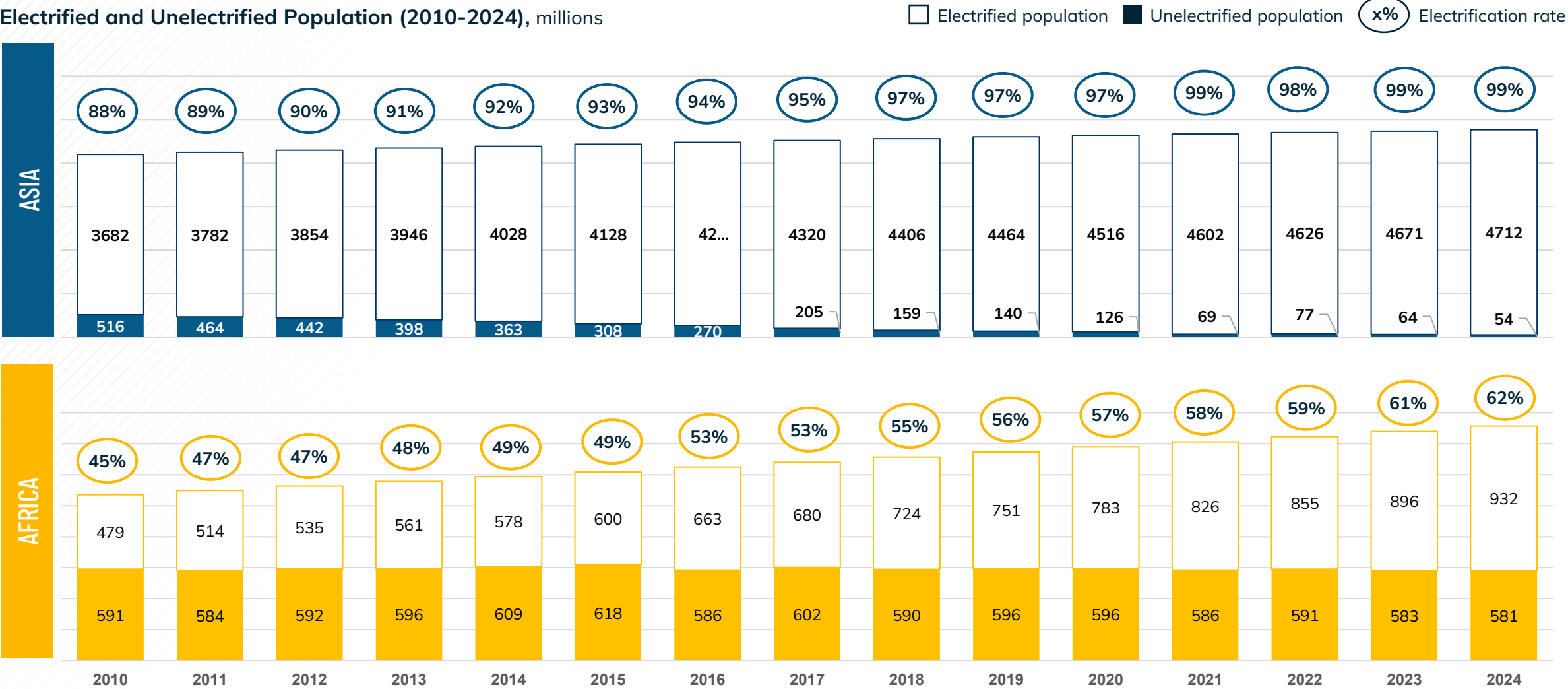
- The number of total unelectrified population in the world decreased by ~486 million between 2010 and 2024. 95% of this gain came from Asia (~462 million).
- 2022 is an outlier year in the trend of reducing unelectrified population.
- Africa in 2024 shows a marginal reduction (10 million) in total unelectrified population from where it started in 2010.

NOTE: The World Bank/ESMAP electricity access historical data (through 2024) and the total-population historical data were both updated in the 2026 dataset release. Because each release also revises earlier years, this creates inconsistencies with the analysis in the previous year.

¹ 2010 – 2024 Compound annual growth rate = the average annual growth rate

SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets

Africa's electrification rate slowly increases every year, Asia's deficit falls steadily toward universal access



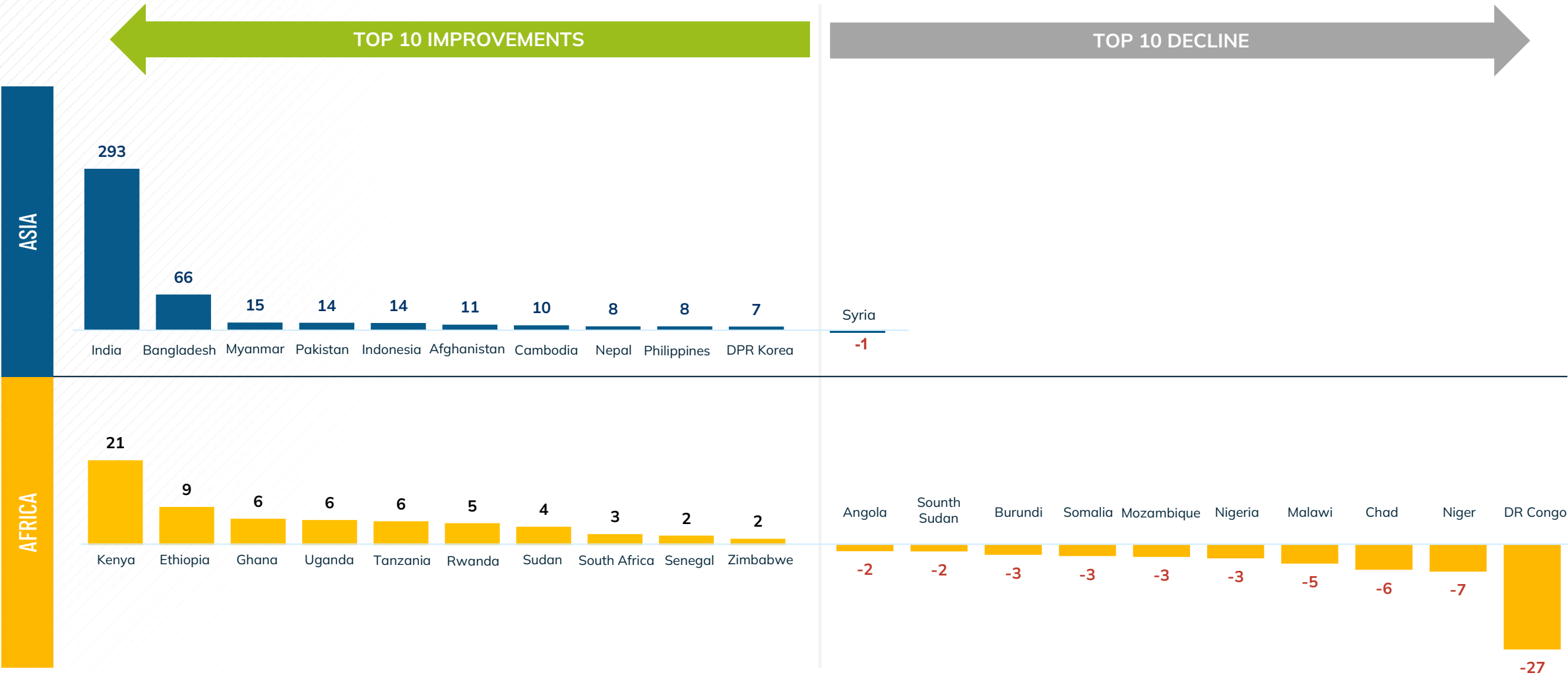
NOTE: The World Bank/ESMAP electricity access historical data (through 2024) and the total-population historical data were both updated in the 2026 dataset release. Because each release also revises earlier years, this creates inconsistencies with the analysis in the previous year.

SOURCE: SEforALL Analysis

DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets; World Bank Open Data – Total Population downloaded on June 25, 2026

18 African countries show the number of unelectrified population backsliding from 2010

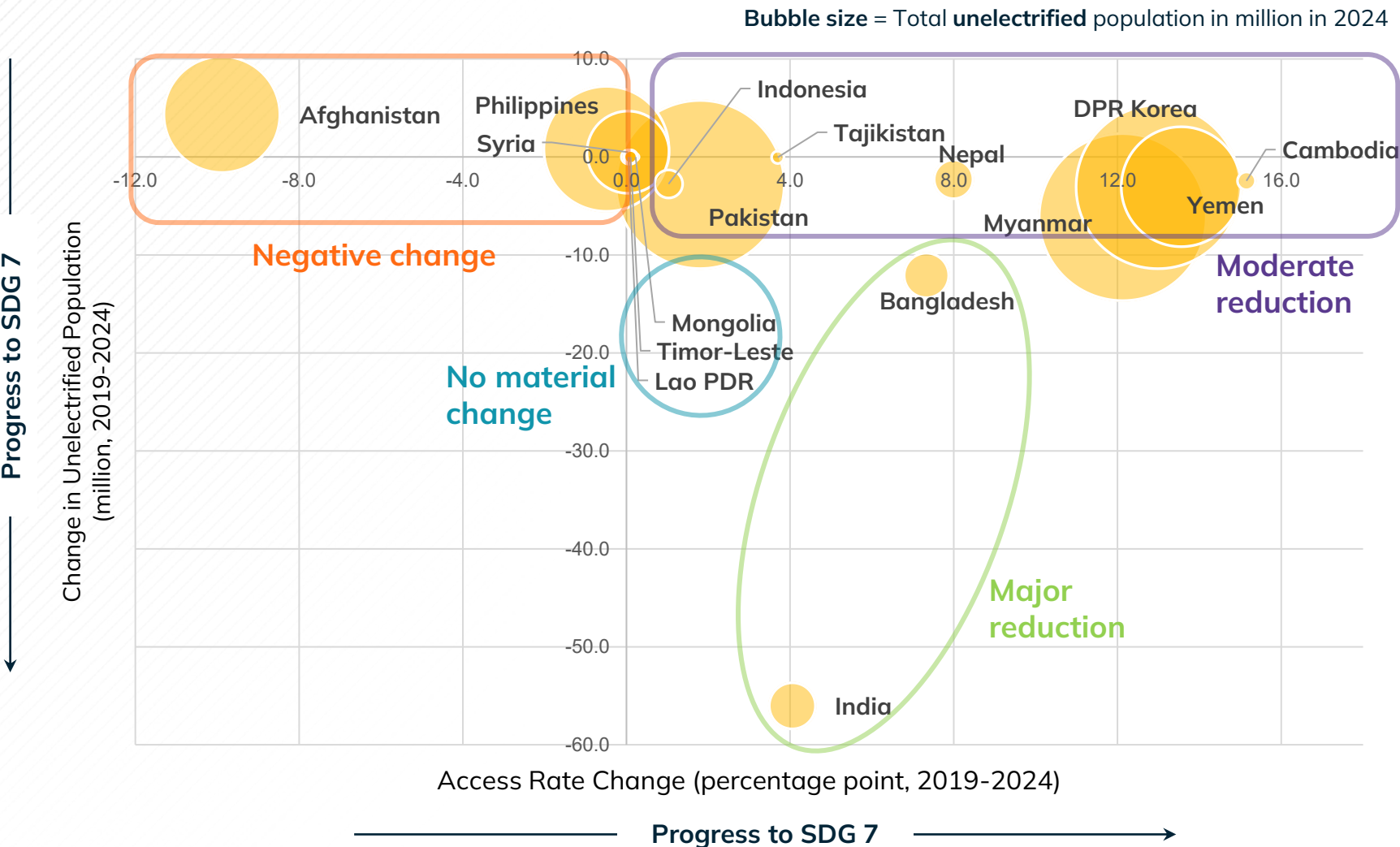
Reduction in unelectrified population between 2010 and 2024, millions



SOURCE: SeforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets

Electricity access: Deep dive on Asia

Changes in population without access and in electricity access rates between 2019 and 2024

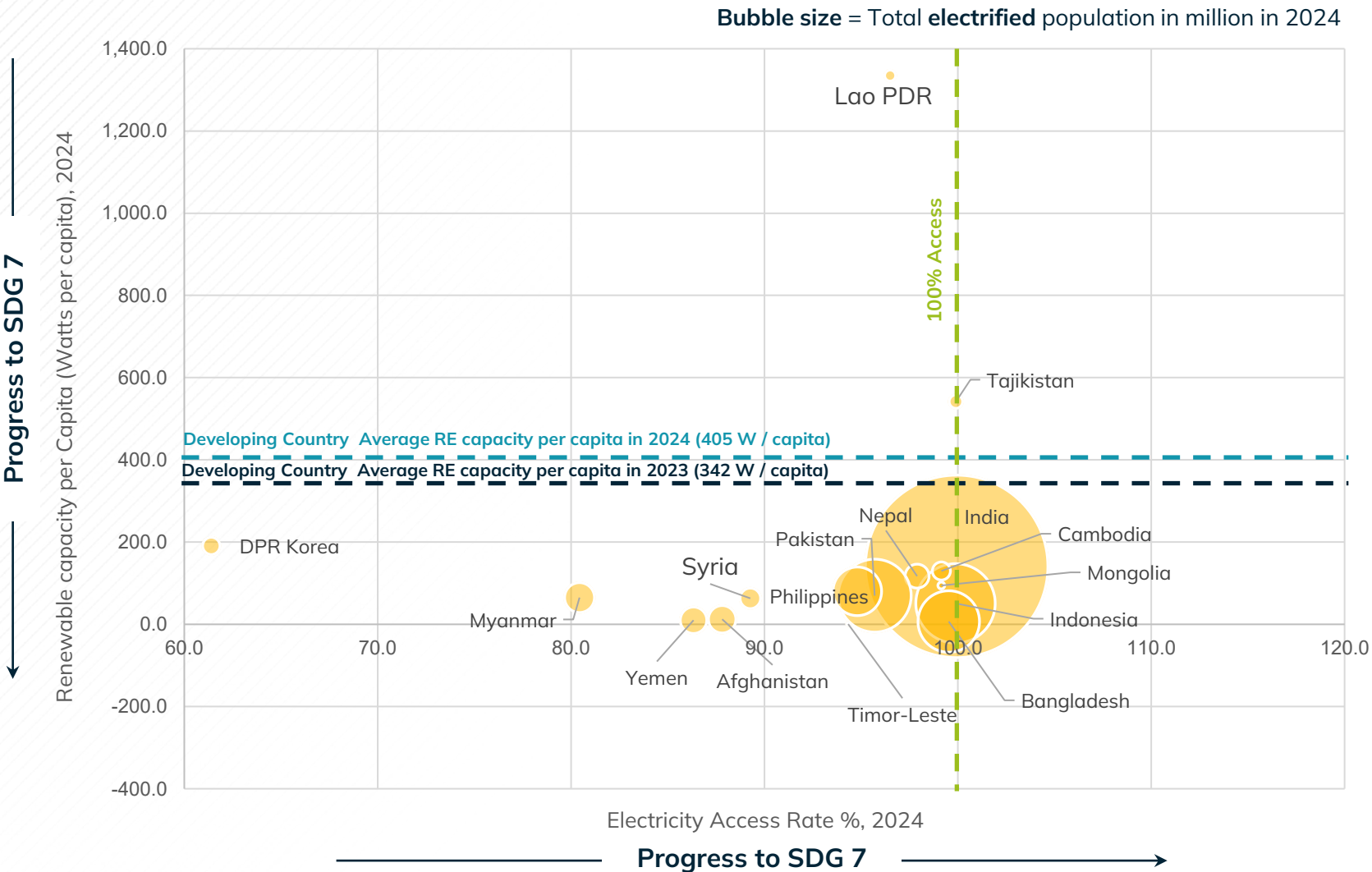


- An analysis of recent 5 data years reveals that Afghanistan, Philippines, and Syria have been backsliding in access rate and adding to their unelectrified populations. Strong attention and action are needed to reverse these trends
- Bangladesh and India has a greater impact on the total number of people gaining access, mainly because of its vast population.
- Cambodia, DPR Korea, Myanmar, and Yemen lead in improving electricity access rates in recent years, while other countries saw modest gains. However, population growth offset these improvements, preventing a significant reduction in their unelectrified populations.

SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets

Many Asian countries need to focus on increasing renewable capacity per capita while achieving universal electricity access

Electrified Population, Electricity Access Rate, and Renewable capacity per capita by country in Asia 2024



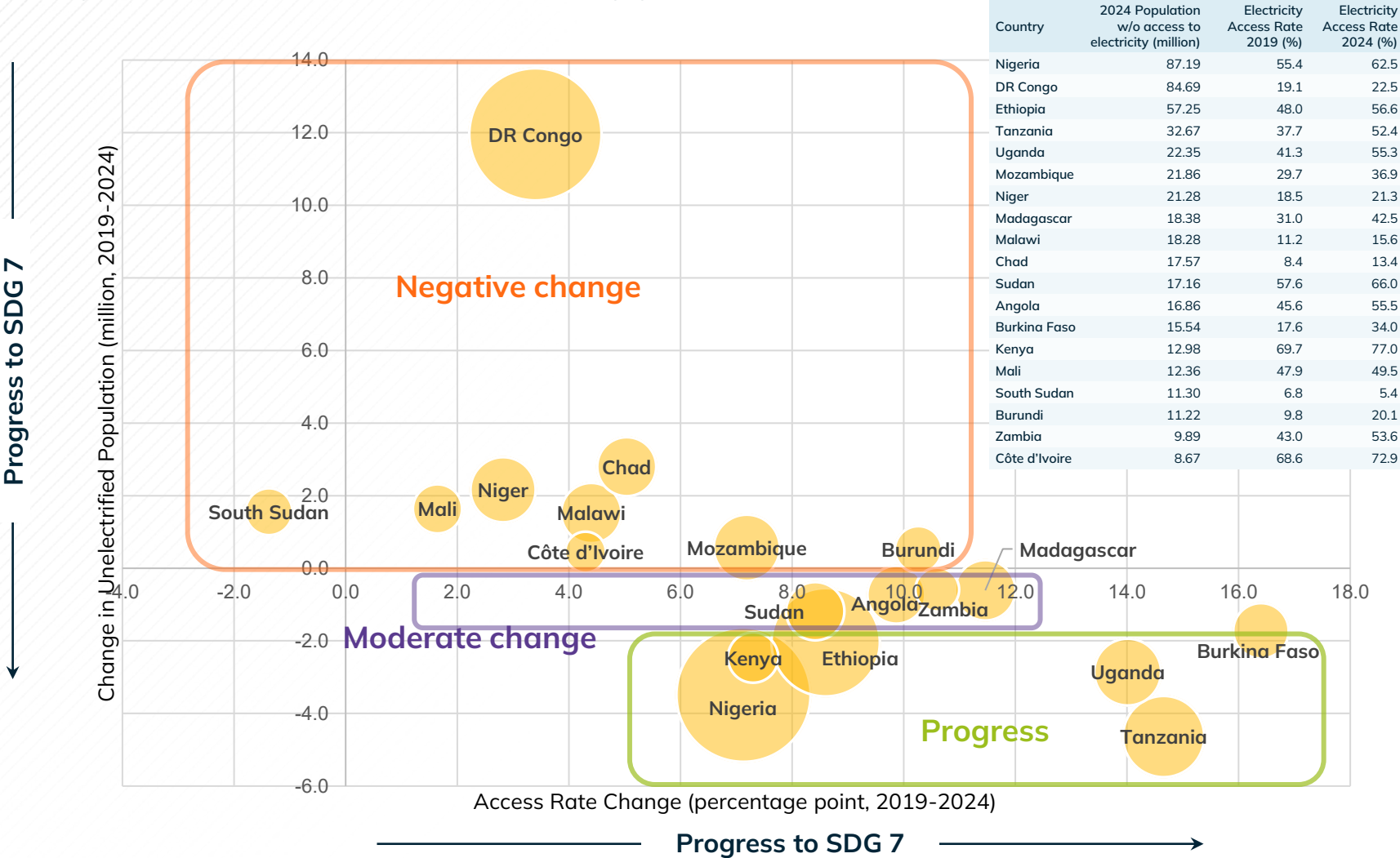
- Developing countries' average renewable power installed capacity per capita increased by 63 W / capita from 2023. However, the progress of Asian countries was much lower.
- Many Asian developing countries have more than 90% access rates, except Afghanistan, DPR Korea, Myanmar, Syria, Yemen. However, their renewable capacity per capita are much lower than the developing country average (405 W / capita), indicating their newly gained access could be low Tier access such as Tier 1, 2 or lower Tier 3.
- To provide Modern Energy Service with clean energy for all, these Asian countries need to increase supply from renewable energy. Asian electricity access strategy needs to turn its attention to creating win-win situation of higher energy consumption with renewable energy provision.

SOURCE: SeforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO
(2026) Tracking SDG7 2026 Report Datasets

Electricity access: Deep dive on Africa (Top 22 Access Deficit countries)

2024 Population without access vs Changes in population without access and in electricity access rates *between 2019 and 2024*

● In top 22 countries Bubble size = Total unelectrified population in million in 2024

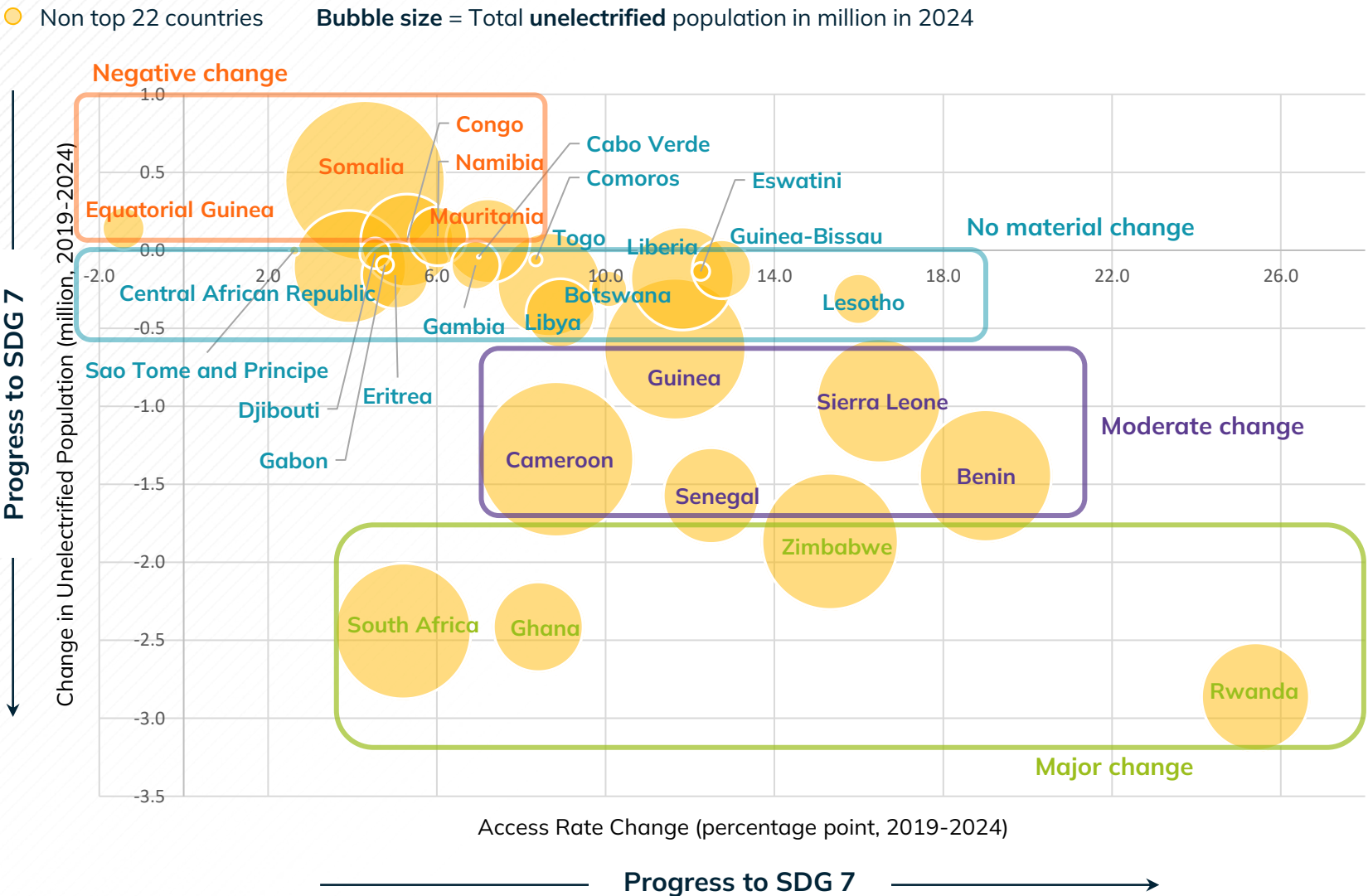


- The largest absolute reductions are Ethiopia, Kenya, Nigeria, Tanzania, Uganda, while Burkina Faso lead in improving electricity access rate.
- Angola, Madagascar, Sudan, Zambia's unelectrified population has been stable, even as electricity access rates have improved.
- South Sudan has been reducing access rate and increasing unelectrified population in recent years.
- Other 8 countries increased access rate but the number of unelectrified population increased, while DR Congo have ~12 million more unelectrified population in the most recent 5 data year.
- All countries with increased unelectrified population since 2019 need to fortify the electrification effort regardless the remaining unelectrified population and access rate improvement.

SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets

Electricity access: Deep dive on Africa (non-Top 22 Access Deficit countries)

2024 Population without access vs Changes in population without access and in electricity access rates *between 2019 and 2024*

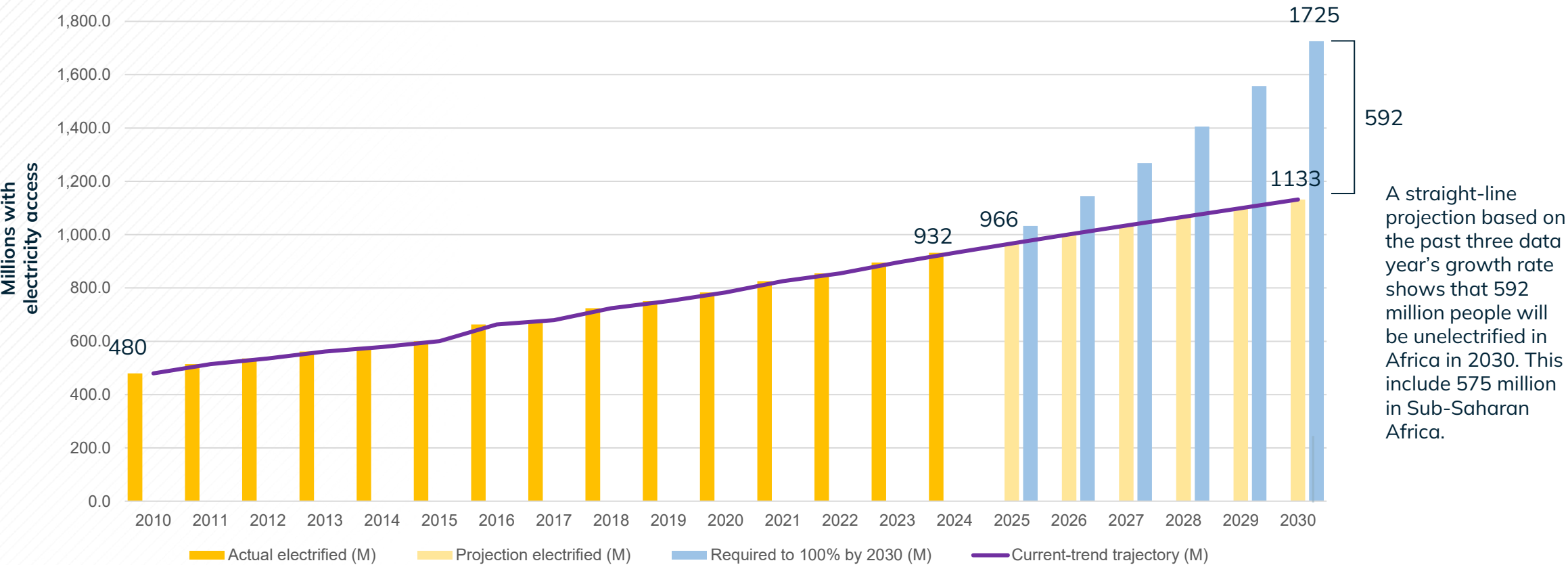


- Benin, Lesotho, Rwanda, Sierra Leone, and Zimbabwe have shown strongest improvement in access rates, while Rwanda also have greater impact on the total number of people gaining access.
- Equatorial Guinea is the only African country in that are not in Top 22 access deficit county list have shown decreased access rates since 2019.
- Meanwhile, Congo, Mauritania, and Namibia, and Somalia had increased the numbers of unelectrified population despite their access rate improvement.

SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets

With the current trajectory, Africa will still have 592 million people unelectrified in 2030

Current trend trajectory vs required trajectory to achieve electricity access in Africa



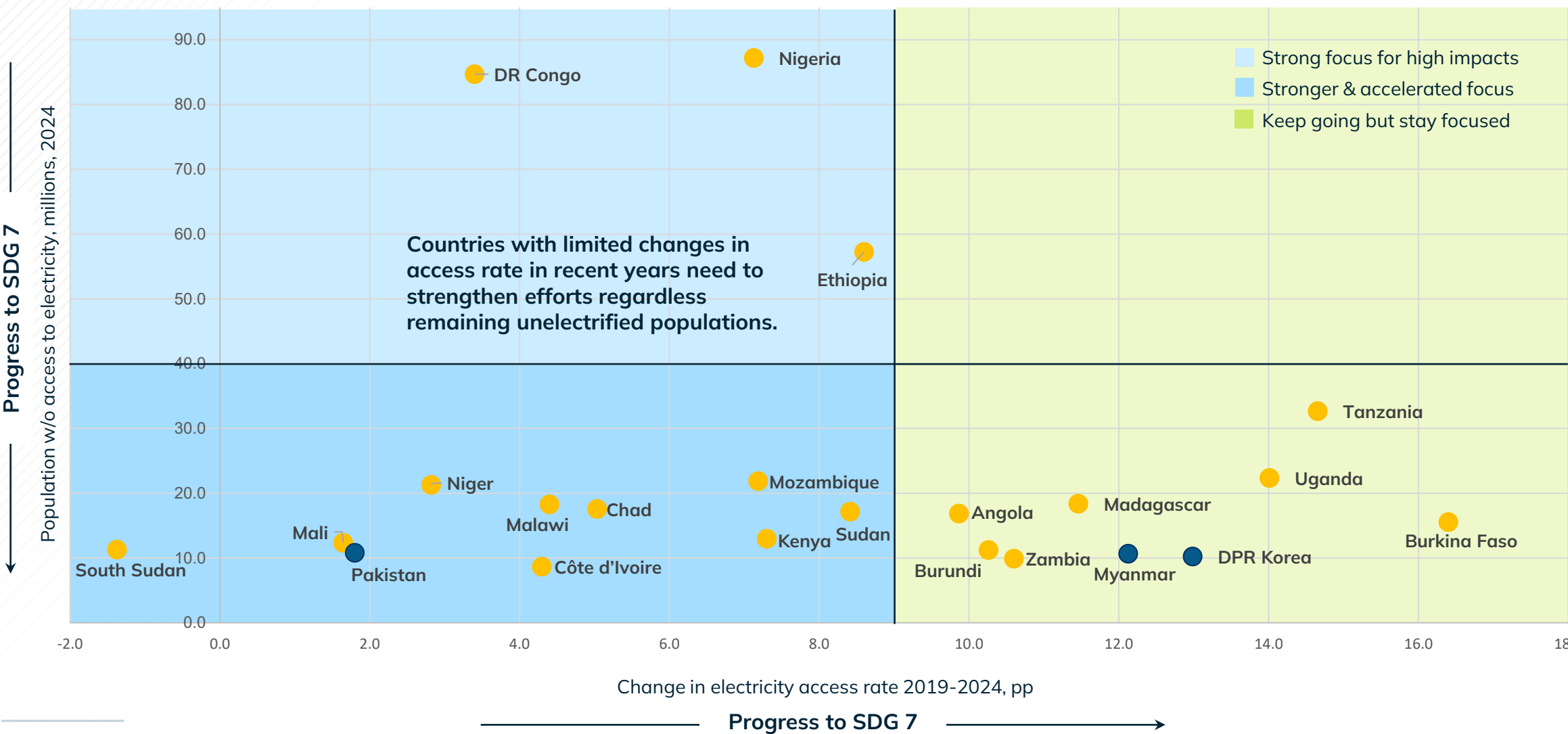
NOTE: This projection is a simple straight-line projection based on historical growth rates

SOURCE: SEforALL Analysis

DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 Report 2026 Datasets; World Bank Open Data – Total Population downloaded on 25 June 2026; World Bank Data Bank – Population Projections and Estimates downloaded on 26 June 2026;

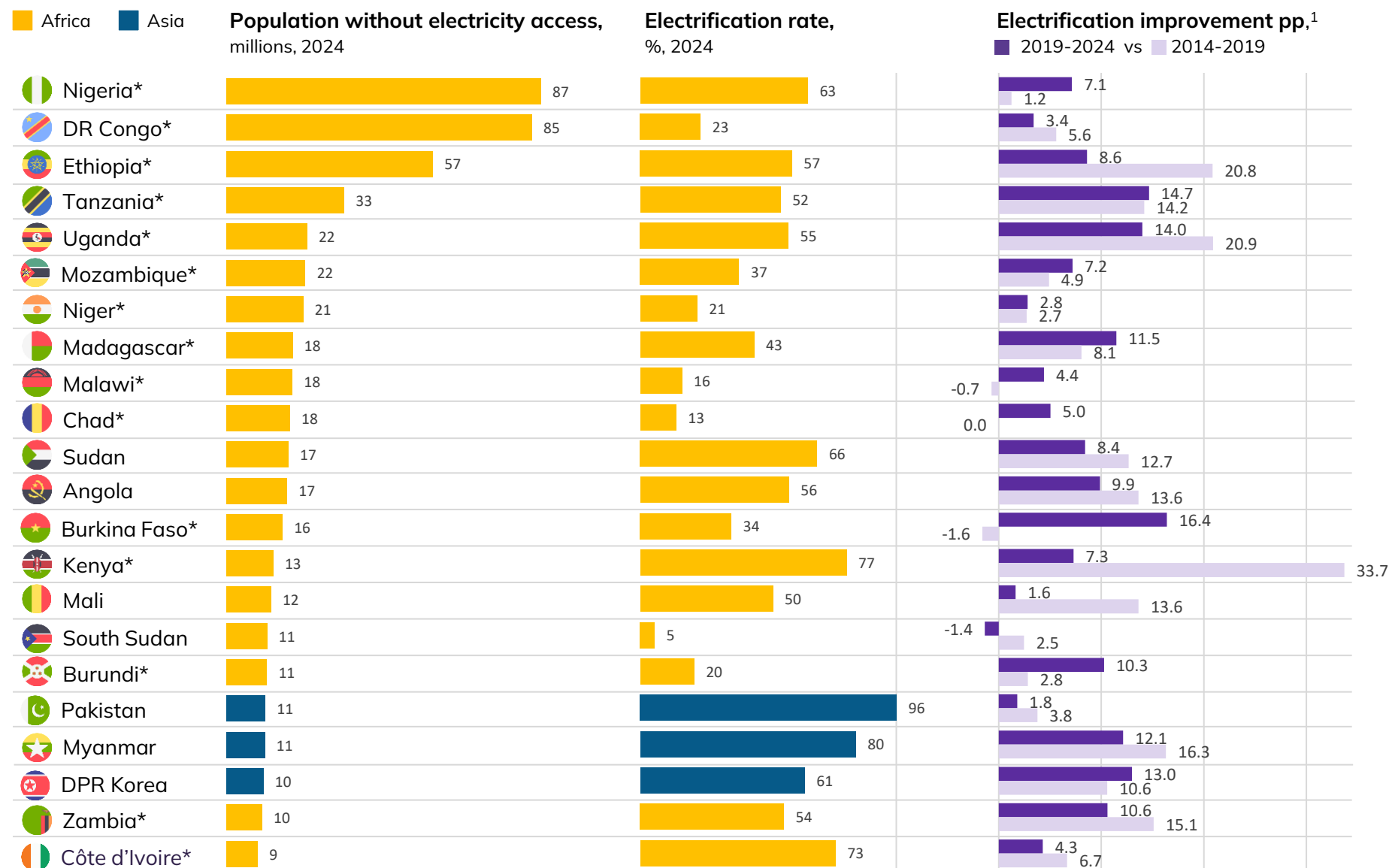
Countries with large unelectrified populations have high impact potential, but tailored strategies are needed for all slow progress and low access rate countries

Population without access to electricity (2024) vs change in electricity access rates (2019-2024) - Top 22 access deficit countries



SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets

Half of the top 22 access deficit countries, which lost momentum in improving their access rate in recent years, require stronger focus – regardless of the current population size without electricity access



- While the Top 22 access deficit countries are still making progress in energy access, improvements in 12 of these countries have been slower over the past five years compared to the 2014–2019 period (e.g., Ethiopia and DR Congo)
- Strongly focused actions are needed to turn negative trends into positive ones

* Countries have Mission 300 National Energy Compact by June 2026

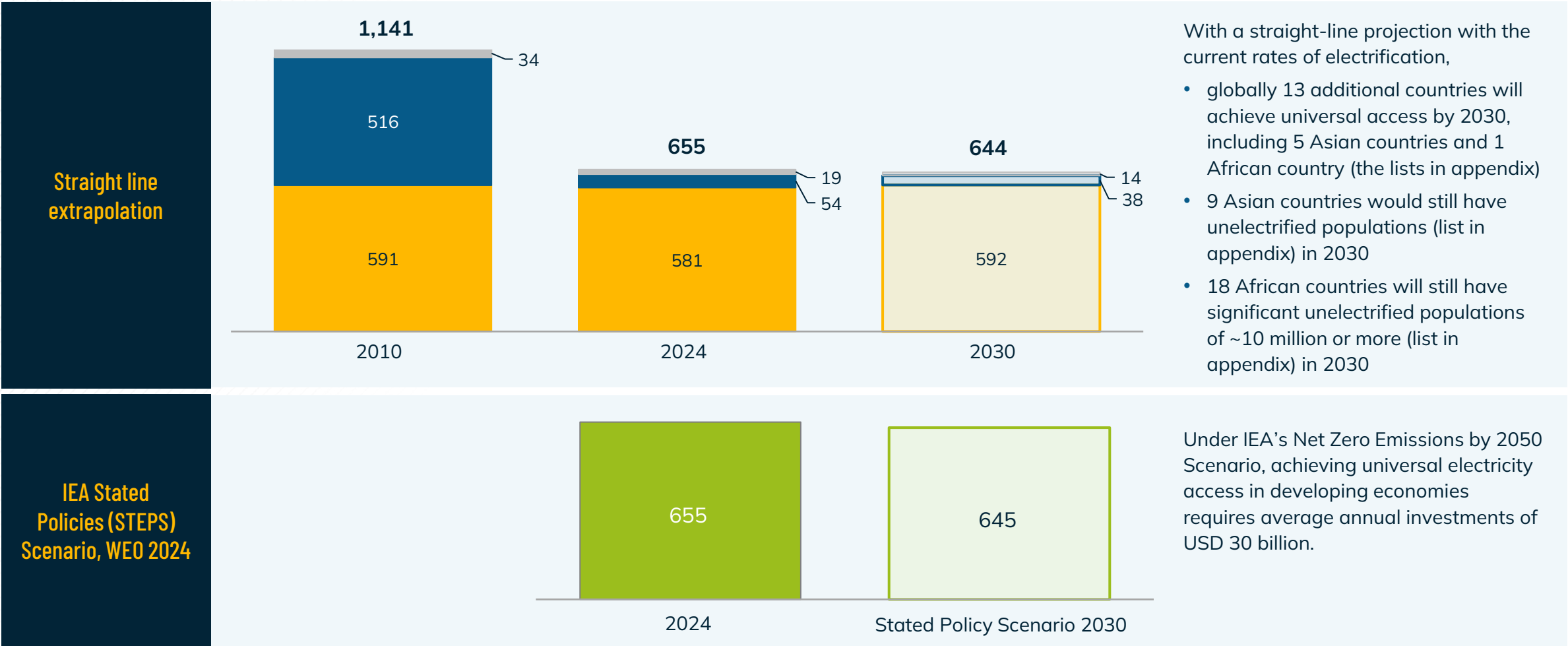
¹ Electrification improvement pp = change in a country's electrification rate over a stated period, measured in percentage points

SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets

Projections show that we are not on track to reach universal electricity access by 2030

Projected population without access to electricity, millions

World Rest of world Africa Asia Forecast shown lighter shade



NOTE: For the 2026 report, the Electricity Access figure for Afghanistan was revised downwards using MICS data, as specified under agreed methodology. The country's unelectrified population dramatically increased in 2022 data as a result. The country's projection, therefore, took annual improvement rate from 2015, instead of the recent three years.

SOURCE: SEforALL Analysis, Tracking SDG7 2024 Report
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report & its Datasets, IEA World Energy Outlook 2024

ENERGY. CLIMATE. DEVELOPMENT.

SDG 7.1.2

Access to Clean Cooking



SDG 7.1.2 Access to Clean Cooking

1

There are currently around 2 billion people without access to clean fuels and technologies for cooking. The deficit is now definitively larger in Africa (~ 50%) than in Asia (~ 46%); the regional centre of gravity has shifted.

- 75% of the people without access live in just 20 countries, with 12 in Africa and 8 in Asia. While the Asian countries in this group mostly have higher access rates than their African counterparts, Africa's faster population growth means its absolute deficit (approximately 997 million in 2024) has now overtaken Asia's (approximately 911 million).
- Only 5 of the 12 African countries in the high-impact group have access rates above 10%; 7 of 12 remain below 10%, with very slow progress.

2

The global average annual reduction rate of the population without clean cooking access since 2010 is around 3%.

- Asia has cut its deficit by ~57% since 2010 (annual improvement at roughly 5.8%), from approximately 2.1 billion to approximately 911 million; more than 68% of Asian countries reduced their deficit over the period.
- Africa's deficit has risen by ~26% since 2010 to roughly 997 million (annual growth at roughly 1.7%); 40 of 54 African countries increased their deficit while only 14 reduced it.
- Global progress is highly concentrated: India alone delivered roughly two-thirds of the world's entire net reduction over 2018 - 2024 (access up from 61% to 81%; ~260 million fewer people without access), and India and China together account for nearly all global progress.
- Much of Africa is in a "population trap": access rates are rising, but population growth outpaces them, so the number of people without clean cooking keeps climbing. Of the 20 countries with the largest deficits, 12 are in Africa and 8 of those fit this trap. Two go backwards outright: Afghanistan and Sudan are the only top 20 countries whose access rate fell, rather than merely failing to keep pace.

3

Looking forward, on current trends we are not on track for SDG 7.1.2: a current-trend projection and the IEA's scenario put between 1.6 and 1.7 billion people without clean cooking access in 2030, with Africa holding roughly two-thirds of the global total.

- Closing the gap requires approximately 400 million people gaining access every year to 2030 - about 330 million to clear today's deficit plus around 70 million each year to keep pace with population growth.
- Current clean cooking investment is approximately USD 2.5 billion per year and needs to rise 3.2-fold to USD 8 billion per year by 2030 (IEA). Electric cooking can address both deficits in the 13 countries that sit at the electricity/clean cooking overlap, though it requires coordinated planning, enabling policy, and affordability support.

Methodology - Description

Data Sources



- The following data was gathered from the World Bank/ ESMAP's Tracking SDG7 database ([download link](#))
 - Total access rate to clean fuels and technologies for cooking per country (2010-2024)
- The following data was gathered from the World Bank open data source
 - Total population per country, 2010-2024
 - Total population estimates per country, 2025 to 2030
- The following data was gathered from the IEA publication, 'A Vision for Clean Cooking Access for All, 2023'
 - Clean cooking investment needs

Projections



- Straight line extrapolation projections toward 2030 were made as follows:
 - The average annual change in the population with access to clean fuels and technologies between 2021 and 2024 was calculated for Africa, Asia and the World
 - Each region's 2024 population with access to clean cooking was projected forward to 2030 (by 6 years) by adding the calculated average annual change to the 2024 population 6 times
 - The projected population without access is the projected total population minus the projected population with access, with 0 set as a minimum to prevent the unconnected population from becoming negative
 - Africa's and Asia's projected populations are subtracted from the World projection to obtain the remaining region's projection
 - The IEA Stated Policies Scenario comparator is taken from IEA, SDG7: Data and Projections – Access to Clean Cooking

NOTE: Access to clean cooking is defined as primary reliance on clean fuels and technologies (electricity, LPG, natural gas, biogas, solar, alcohol fuels) as defined against the WHO Guidelines for Indoor Air Quality: Household Fuel Combustion, as applied in the Tracking SDG 7 2026 report.

Methodology - Description

Clean fuels for cooking



Clean fuels recommended by WHO¹ are:

- LPG
- Ethanol
- Natural gas
- Biogas
- Solar cookers
- Electricity

Improved technologies for cooking



Emissions rate targets for improved technologies are defined by the WHO¹ and emissions should be less than:

- 0.23 mg/min (unvented) and 0.80 mg/min (vented) of PM_{2.5}²
- 0.16 g/min (unvented) and 0.59 g/min (vented) of CO

‘Clean’ is defined by keeping household PM_{2.5} and CO within WHO air-quality guideline concentrations, since it is these pollutant levels that drive the health impacts:

- PM_{2.5}: 24-hour mean $\leq 25 \mu\text{g}/\text{m}^3$ and annual mean $\leq 10 \mu\text{g}/\text{m}^3$
- CO: 24-hour mean $\leq 7 \text{ mg}/\text{m}^3$ and 8-hour mean $\leq 10 \text{ mg}/\text{m}^3$

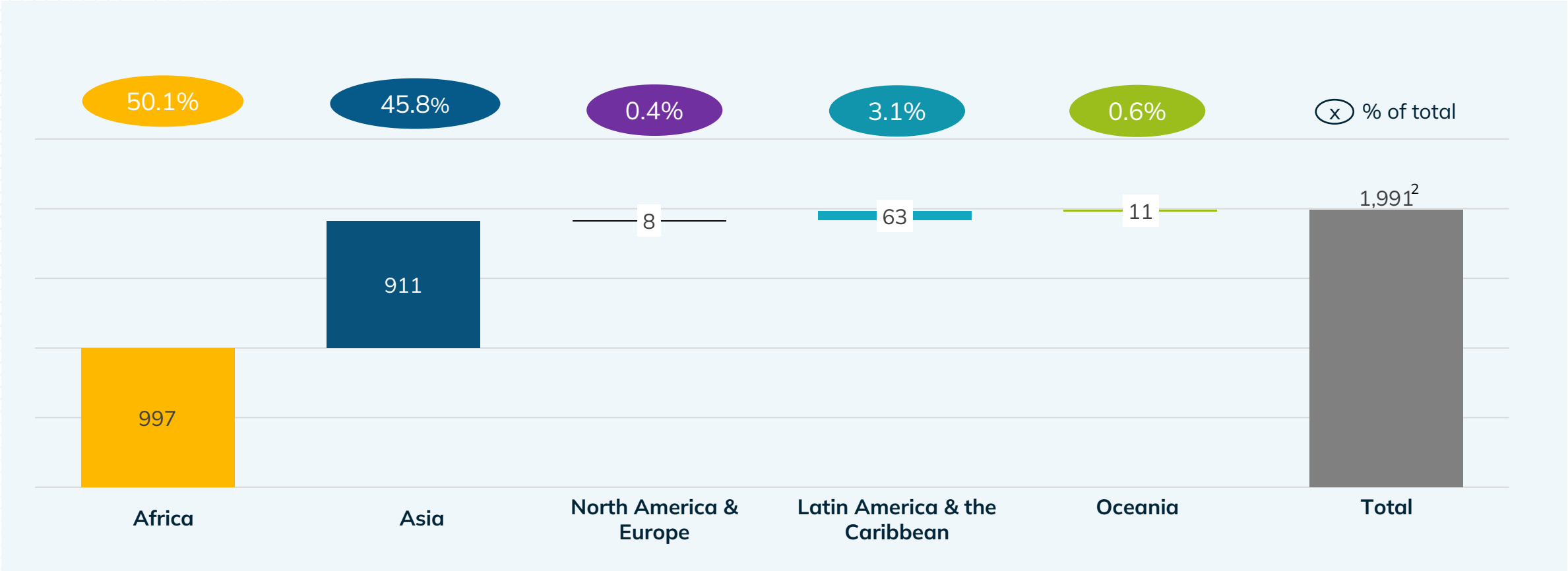
¹ In the normative guidance World Health Organization guidelines for indoor air quality: household fuel combustion

² Atmospheric Particulate Matter with diameter less than 2.5 micrometers

SOURCE: WHO Guidelines for Indoor Air Quality: Household Fuel Combustion (2014); WHO Guidelines for Indoor Air Quality: Selected Pollutants (2010); WHO Air Quality Guidelines, Global Update 2005; ESMAP, Beyond Connections: Energy Access Redefined (2015)

There are ~2 billion people in the world without access to clean fuels and technologies for cooking

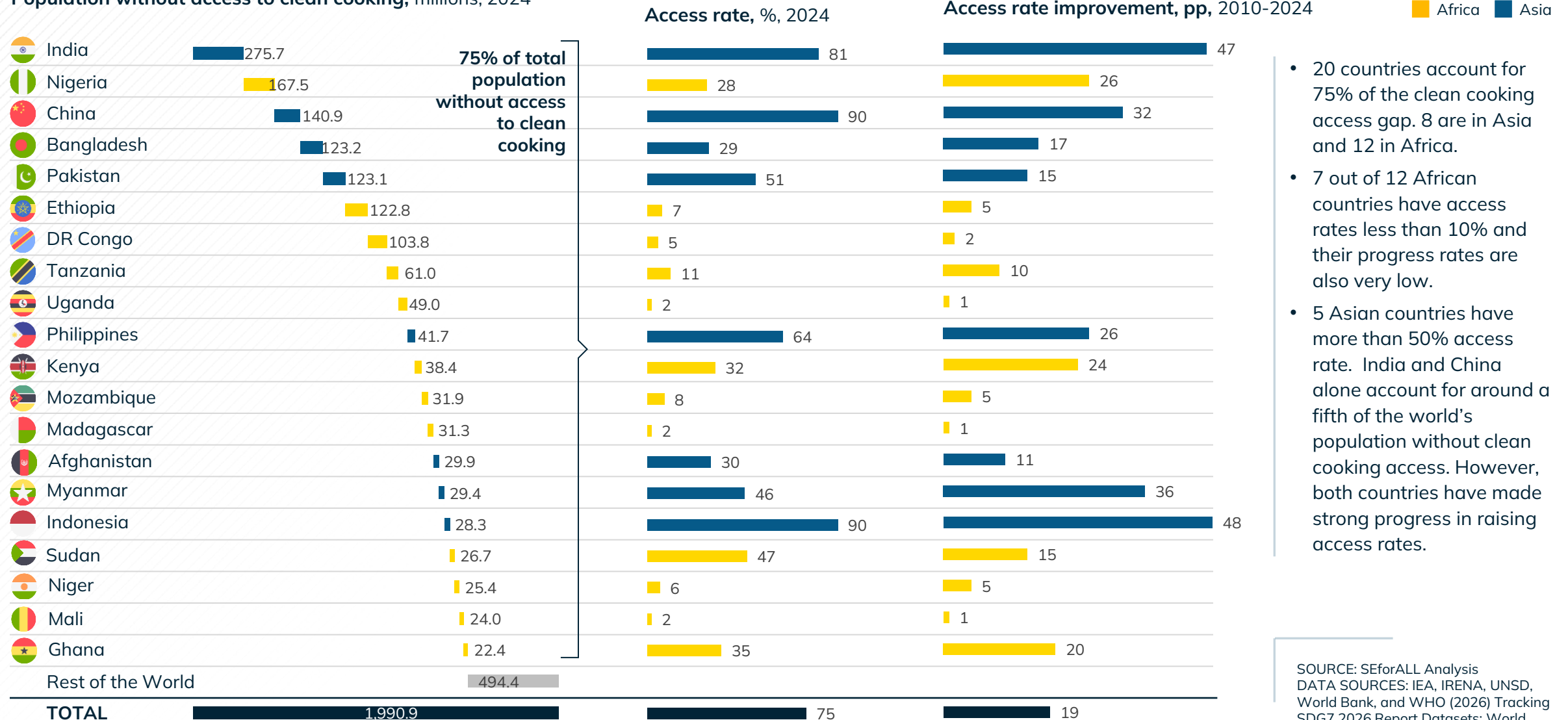
Population without access to clean fuels and technologies for cooking¹ by region, millions, 2024



NOTES:
¹ Clean cooking access is defined as a household using clean fuels or improved technologies for cooking as defined by the WHO
² Country-level calculations were aggregated to regional and world totals. Regional and world totals are the sum of country-level results across the 194 countries with published access rates.
SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets; World Bank Total Population data 2026

Top 20 access deficit countries are in Africa and Asia, making up 75% of the access to clean cooking challenge

Population without access to clean cooking, millions, 2024

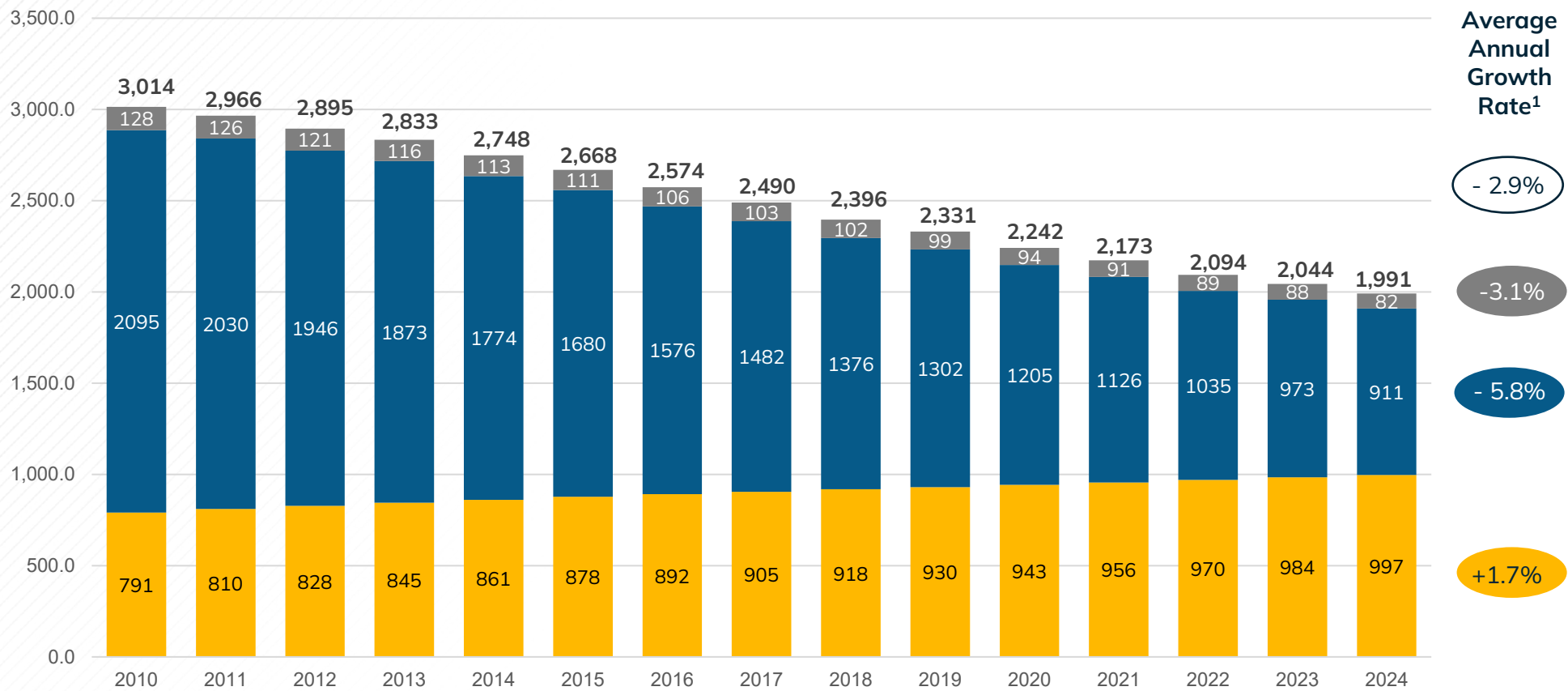


SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets; World Bank Total Population data 2026

The number of people without access to clean fuels and technologies for cooking has declined from 3 bn in 2010 to 2 bn in 2024

Population without access to clean fuels and technologies for cooking by region, millions, 2010-2024

Rest of the World Africa Asia



- Progress in increasing access to clean cooking has been slow over the past decade.
- Asia has reduced its access deficit population by 57% since 2010, but Africa has now overtaken Asia as the region with the most people without clean cooking access.
- The number of people without access in Africa shows a 26% increase since 2010.

NOTE: The World Bank/ESMAP clean-cooking historical data (through 2024) and the total-population historical data were both updated in the 2026 dataset release.

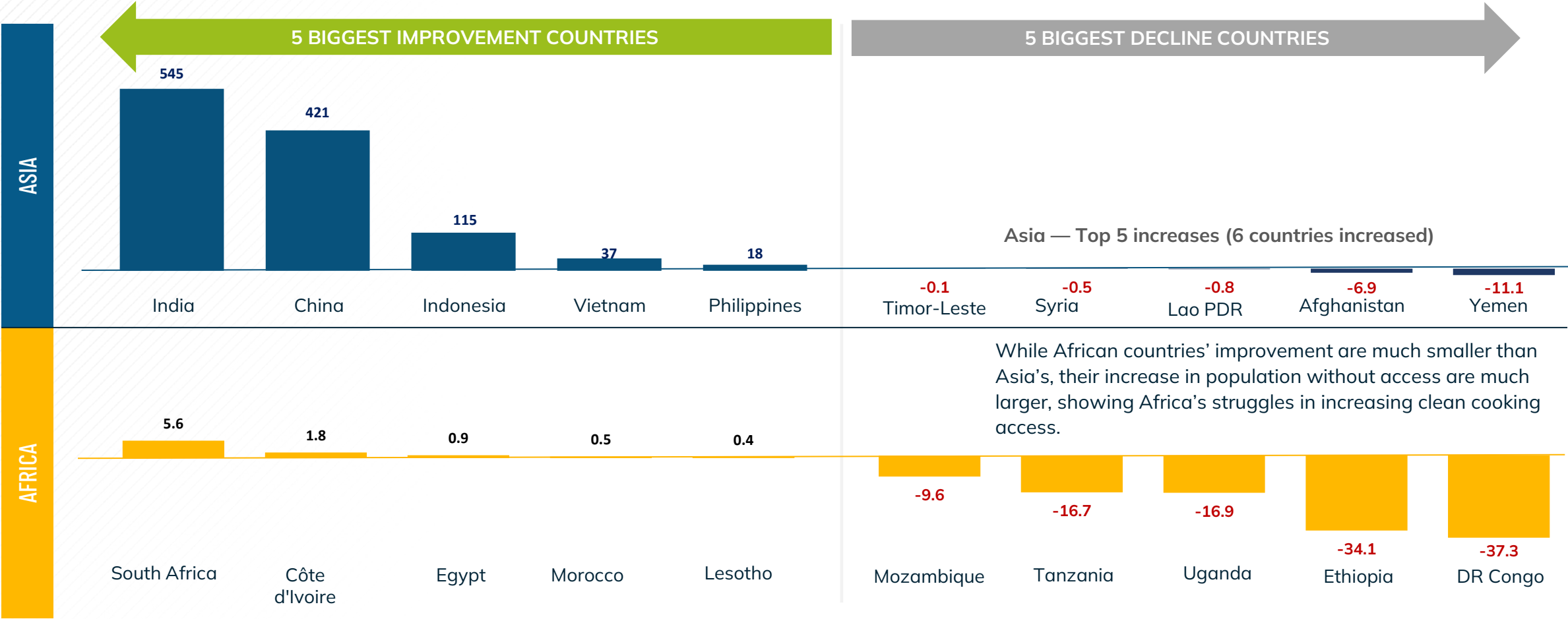
¹ Compound annual growth rate = the average annual growth rate

SOURCE: SEforALL Analysis

DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets; World Bank Total Population data 2026

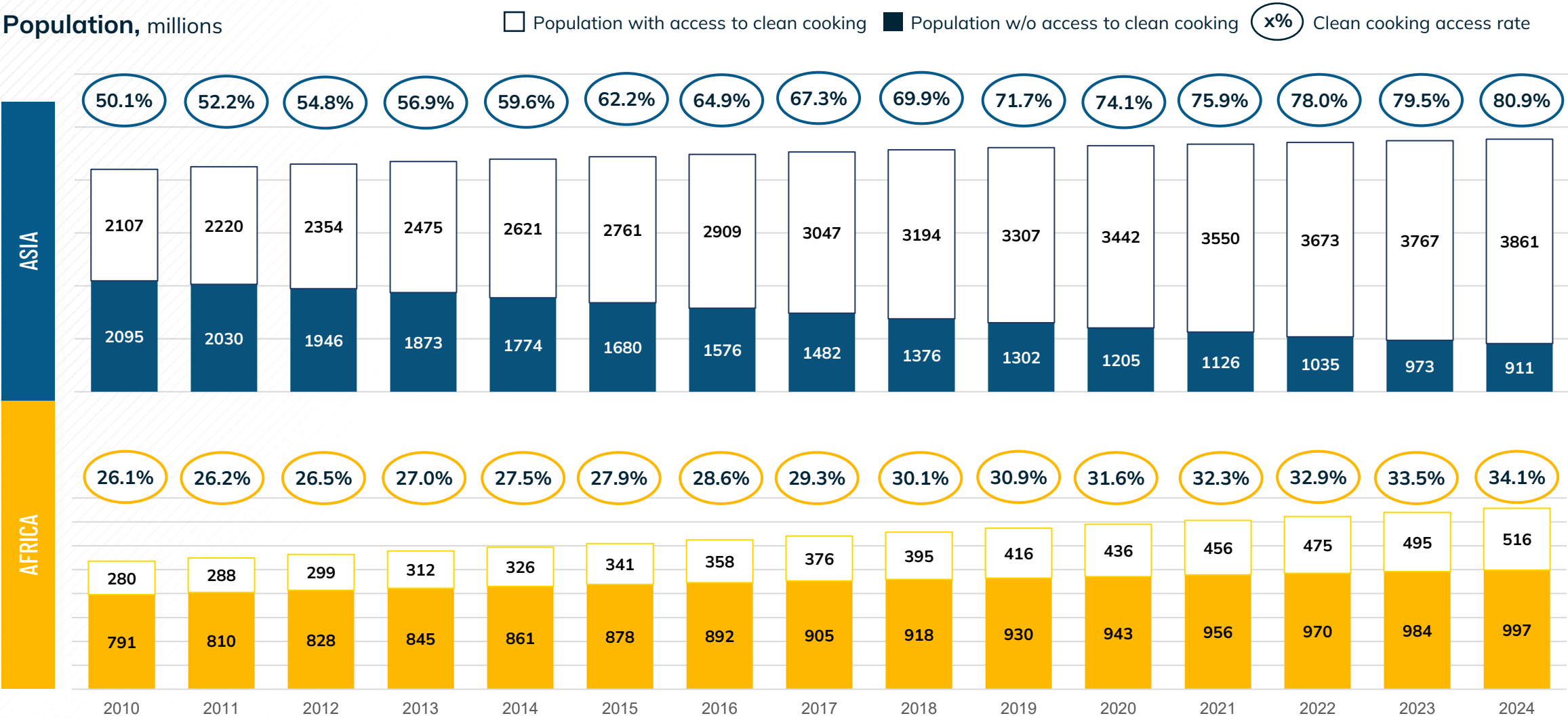
75% of African countries increased the population without access between 2010 and 2024 while more than 68% of Asian countries reduced their access deficit population

Reduction in population without access to clean cooking between 2010 and 2024, millions



NOTE: These figures represent the absolute change in the number of people without access to clean cooking solutions between 2010 and 2024.
SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets; World Bank Total Population data 2026

Asia has reached almost 81% clean cooking access while Africa's rate stays at around a third



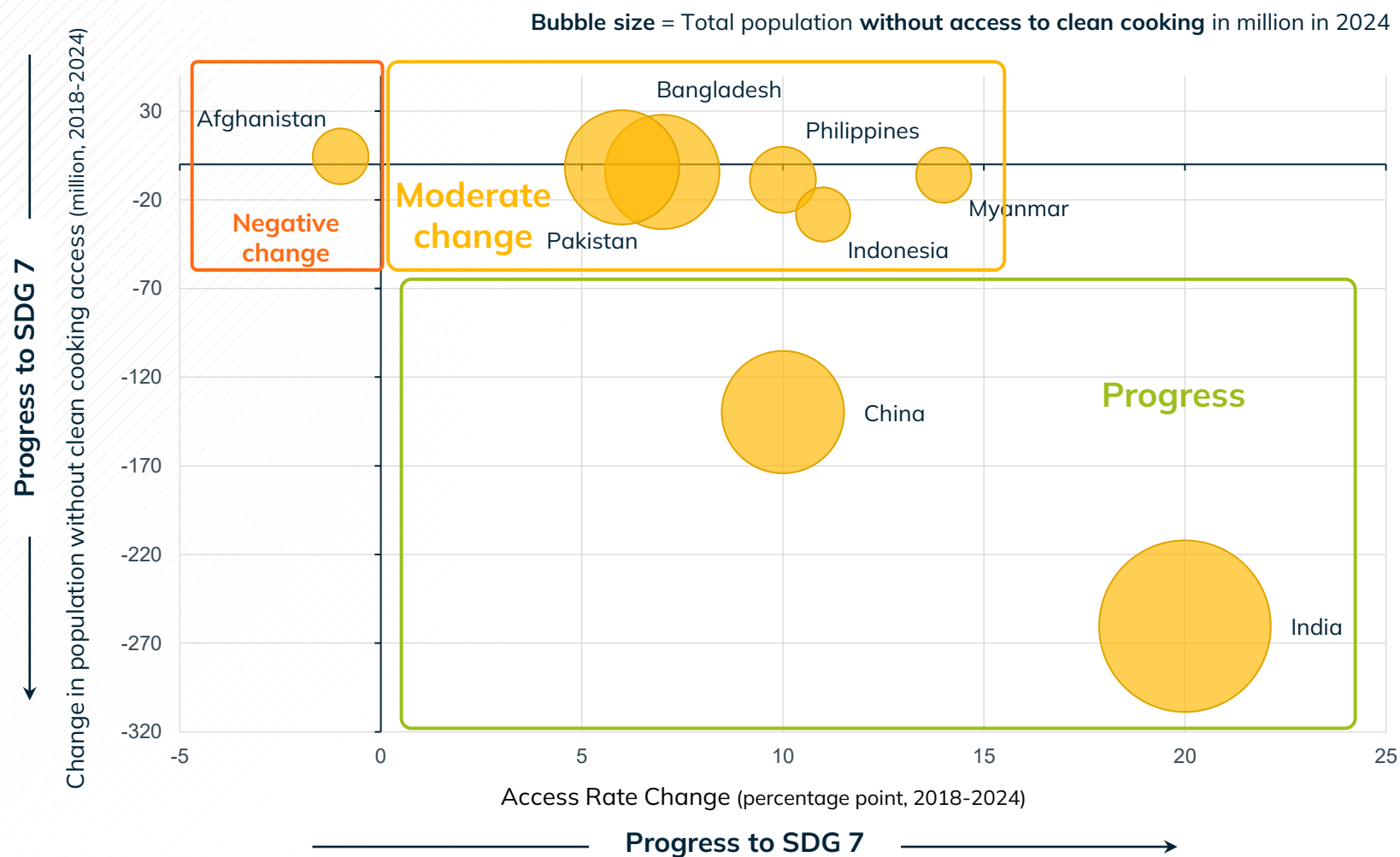
NOTE: The World Bank/ESMAP clean-cooking historical data (through 2024) and the total-population historical data were both updated in the 2026 dataset release.

SOURCE: SEforALL Analysis

DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets; World Bank Total Population data 2026

Asia's clean cooking deficit is falling fast, but almost entirely because of India and China

2024 Population without access vs Changes in population without access and in clean cooking access rates *between 2018 and 2024*

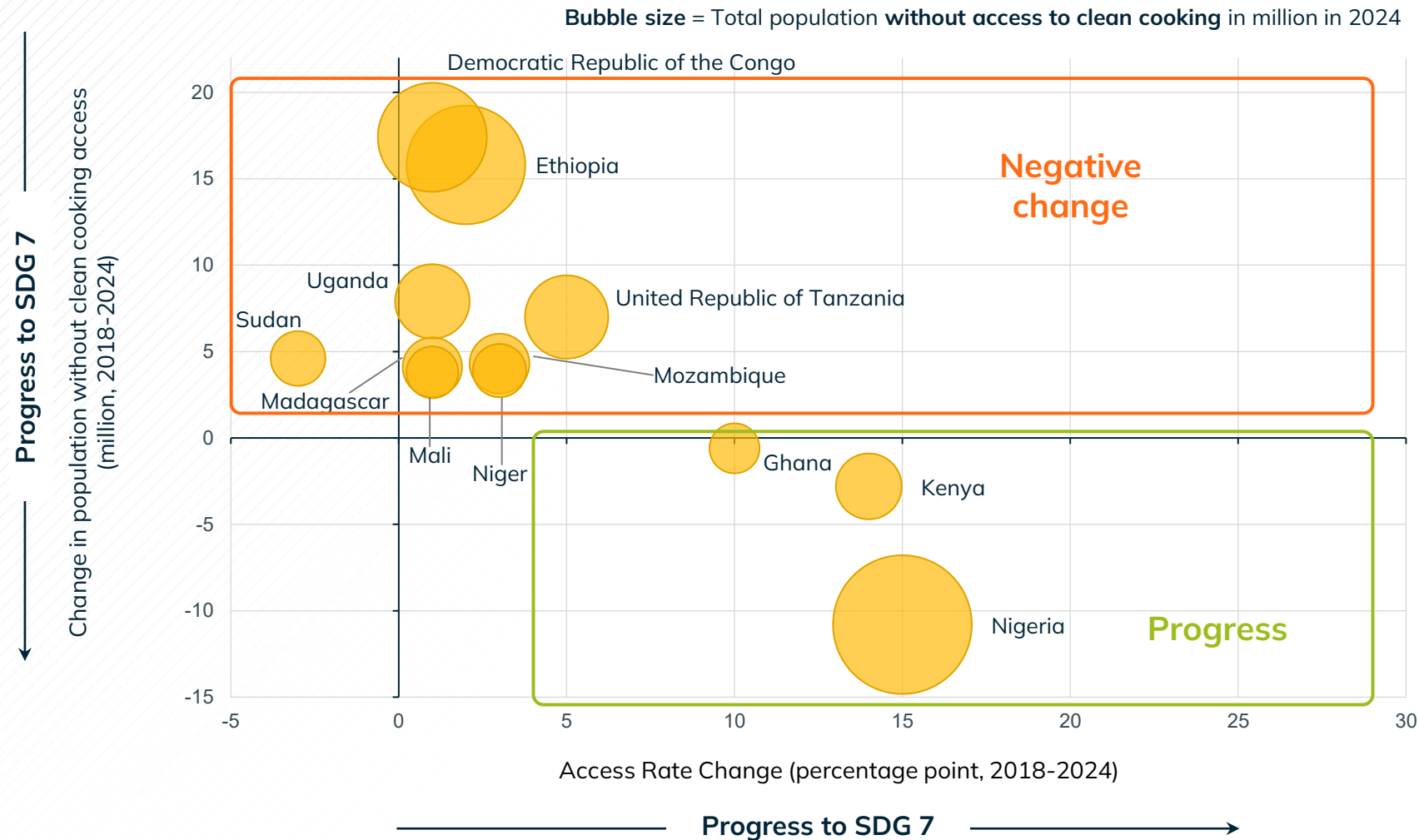


- Most leading Asian countries made meaningful progress over 2018–2024, with one exception: **Afghanistan moved backwards** — its access rate slipped (31%→30%) and its deficit rose 4.5M.
- **India dominates the improvement: a 20-point rise in access (61%→81%) cut its deficit by 260 million** — the largest gain on both measures and about two-thirds of the world's entire net reduction over the period. **China adds a further 140-million cut, so India and China together account for nearly all global progress.**
- Gains this concentrated are fragile: with large deficits remaining elsewhere, efforts must broaden and be sustained.

SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets; World Bank Total Population data 2026

In most of Africa, rising access rates are being outrun by population growth - the deficit keeps climbing

2024 Population without access vs Changes in population without access and in clean cooking access rates *between 2018 and 2024*

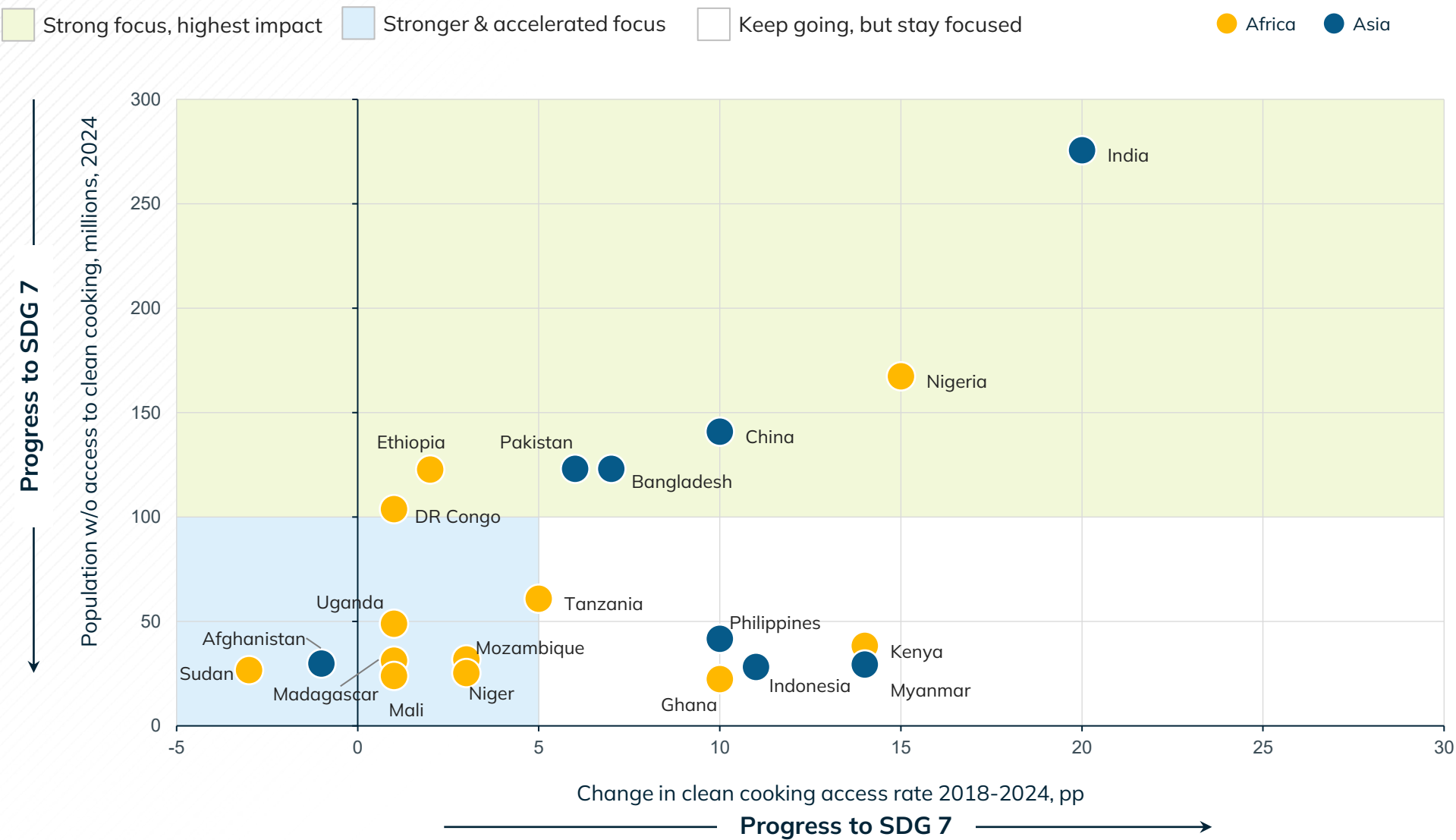


- Of the 12 top African countries, only Nigeria, Kenya and Ghana made real progress (rate up, deficit down). Eight are in a population trap — access rates rose but deficits still grew as population outpaced the gains. Sudan is the lone outright backslider: its access rate fell (50%→47%, -3pp) and its deficit rose 4.6M.
- The trap is concentrating the shortfall in the fastest-growing, lowest-access states — DR Congo (5% access, +17M) and Ethiopia (7%, +16M) now rank among the world's largest deficits and are still rising.

SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets; World Bank Total Population data 2026

A handful of large-deficit countries hold most of the opportunity; slow-progress and backsliding states need tailored strategies

Population without access to clean cooking (2024) vs change in clean cooking access rates (2018-2024) - Top 20 countries

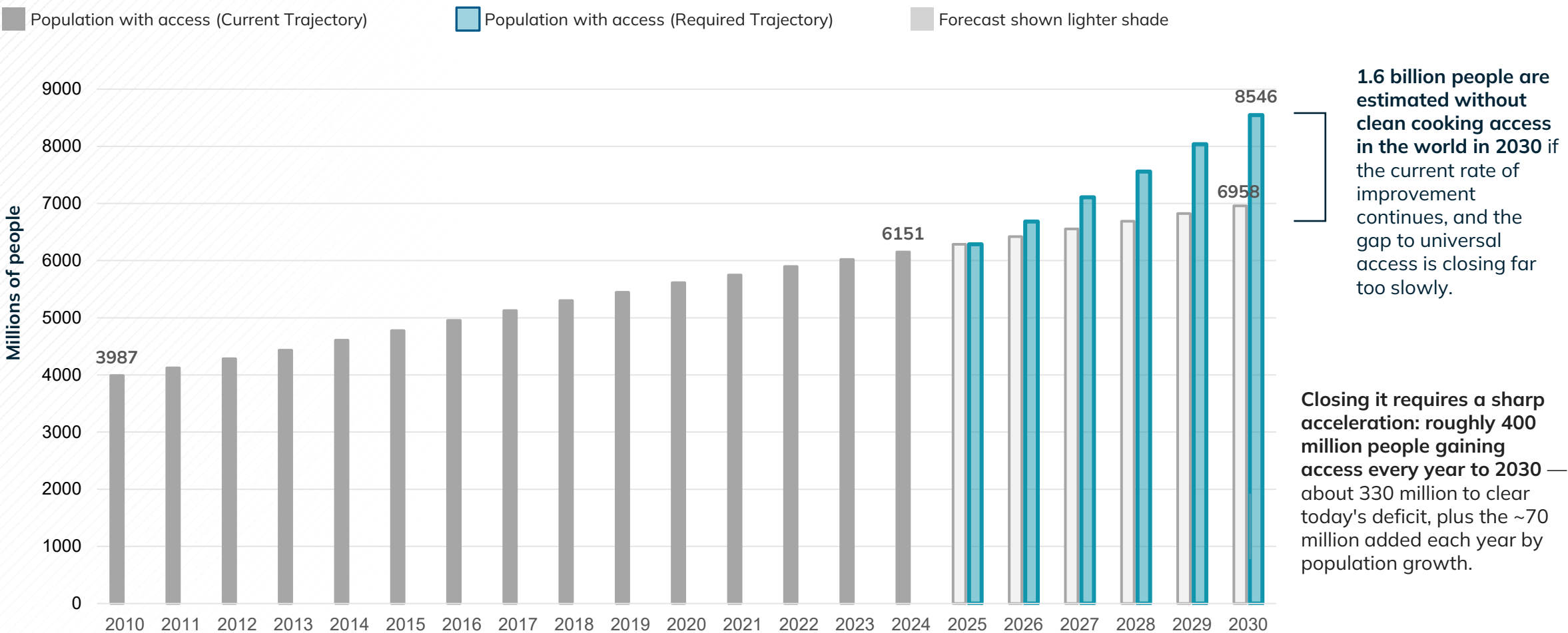


- **Populous countries that combine large deficits with strong recent improvement — India, Nigeria and China — must sustain momentum;** their scale means even fast progress leaves very large numbers without access.
- **Countries with little or negative recent progress need tailored, intensified strategies —** most acutely Afghanistan and Sudan, the only top-20 countries whose access rate actually declined.

SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets; World Bank Total Population data 2026

On current trends, 1.6 billion people - about a fifth of humanity - still lack clean cooking in 2030

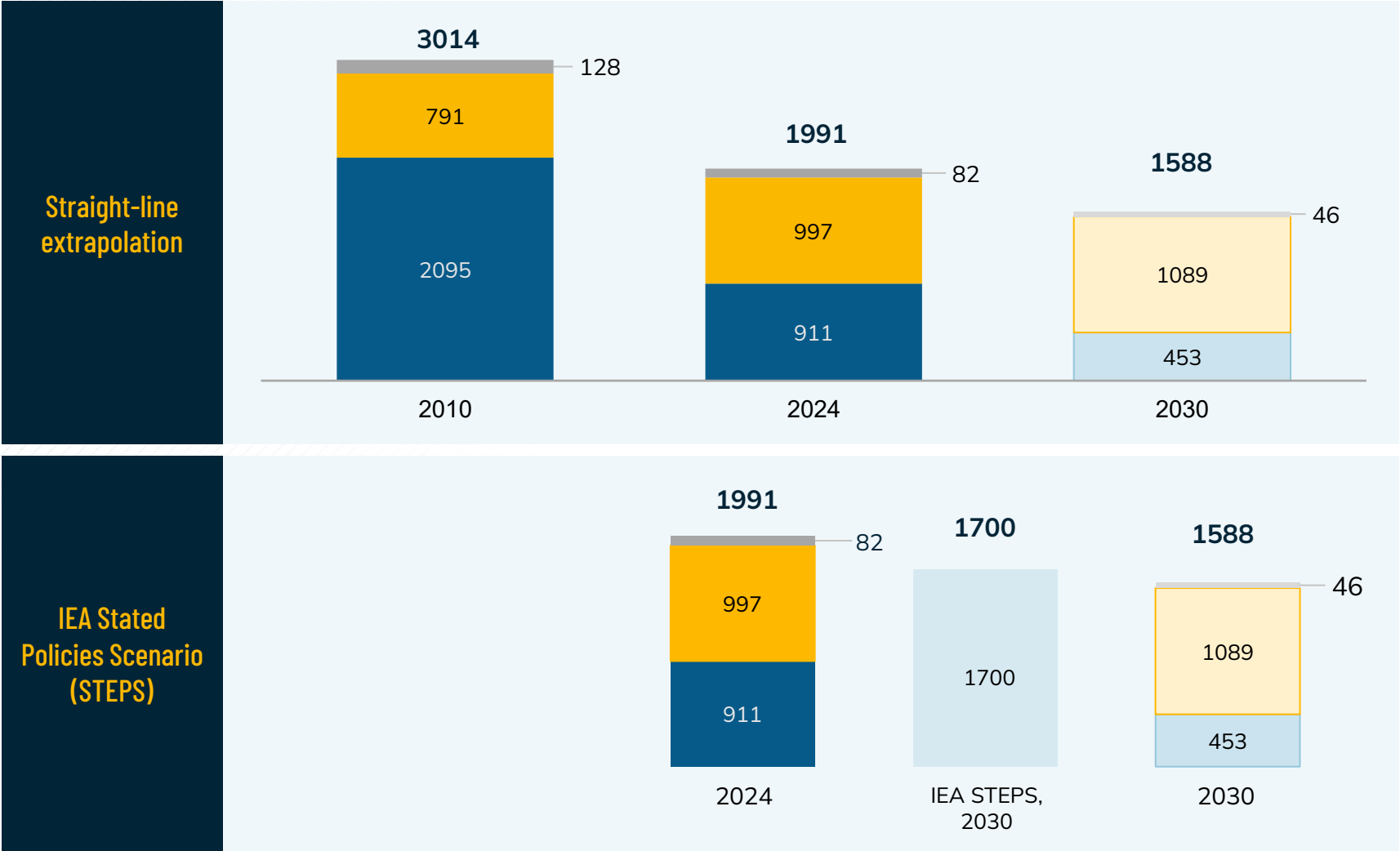
Current trend trajectory vs required trajectory to achieve clean cooking access



NOTE: The “current trajectory” extends the number of people with clean cooking access in a straight line at its 2021–2024 average annual increase ($\approx +135\text{M/yr}$), with the deficit shown as projected population minus that. Regional populations to 2030 are World Bank projections.
SOURCE: SEforALL Analysis.
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets; World Bank Development Indicators (2026)– Population, total, World Bank Data Bank (2026) Population projections and estimates

SDG 7.1.2 is still off track for 2030, and the deficit is shifting decisively from Asia to Africa

Number of people without access to clean cooking, millions Rest of world Africa Asia Forecast shown lighter shade



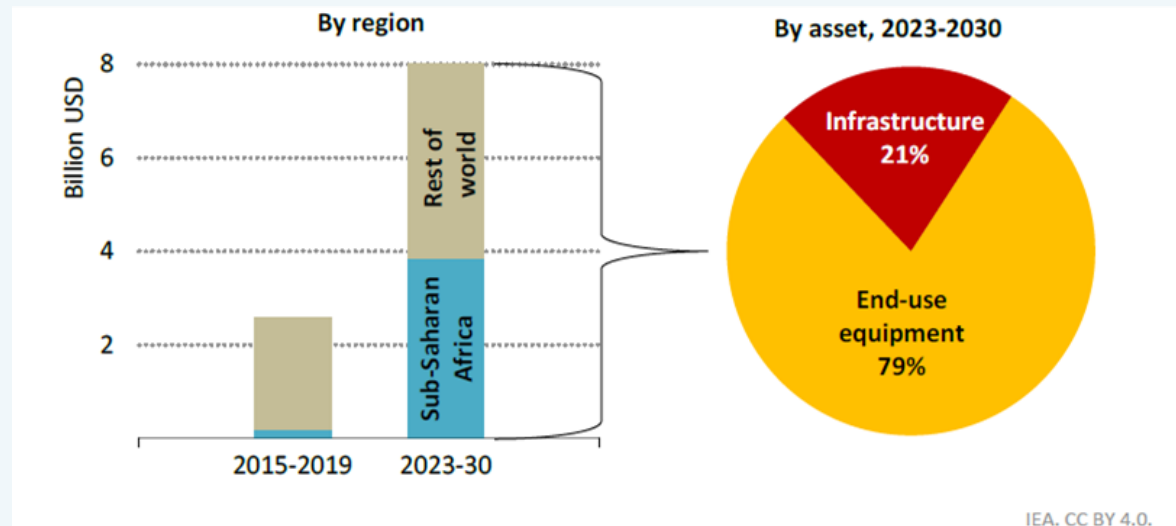
- The straight-line projection has Asia's deficit falling toward 2030 while Africa's keeps rising with population growth. Africa — already the largest regional deficit (997M in 2024 vs Asia's 911M) — becomes the clear epicentre, holding about two-thirds of the global total by 2030.
- IEA's Stated Policies Scenario reaches the same conclusion independently: ~1.7 billion still without clean cooking in 2030 (about 20% of the world), with roughly 940 million in Sub-Saharan Africa.

SOURCE: SEforALL analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report & its Datasets; IEA, SDG7: Data and Projections – Access to Clean Cooking (Stated Policies Scenario)

Average annual investment of USD 8 billion (2022-30) needed for universal clean cooking access

Average annual investment for clean cooking access in the IEA's Access for All Scenario, 2022–2030

Annual investment required in the Clean Cooking Access for All scenario by 2030



Annual investments need to reach USD 8 billion per year until 2030 to achieve access for all, half of which would be in Africa. Most of the investment need is for stoves.

Note: End-use equipment includes stoves, gas cylinders, and biodigesters. Infrastructure includes that for LPG (e.g., importing storage units, refilling stations, bottling facilities, etc.) and the consumer connection cost for electricity (e.g., connection to the grid or an off-grid system). Investment figures include upfront costs only and exclude fuel, energy and operation costs. LPG infrastructure represent the bulk of infrastructure investments as electricity infrastructure is often being expanded to support other end-uses than cooking.

- Today, clean cooking investments are around USD 2.5 billion annually.
- In the IEA's Access for All scenario, this would need to rise to USD 8 billion annually between 2022 and 2030 – requiring a cumulative investment of around USD 60 billion.
- Sub-Saharan Africa makes up around half of these investment needs, standing at almost USD 4 billion annually.
- The required investments in clean cooking through the rest of this decade will need to be split between stoves, accompanying equipment and supporting infrastructure to ensure continued delivery. Roughly 80% of the total investment goes into providing stoves and equipment. The remainder is designated for infrastructure, largely to serve LPG delivery with a smaller share for electricity. This does not account for the investments needed to build up clean cook stove supply chains.

Source: IEA A Vision for Clean Cooking Access for All, 2023

Note: IEA's Access for All Scenario examines practical regional strategies required to guarantee universal access to clean cooking, thereby aligning with the objectives of SDG7

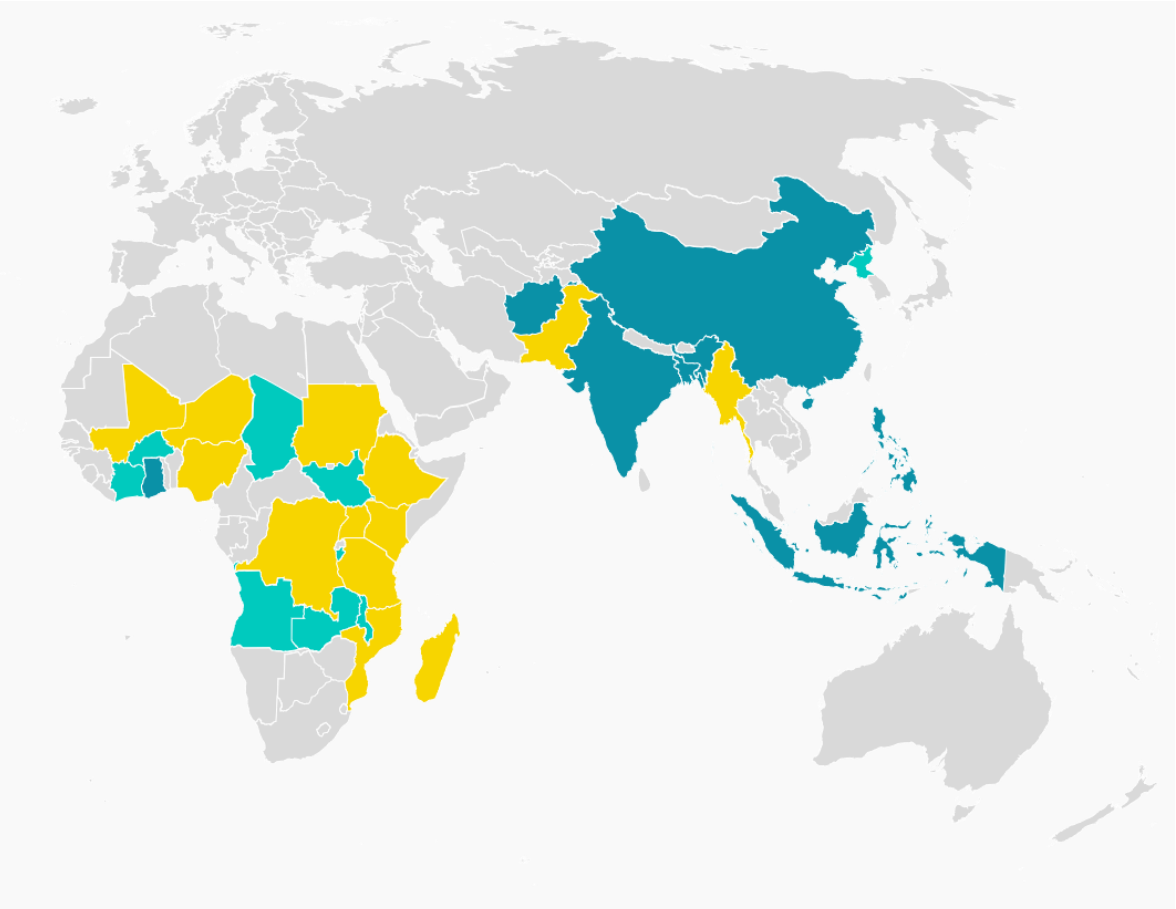
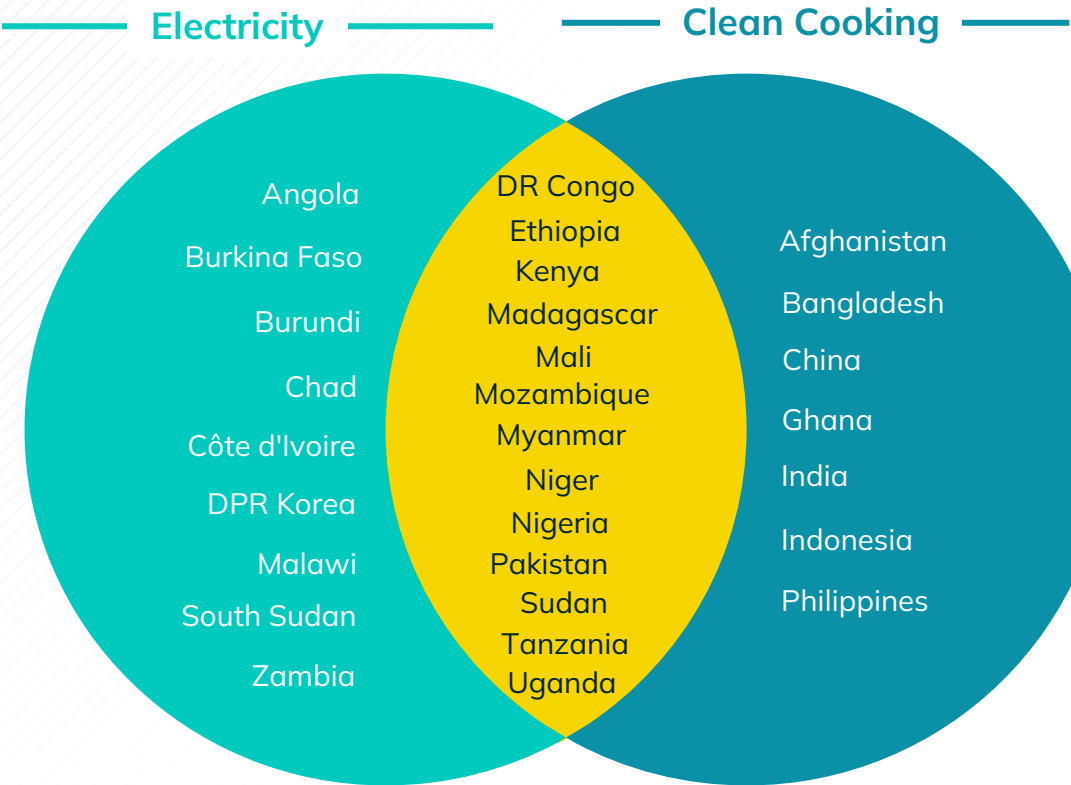
Electrification and clean cooking deficit countries often overlap

13 countries make up both the top 80% of electricity access gap and 75% of clean cooking access gap (these are at the intersection of the Venn diagram below)

COUNTRY OVERLAP BETWEEN ELECTRICITY ACCESS AND CLEAN COOKING ACCESS CHALLENGES

~655 million people lack access to electricity with the countries making the top 80% being...

~2 billion people lack access to clean cooking with the countries making up the top 75% being...



ENERGY. CLIMATE. DEVELOPMENT.

SDG 7.2

Renewable Energy



SDG 7.2 Renewable Energy

1

Renewable energy deployment continues, but progress remains slow in some key regions.

- Renewables accounted for **18.0% of total final energy consumption (TFEC) in 2023**, increasing by just 0.3 percentage points from 2022. **Modern renewables¹ reached 13.4%, up 0.5 percentage points.**
- Since 2010, the global renewable energy share has increased by only 3 percentage points, while **modern renewables have increased by 4.5 percentage points**, indicating that the transition remains gradual.
- Renewable energy use continues to expand unevenly across sectors. Renewable heat remains the largest end use in absolute terms but has recorded the slowest growth since 2010, while renewable electricity has expanded the fastest and transport continues to grow from a low base.

2

Global renewable energy progress remains uneven across regions.

- Africa is the only region where the overall renewable share has declined since 2010, as reductions in traditional biomass use have not been matched by growth in modern renewables. **Modern renewables account for only around 22% of Africa's total renewable energy mix, the lowest of any region, compared to over 70% in every other region.**
- Installed renewable energy capacity per capita has grown fastest in Asia, while Sub-Saharan Africa and the Least Developed Countries continue to record the slowest growth, reflecting persistent disparities in access to modern energy.
- **The 20 largest energy-consuming countries account for around 75% of global energy consumption, yet only 16% of their energy comes from renewables**, giving them a disproportionate influence on global progress.
- **International public financial flows to developing countries reached USD 24.6 billion in 2024, just 1% above 2023** and still only 78% of their 2016 peak.

3

Looking forward, accelerating renewable energy deployment will require faster growth where the gap is largest.

- Current trends project the modern renewable share of TFEC to reach only around 15.5% by 2030, below the IEA Stated Policies Scenario (19%) and less than half the approximately one-third share required under the IEA Net Zero Emissions Scenario.
- **Global renewable energy investment remains around three-quarters of the level required under the IEA Net Zero pathway, with more than 80% concentrated in China and advanced economies**, underscoring the need to scale investment in developing countries.

Methodology - Description

Data Sources



- The following data was gathered from World Bank/ ESMAP's Tracking SDG 7 database ([download link](#)):
 - The total share of renewables in total final energy consumption in the world between 2010 and 2023.
 - The total share of renewables in total final energy consumption per country and per region between 2010 and 2023
 - The share of modern renewables in total final energy consumption per country and per region between 2010 and 2023
 - International financial flows to developing countries in support of clean energy research and development and renewable energy production, including in hybrid systems between 2010 and 2024
 - Installed renewable power installed capacity in developed and developing countries (in watts per capita) between 2010 and 2024
- The following data was gathered from the IEA's publications and their datasets:
 - Energy investment by sector and by region (World Energy Investment 2026)

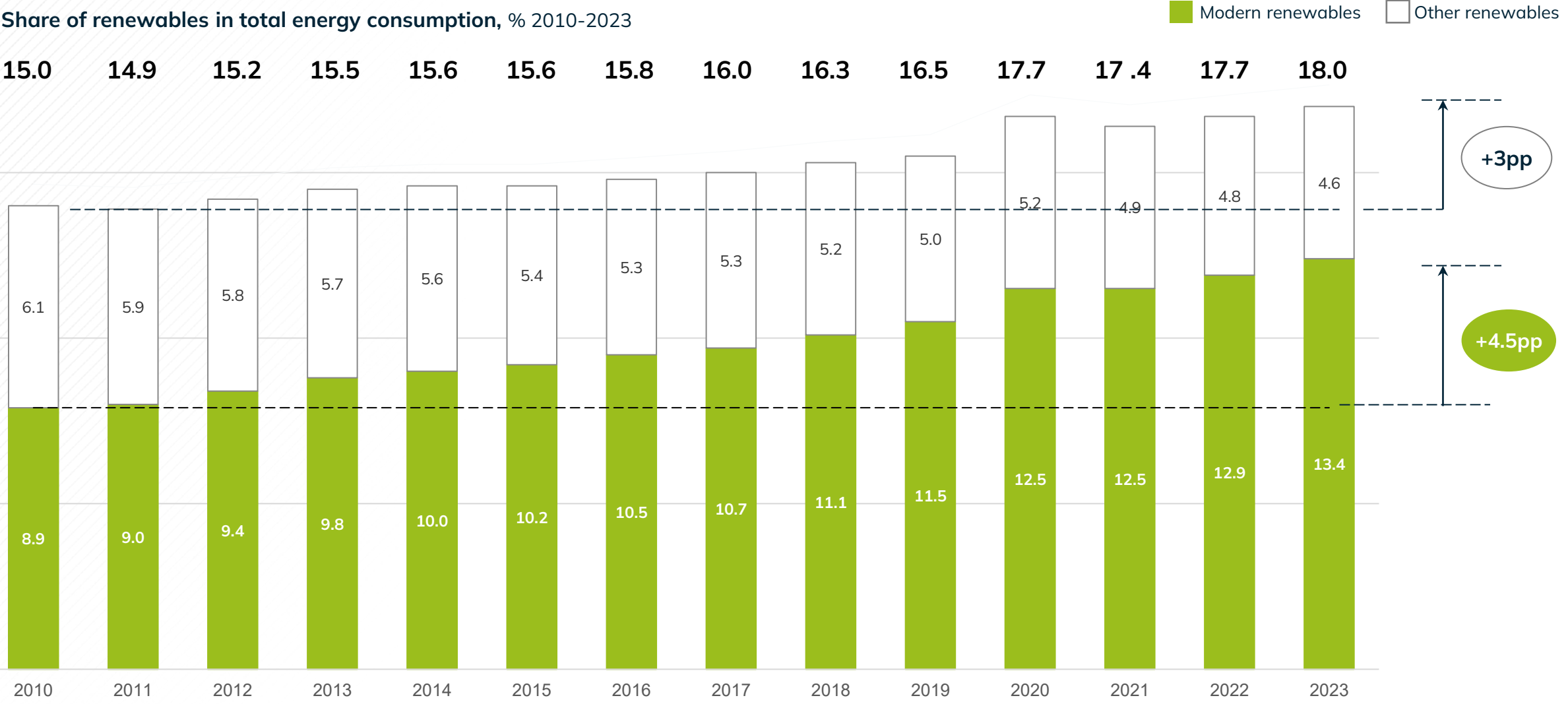
Projections



The straight-line extrapolation projection was made via the following process:

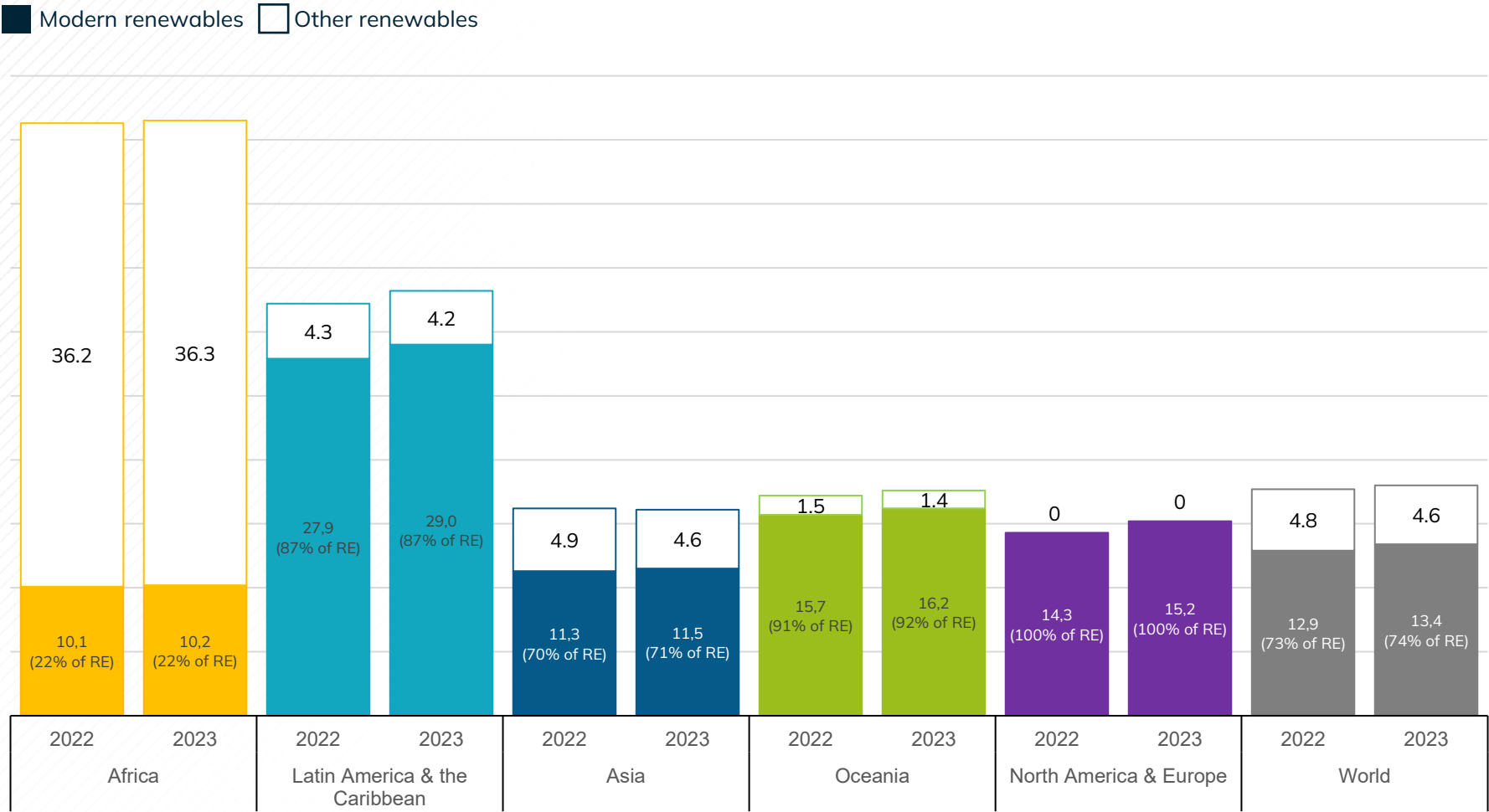
- The annual rate of change (percentage-point change per year) in the share of renewables in final energy consumption was calculated at a global level using a linear fit to 2020–2023 data
- The share of renewables in the energy mix was projected forward to 2030 by extending this linear trend at the calculated annual rate of change

The share of renewables and that of modern renewables in total energy consumption increased by 3pp and 4.5pp, respectively, in 2010-23



Today, the share of renewables in the total energy consumption is 18%, 13.4% of which is modern renewables

Share of renewables in total final energy consumption by region, %, 2022 and 2023



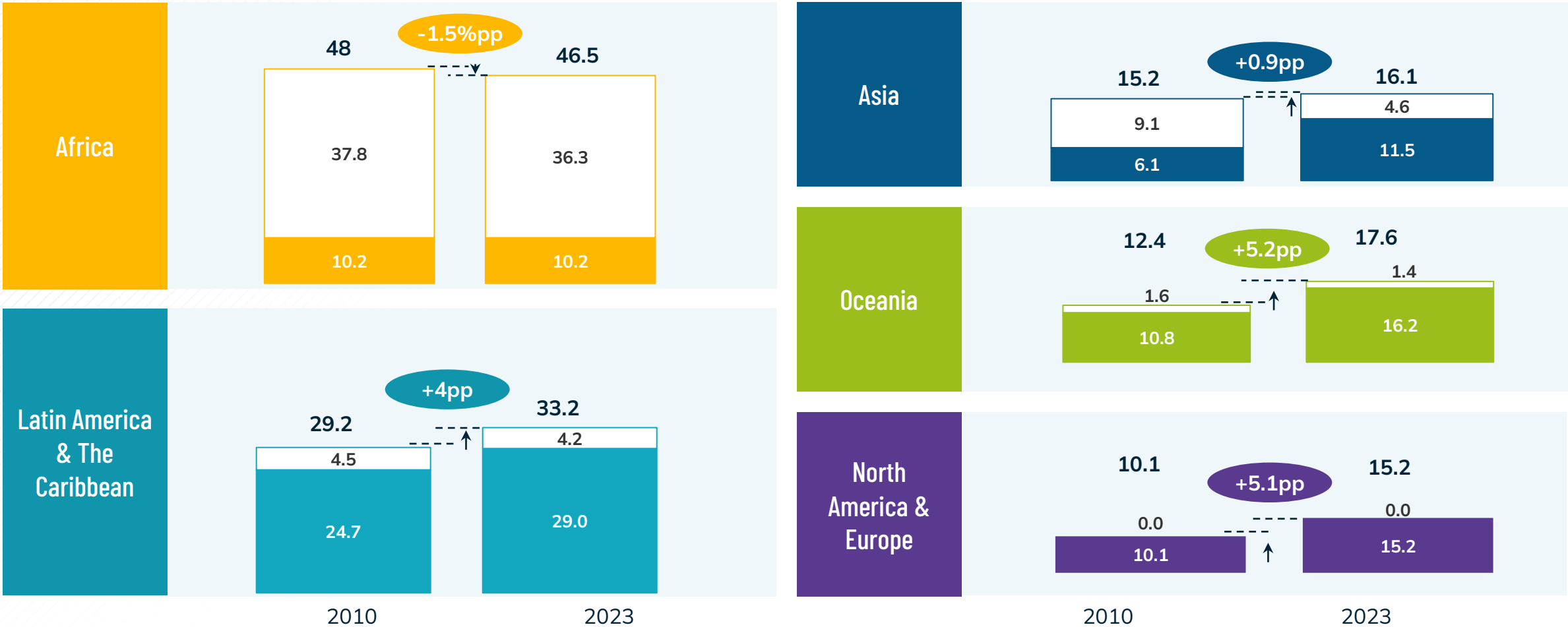
- The world had only 13.4% of modern renewables (excluding traditional biomass) in its Total Final Energy Consumption (TFEC) in 2023 with a minor increase of +0.5 percentage points since 2022.
- The World and all regions, except Latin America & the Caribbean, showed stagnating results - an improvement of less than 1 percent point - in both renewable share and modern renewable share in TFEC in 2023, compared to 2022.
- Latin America & the Caribbean showed advancements in modern renewable energy, with an increase of 1.1% in 2023, compared to 2022.

SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets

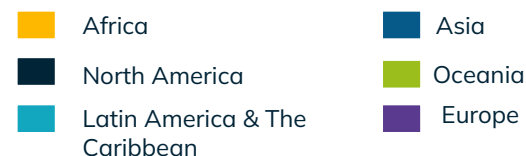
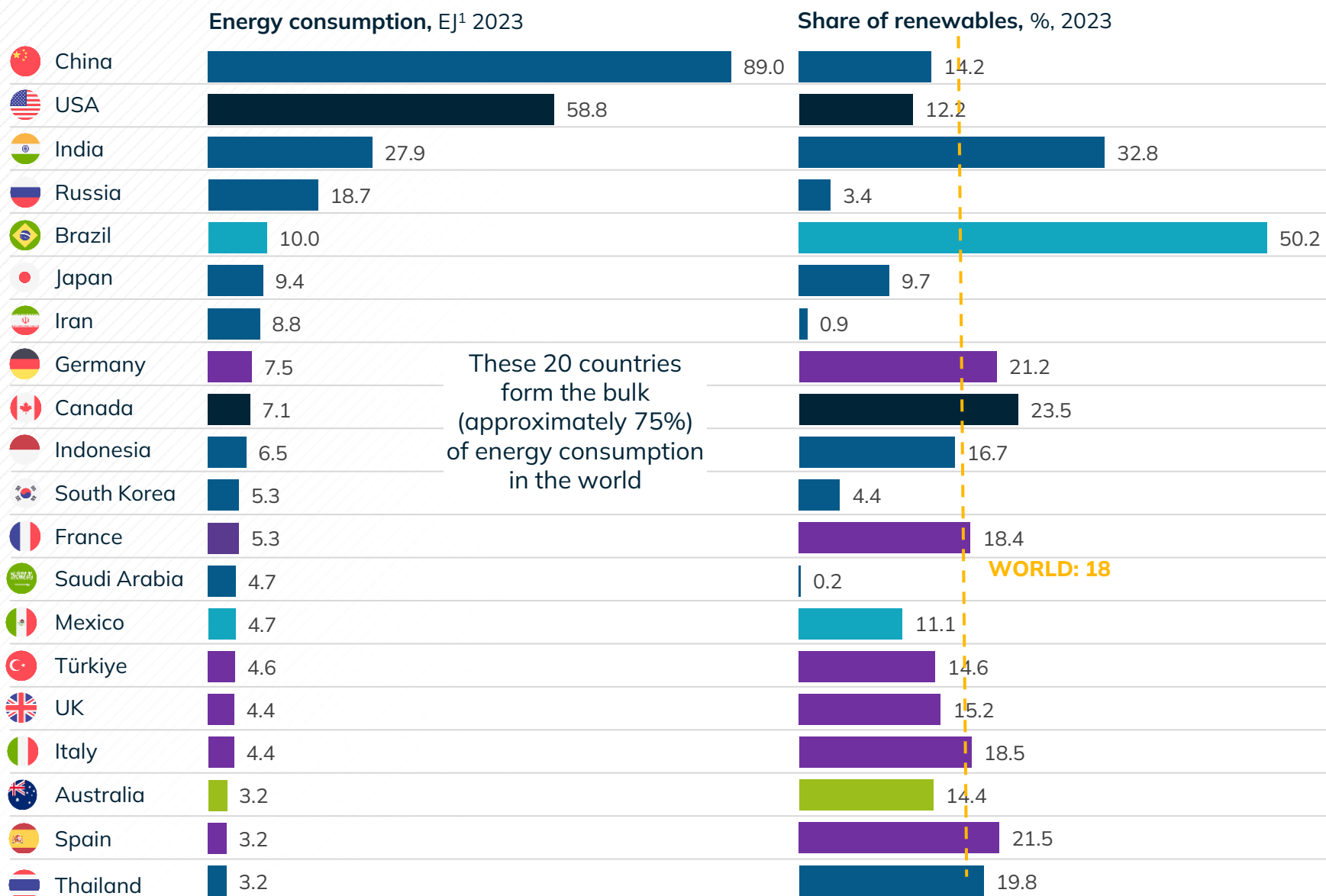
Africa is the only region that regressed since 2010 although share of modern renewables remaining stagnant.
Other regions have shown some progress (although slow) in share of RE with Oceania leading with 5.2pp increase

Share of renewables in energy consumption by region, %, 2010 and 2023

Modern renewables Other renewables



Only 16% of the total final energy consumed by the top 20 energy-consuming countries are from renewables



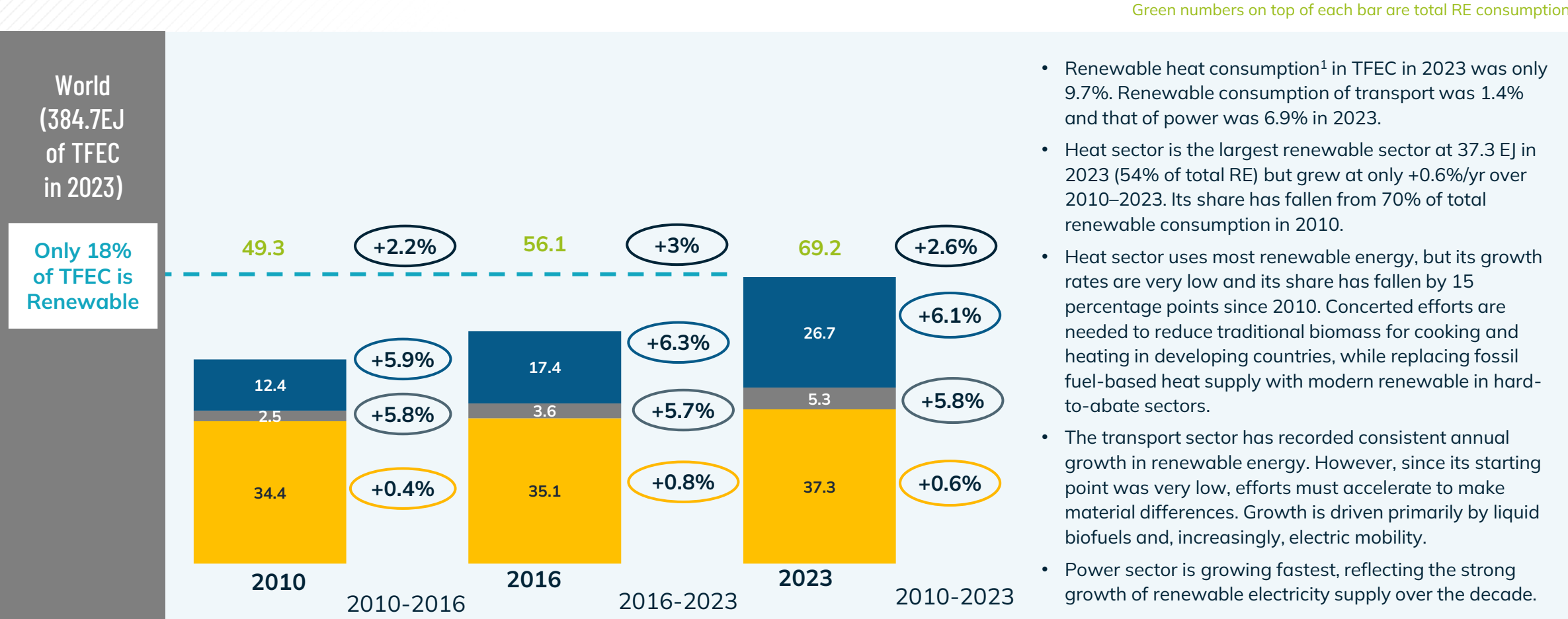
- Only 8 countries out of the top 20 energy-consuming countries have a higher share of renewables in their energy TREC than the world average.
- Only 45.6 EJ (16%) in 286.6 EJ TREC of top 20 countries come from renewables
- To substantially increase RE share in TREC, fortifying efforts in all sectors in these top 20 High-Impact Countries will be most effective, especially in high consumption countries with low renewable / modern renewable shares such as China, the United States, and Russia.
- If China and the United States (12.2%) alone raised their renewable energy (RE) share to the 18% world average, global RE share would increase by 1.8 percentage points.²

1: EJ = Exajoule = 1000 PJ

2: Assuming all other countries' energy consumption and renewable shares remain unchanged

Heat has the largest renewable consumption, but its share is continually reducing while power sector has the strongest growth rate

Total renewables in heat, transport, and electricity final energy consumptions (EJ) in 2010, 2016 and 2023



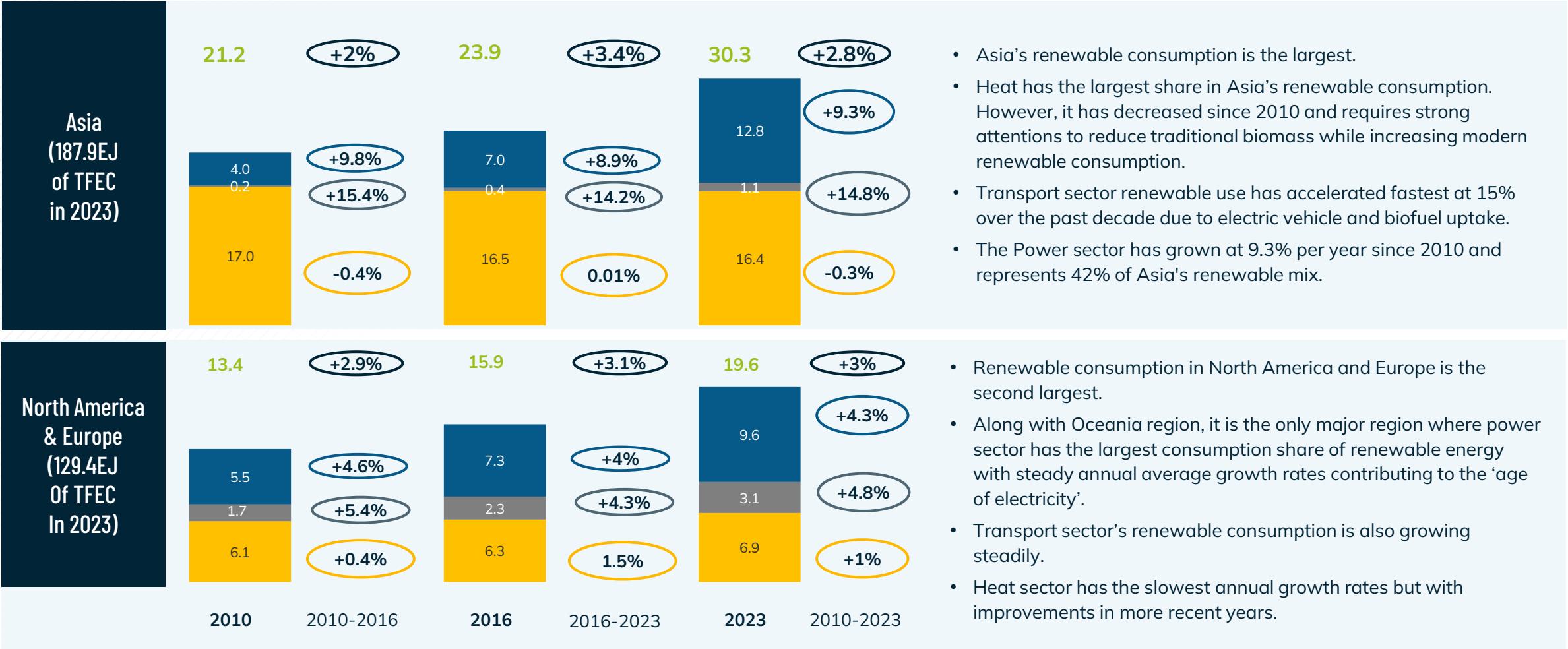
¹ Covers final consumption of renewable energy for heat raising purposes (including cooking), excluding electricity in all sectors excluding transport: manufacturing industries, construction and non-fuel mining industries, residential, commercial and public services, agriculture, forestry, fishing and not elsewhere specified.

SOURCE: SEforALL Analysis

DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets

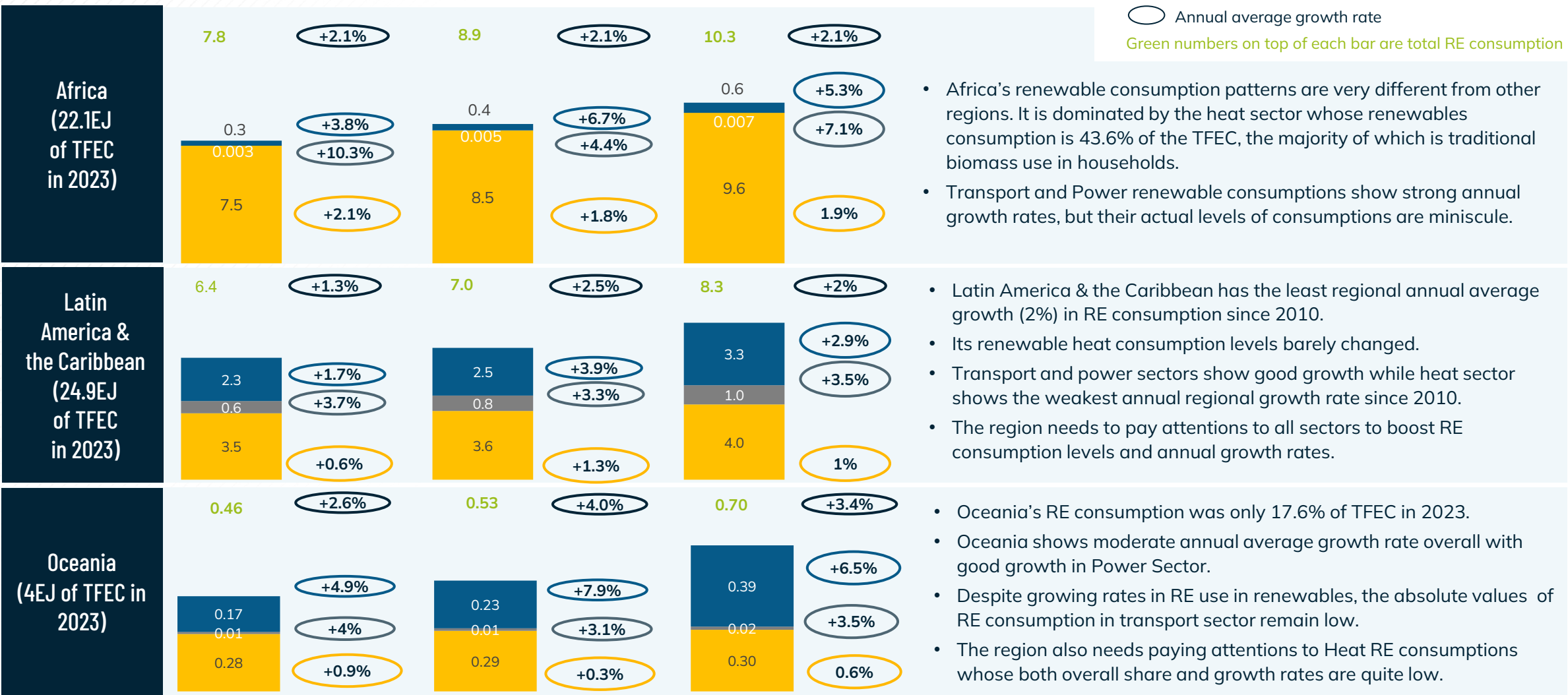
Asia is the only region where renewable heat consumption is declining, even as its Power sector records strong growth. RE consumption in Power sector in North America & Europe exceeds that of Heat sector.

Renewables total, heat, transport and electricity final energy consumption by region, EJ, 2010, 2016, 2023



Africa's renewable energy consumption patterns are very different from other regions, with growth needed in modern renewable Heat, Power and Transport. Oceania also needs to accelerate renewable energy consumption across all sectors

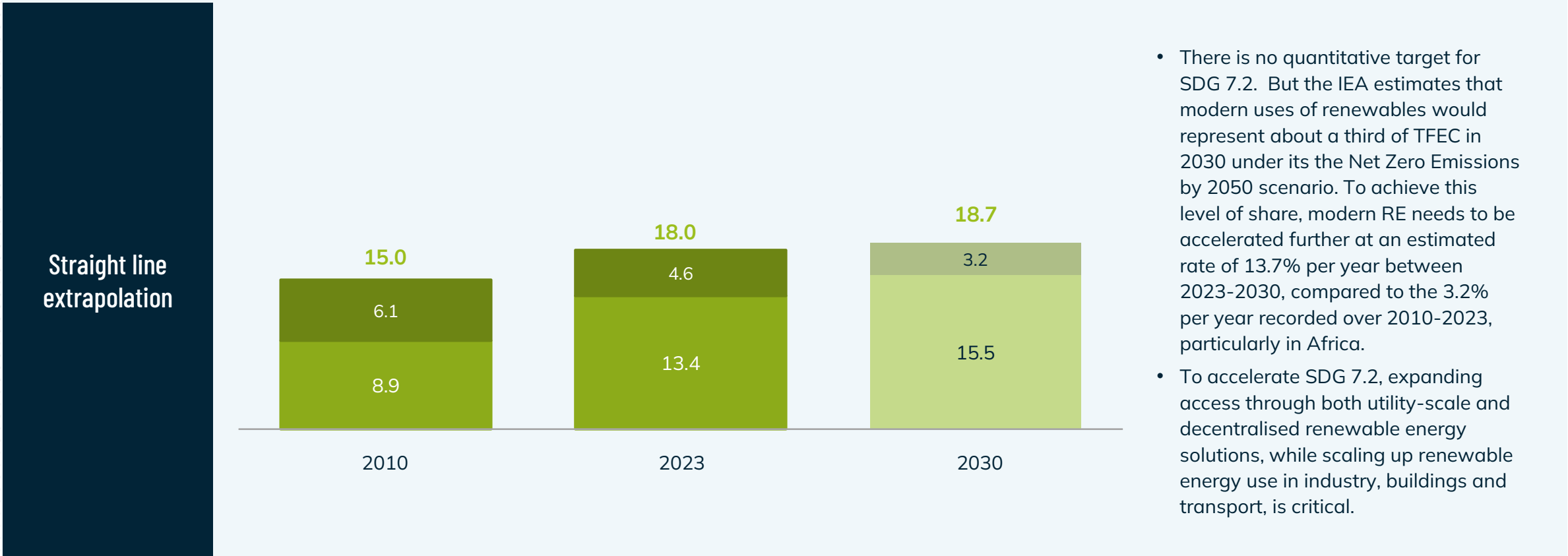
Renewables total, heat, transport and electricity final energy consumption by region, EJ, 2010, 2016, 2023



Projections show that we could see very slow progress and moderate gains to 2030

Share of renewables in energy consumption, %

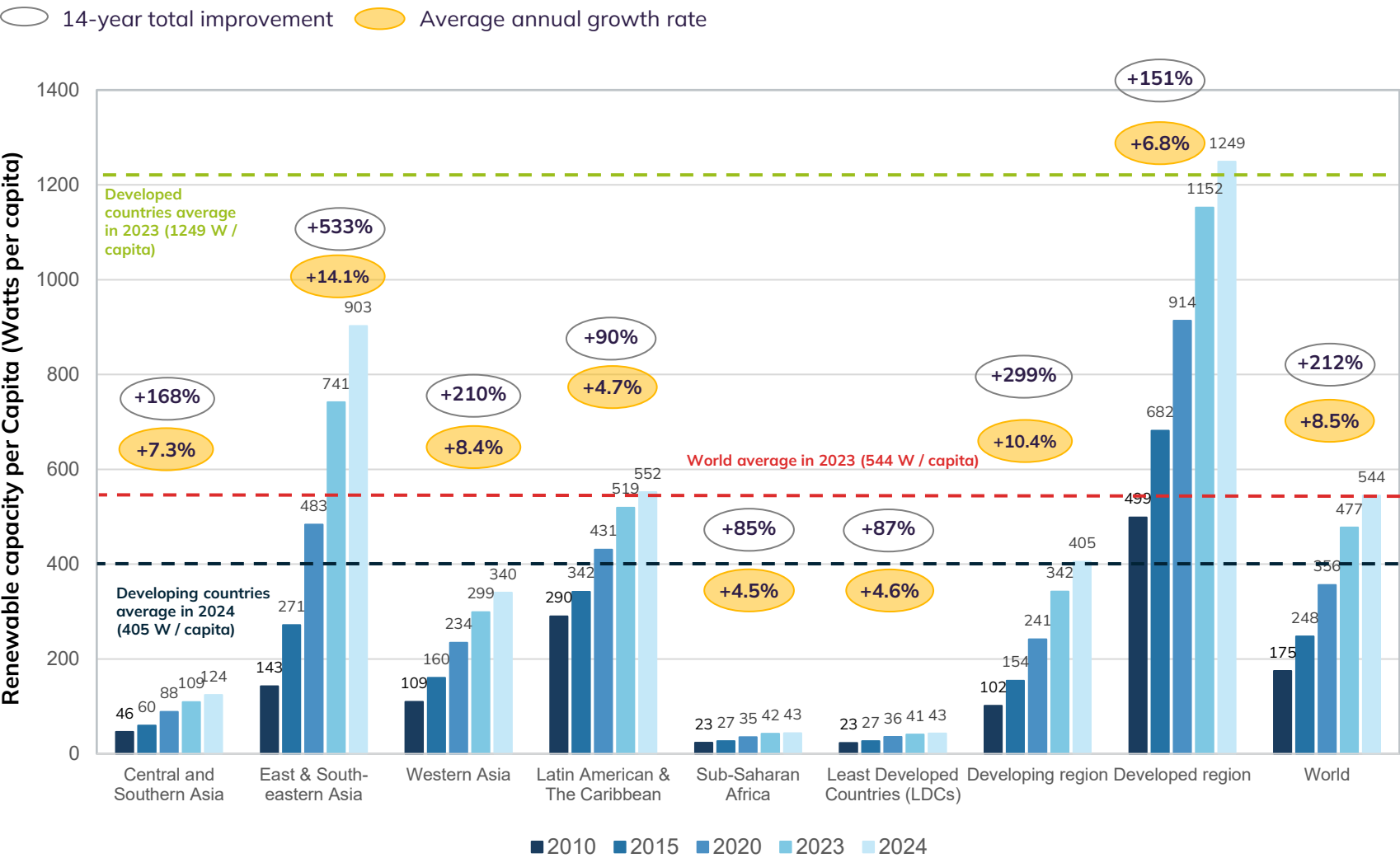
■ Modern renewables ■ Other renewables □ Forecast shown lighter shade



SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report & its Datasets

Sub-Saharan Africa’s renewable capacity per capita is quite low, while Asia’s advancement has been strong since 2010

Renewable capacity per capita by region and development status, 2010, 2015, 2020, 2023, 2024 Watts per capita

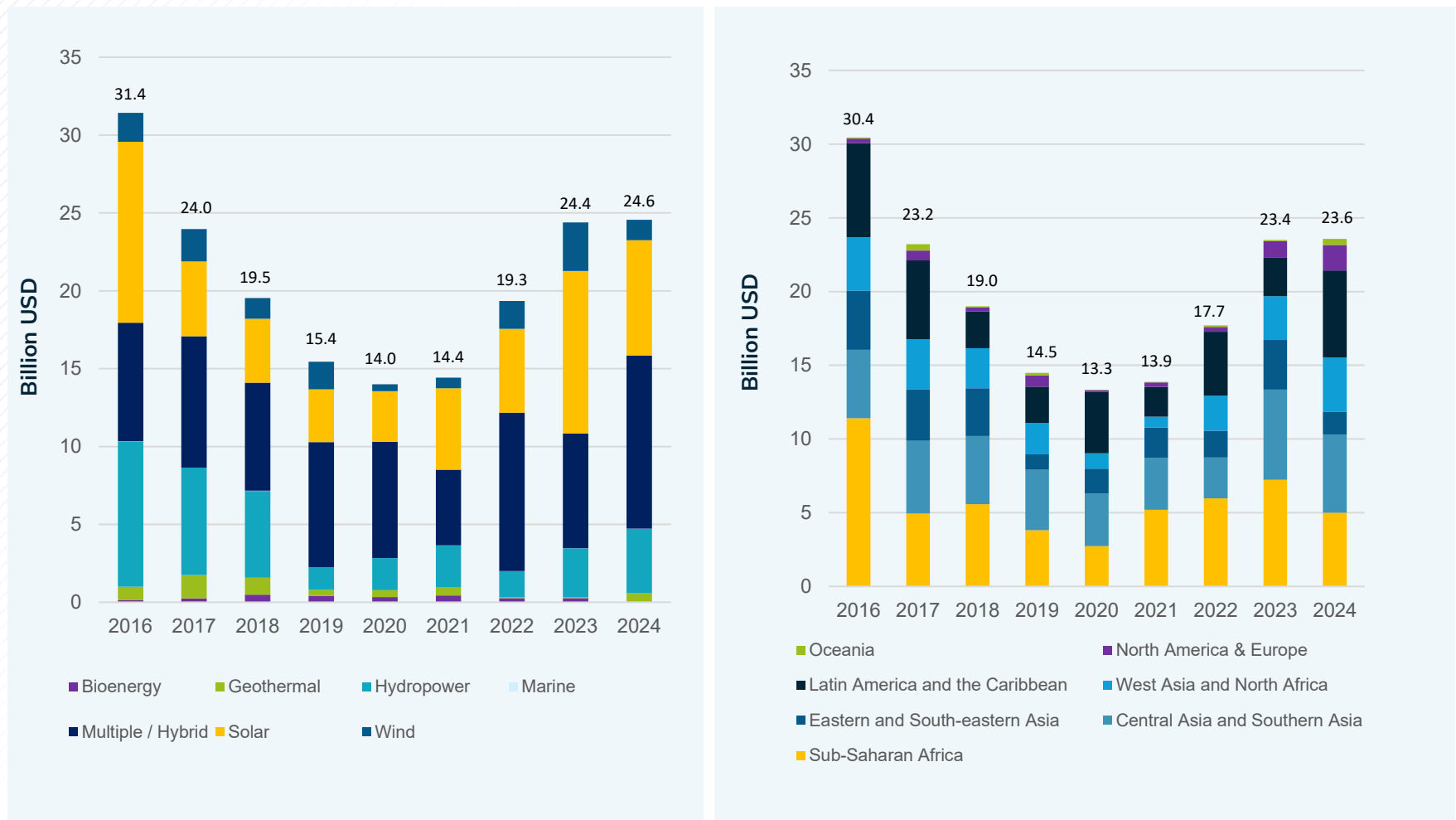


- Renewable power generating capacity per capita in Sub-Saharan Africa (SSA) and LDCs (many in SSA) is much smaller and shows slower growth than in Asia, corresponding to slow pace of electrification and capacity expansion in SSA.
- All Asian sub-regions have made strong progress since 2010, with most exceeding average growth rates of developed countries.
- Eastern and South-East Asia and Latin America and the Caribbean show higher capacity per capita than the developing country average.
- Central and Southern Asia's low renewable energy capacity per capita, despite strong progress in electrification and renewable energy deployment in India, Bangladesh and Pakistan, reflects the challenge of scaling RE capacity fast enough to keep pace with large and growing populations.

SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets

International public financial flows to support Clean and Renewable Energy in developing countries has barely increased between 2023 and 2024, and remains far below the 2016 level

International Public Investment in Renewable and Clean Energy to Developing Countries, 2016-2024



- International public financial flows in support of renewable and clean energy peaked in 2016 (around 31.4 billion USD). It declined steadily since 2016, bounced back in 2022 and 2023 (19.3 and 24.4 billion USD respectively).
- However, in 2024 the investment has barely increased (24.6 billion USD and was 78.3% of the 2016 amount).
- Multiple technology (hybrid) projects have received the largest support for the past 5 years (2020 onwards) in total (USD 40.9 billion), followed by solar energy (USD 31.7 billion).
- Hydropower collapsed from its 2016 peak but has partially rebounded in the last two years.
- Sub-Saharan Africa received the largest amount in total (USD 26.1 billion USD) between 2020 and 2024, followed by Central and Southern Asia (USD 21.3 billion) and Latin America and the Caribbeans (USD 19 billion).

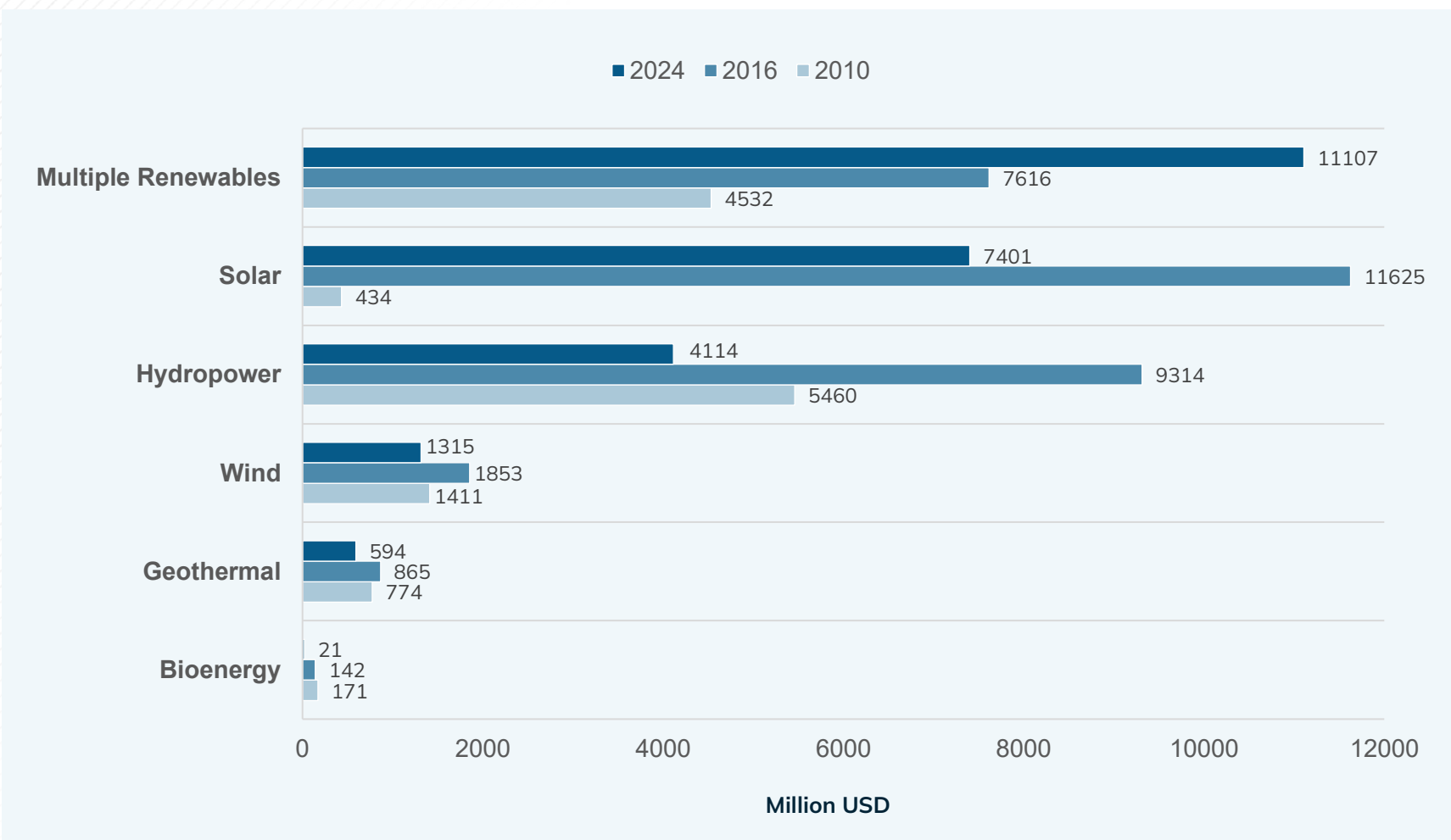
Note: Totals by technology and by region may differ because some investments are not allocated to a specific region and are therefore excluded from the regional breakdown.

SOURCE: SEforALL Analysis

DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets

Solar and Multiple hybrid technology projects have the highest investment share for the past decade

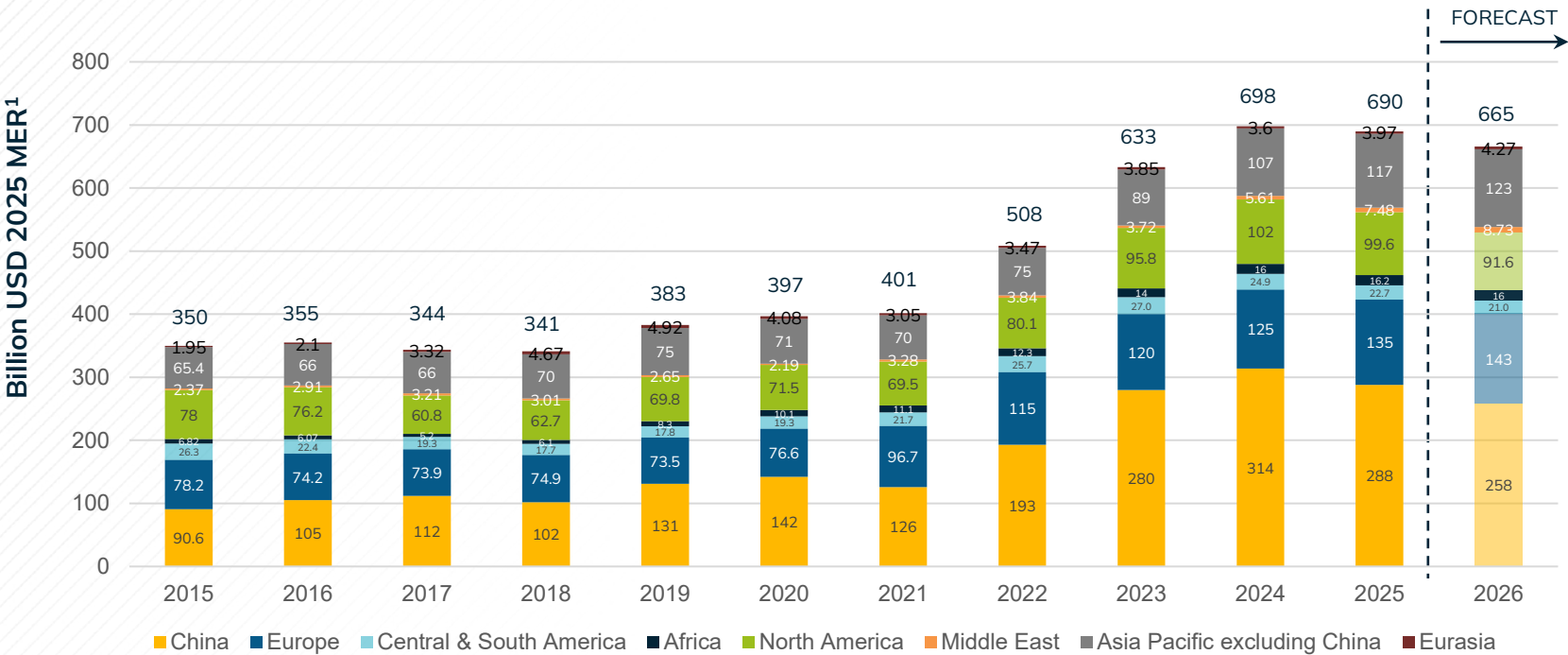
International Public Investment in Renewable and Clean Energy in Developing Countries, 2010, 2016 and 2024



- Solar’s 2024 investment was almost 17-fold increase from 2010 but 36% less than the peak in 2016.
- Hydropower investments have greatly reduced since 2010 (56% collapse from its 2016 peak) showing shifting technology preferences.
- In 2024, Solar and Multiple technology projects have the largest investment share.
- Where resource endowment permits, diversifying energy resources could bring energy security benefits and system resiliency. Wherever suitable, bioenergy, geothermal energy and hydropower should be considered for investment, as they are non-variable renewables that can support system integration.

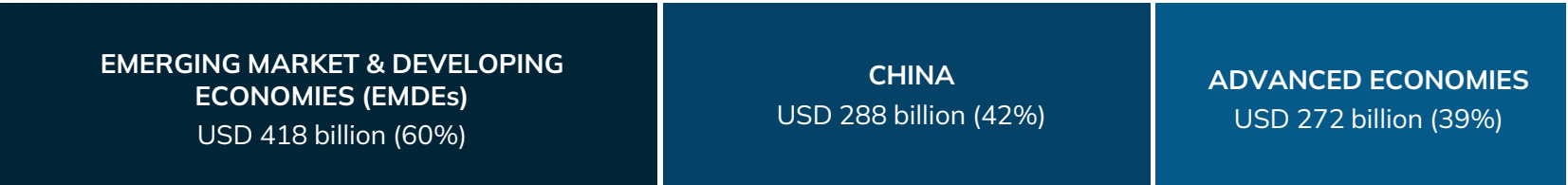
Global renewable power investment fell 1% to USD 690 billion in 2025 and is estimated to decrease further in 2026, despite record capacity additions growing 15.5% to a record 692 GW driven by falling technology costs

Renewable Power Investment, Billion USD 2015-2025



- The global investment in renewable power reached USD 690 billion in 2025, a 1% decrease from 2024. driven by falling solar technology costs, reducing the investment required per gigawatt of installed capacity.
- The investments have unevenly changed among geographies.
- China (42%) surpassed the Advanced Economies (39%) in Renewable Power Investment in 2025 for the third consecutive year. Together, they accounted for 81% of the total investment in 2025.
- China's investment in renewable power retreated in 2025-2026 as low-cost domestic solar equipment reduce per GW spending.
- Asia Pacific (including China) accounted for 54% of total investment made between 2015 and 2026.
- Africa is projected to receive just 2.4% of the global total investment in renewable power in 2026 despite doubling absolute RE investment from 2015-2026.

Renewable Power Investment, 2025



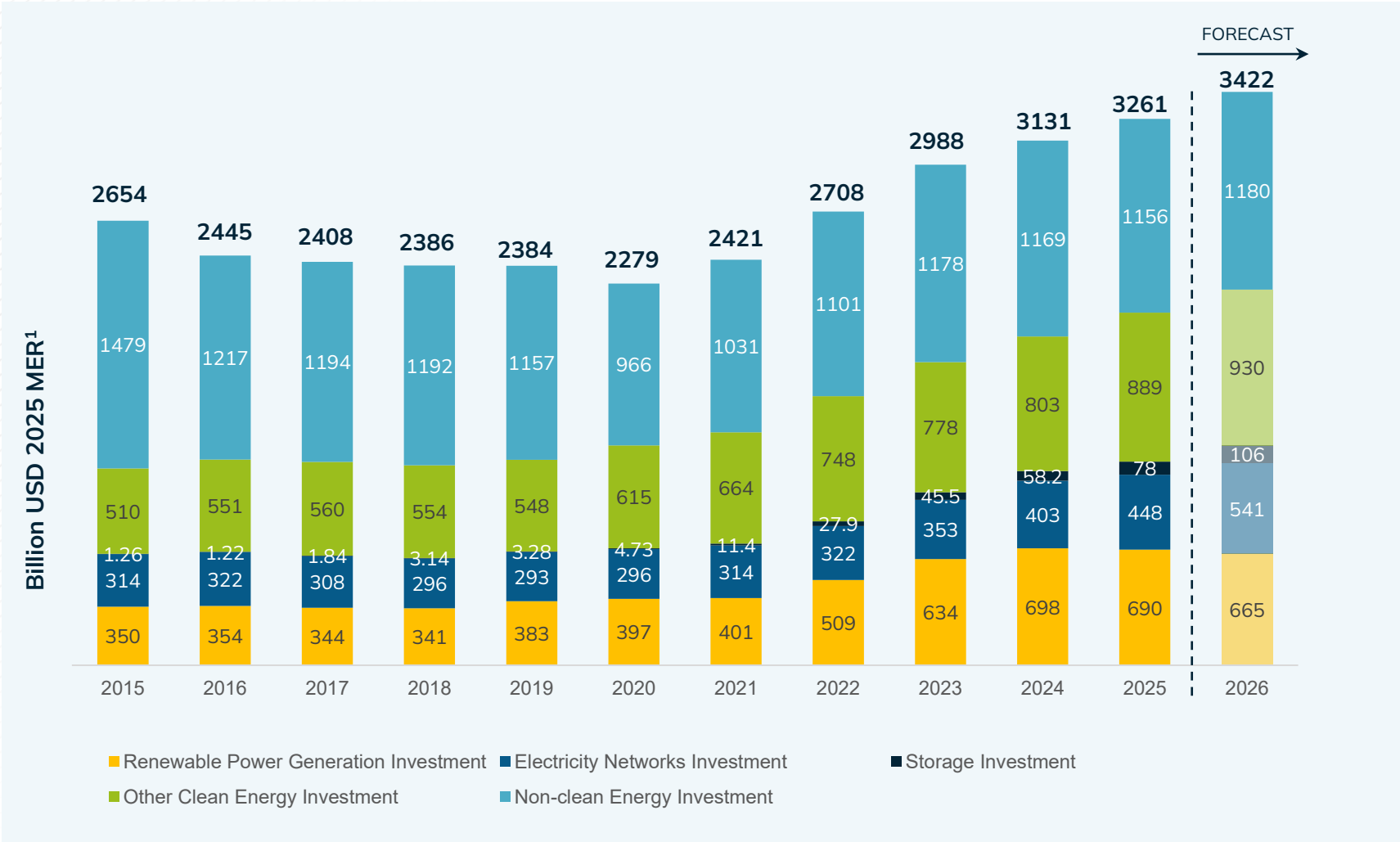
¹ Market Exchange Rate

SOURCE: SEforALL Analysis

DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets. World Energy Investment 2026 Data file. IRENA Renewable Capacity Dataset 2026

Global clean energy investment grew 7.3% to USD 2.1 trillion in 2025, though growth is uneven across technologies and regions, with electricity networks accelerating while renewable power generation investment declined.

Global Energy Investment, 2015-2025, billion USD



- Global clean energy investment grew 7.3% in 2025, though renewable power generation investment declined 1% in 2025 and is estimated to fall a further 3.6% in 2026, driven by falling solar costs rather than reduced deployment.
- Electricity network investment grew 11% in 2025 and is estimated to rise a further 21% in 2026, driven by AI data centres and EV charging, though growth remains concentrated in advanced economies with Africa stagnating at around USD 9 billion annually.
- Renewable power generation investment in 2026 is estimated to reach only 65.5% of the USD 1,016 billion per year needed under the IEA Net Zero Emissions Scenario.
- Despite clean energy investment nearly doubling over the past decade, fossil fuel spending has declined by only 24% in 2025, underscoring the pace mismatch between clean energy growth and fossil fuel phase-down.

¹ Market Exchange Rate
Data Source: IEA World Energy Investment Datafile 2026

ENERGY. CLIMATE. DEVELOPMENT.

SDG 7.3

Energy Efficiency



SDG 7.3 Energy Efficiency

1

Global energy intensity continued to improve in 2023, but momentum is slowing.

- The world used 3.76 MJ of energy to generate USD 1 of economic activity in 2023, down from 4.71 MJ/USD in 2010. While global energy intensity has improved by an average of 1.7% per year since 2010, recent progress has slowed markedly.
- The annual rate of improvement fell from 2.4% between 2021 and 2022 to 1.5% between 2022 and 2023, extending the slowdown observed since 2015. This indicates that efficiency gains are becoming harder to achieve at the pace required for SDG 7.3.
- Progress continues to depend on improvements across industry, transport and buildings, where stronger policies and investment remain essential.

2

Global energy efficiency progress is increasingly shaped by a small number of regions and major economies.

- Asia (4.21 MJ/USD 2021 PPP GDP) remains the only region with energy intensity above the global average (3.76 MJ/USD 2021 PPP GDP), and the gap has widened for three consecutive years. By contrast, Latin America and the Caribbean remains the least energy-intensive region (2.86 MJ/USD GDP), highlighting widening regional divergence.
- Among the world's 20 largest energy-consuming countries, 14 have energy intensity below the global average. The remaining countries including China, Russia, Iran, Canada, South Korea and Saudi Arabia account for a large share of global energy demand, meaning improvements in a relatively small group of economies could significantly improve global performance.
- Global investment in end-use energy efficiency increased by just 1% in 2025 after growing 15% the previous year, suggesting that investment momentum is weakening. At the same time, emerging and developing economies continue to receive a disproportionately small share of global investment despite accounting for most energy demand.

3

Looking forward, accelerating energy efficiency improvements will require stronger investment and implementation.

- Achieving SDG 7.3 now requires annual energy intensity improvements of around 4% through 2030, nearly three times the 1.5% improvement achieved in 2023, reflecting the cumulative impact of slower progress since 2015.
- In 2025, global investment in end-use energy efficiency reached USD 429 billion, only around 75% of the of the USD 566 billion per year required under the IEA Net Zero Emissions by 2050 Scenario, leaving a persistent investment gap.
- Closing this gap will require stronger efficiency standards, greater investment and targeted policies across industry, transport and buildings, supported by country-specific strategies that reflect differences in economic structure and energy demand.

Note: While analysing improvements in global energy intensity, qualitative metrics such as structural efficiencies and changes in economy are not captured.

Methodology - Description

Data Sources



The following data was gathered from the World Bank/ ESMAP's Tracking SDG 7 database ([Link](#)):

- Energy intensity per country (Energy intensity level of primary energy (megajoules per constant 2021 purchasing power parity GDP)
- Total Final Energy Consumption per Country (PJ)
- Total Energy Supply per Country (ktoe)
- GDP per Country (billion USD 2021 prices and PPPs)
- Total Energy Intensity per Region

The following data was gathered from the IEA's publications and their datasets

- Energy Investment by sector (World Energy Investment 2025 report)

Projections



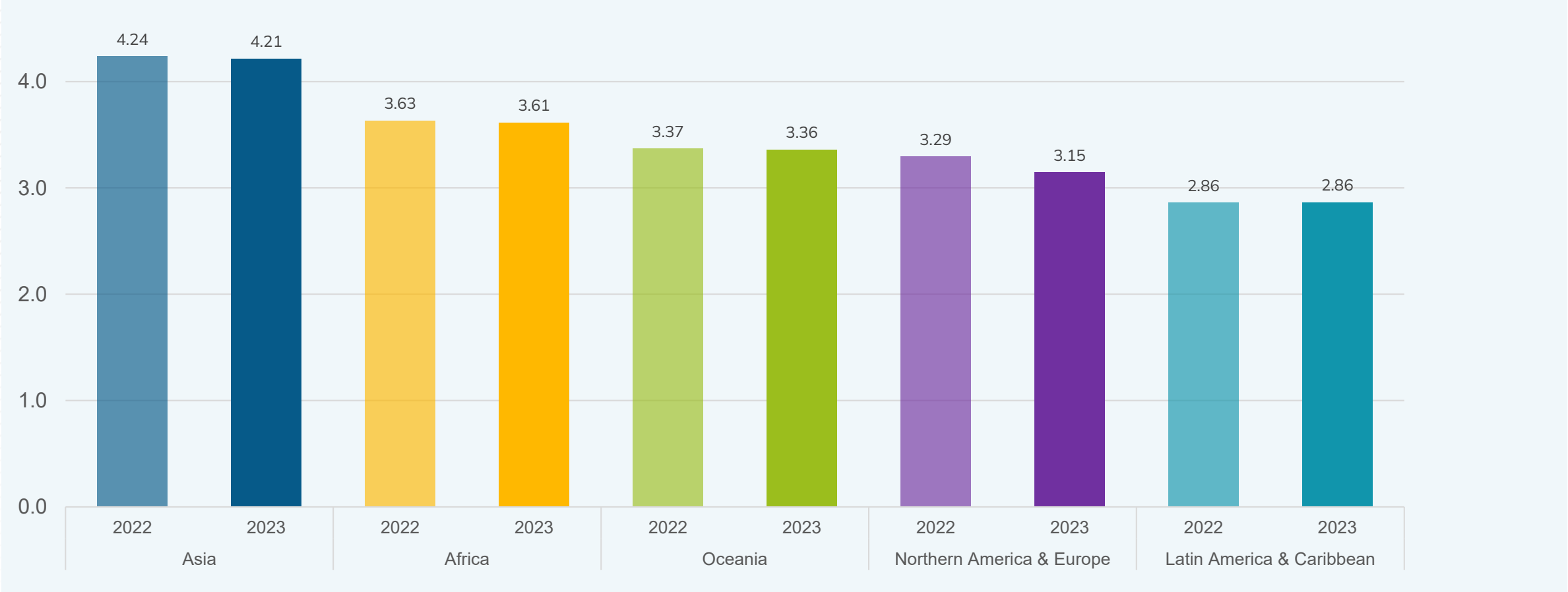
The straight-line extrapolation projection was made via the following process:

- The annual rate of change (MJ per USD per year) in the energy intensity of GDP was calculated at a global level using a linear fit to 2010–2023 data
- The energy intensity of GDP was projected forward to 2030 (by 7 years) by extending this linear trend at the calculated annual rate of change

The World uses 3.76 MJ of energy to generate USD 1 of economic output. The change (reduction) from 2022 to 2023 is not significant

World average energy intensity fell from 3.91 to 3.76 MJ/USD in just two years (−0.15), but the pace of improvement slowed from 0.09 reduction in 2021/22 vs only 0.06 reduction in 2022/23.

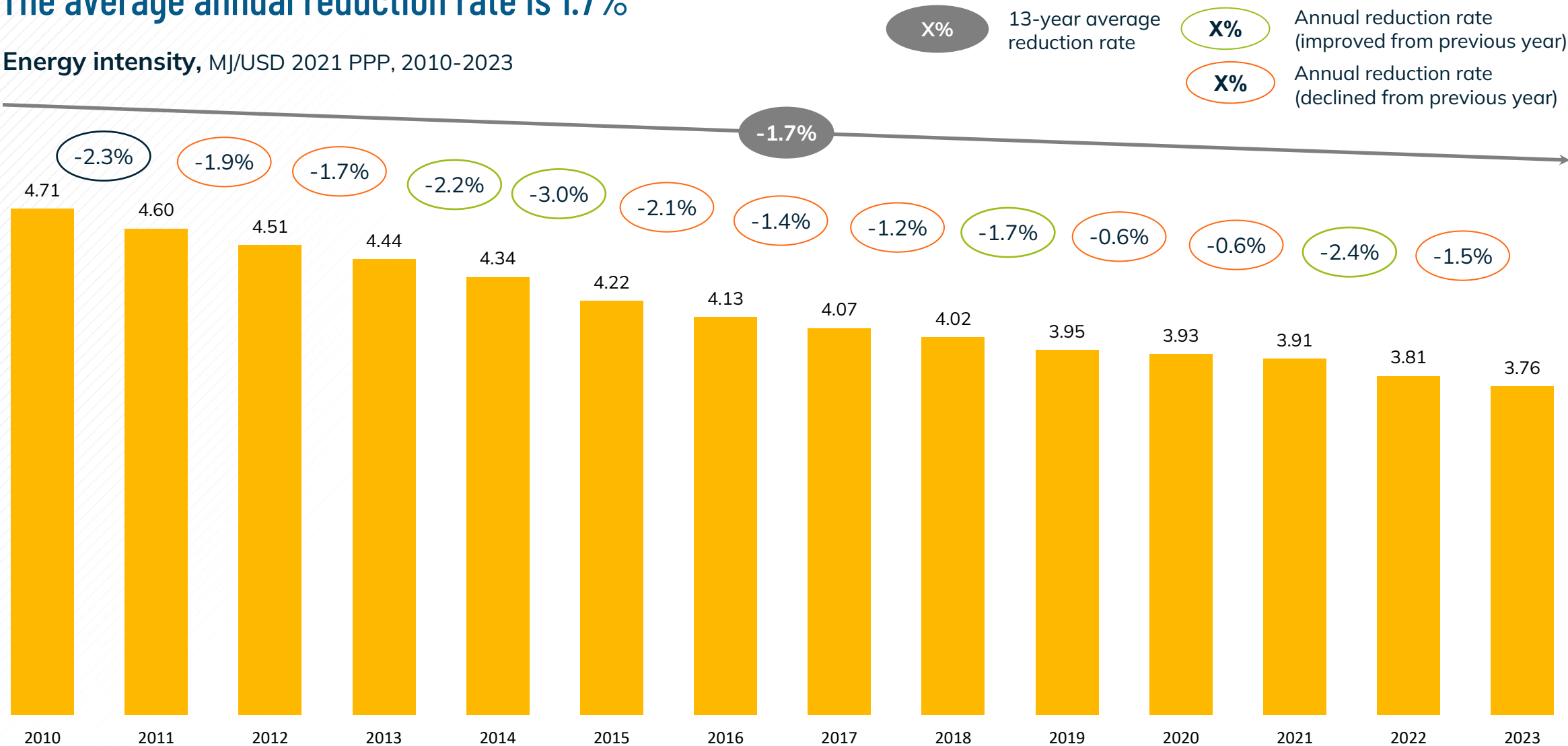
Energy intensity by region, MJ/USD 2021 PPP¹ in 2022 and 2023



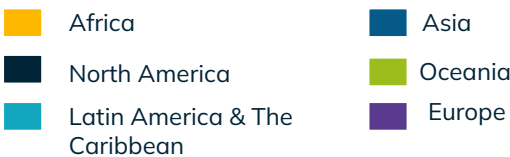
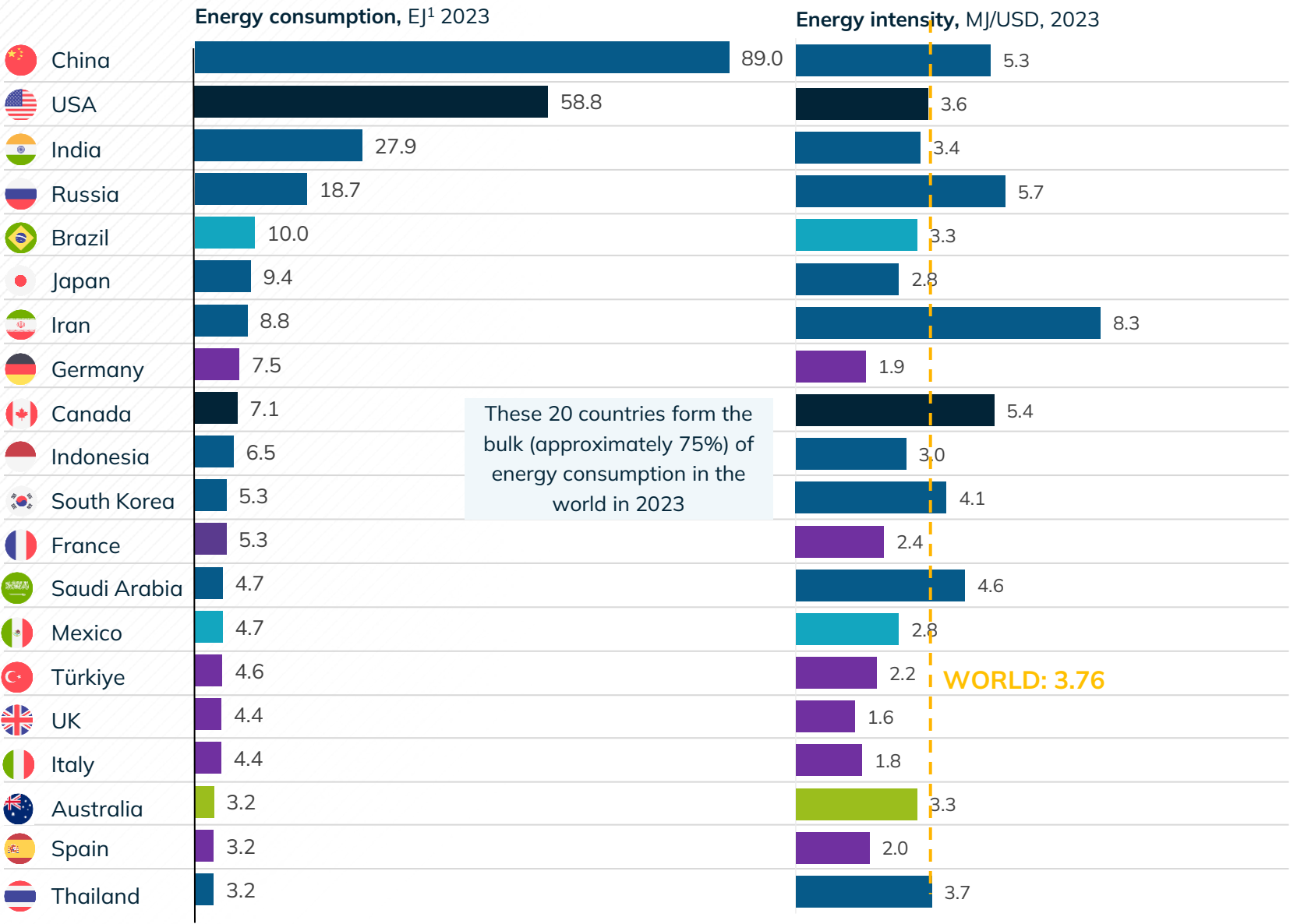
1 Unit is in megajoules per US dollar of GDP at 2021 purchasing power parity (PPP)
SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets

There has been a 0.95 MJ/USD improvement in energy efficiency over the past 13 years.
The average annual reduction rate is 1.7%

Energy intensity, MJ/USD 2021 PPP, 2010-2023



6 of top 20 energy consumption countries have energy intensity higher than the world average



- 14 of the top 20 most energy consuming countries are energy conscientious.
- While the 20 most energy intensive countries form about 75% of the world energy consumption, the 6 countries with energy intensity above the world average form about 35% of the total world energy consumption.
- Reducing the energy intensity of 6 countries (China, Russia, Iran, Canada, South Korea and Saudi Arabia), which have higher energy intensity than the world average, can help accelerate global decarbonization progress greatly.

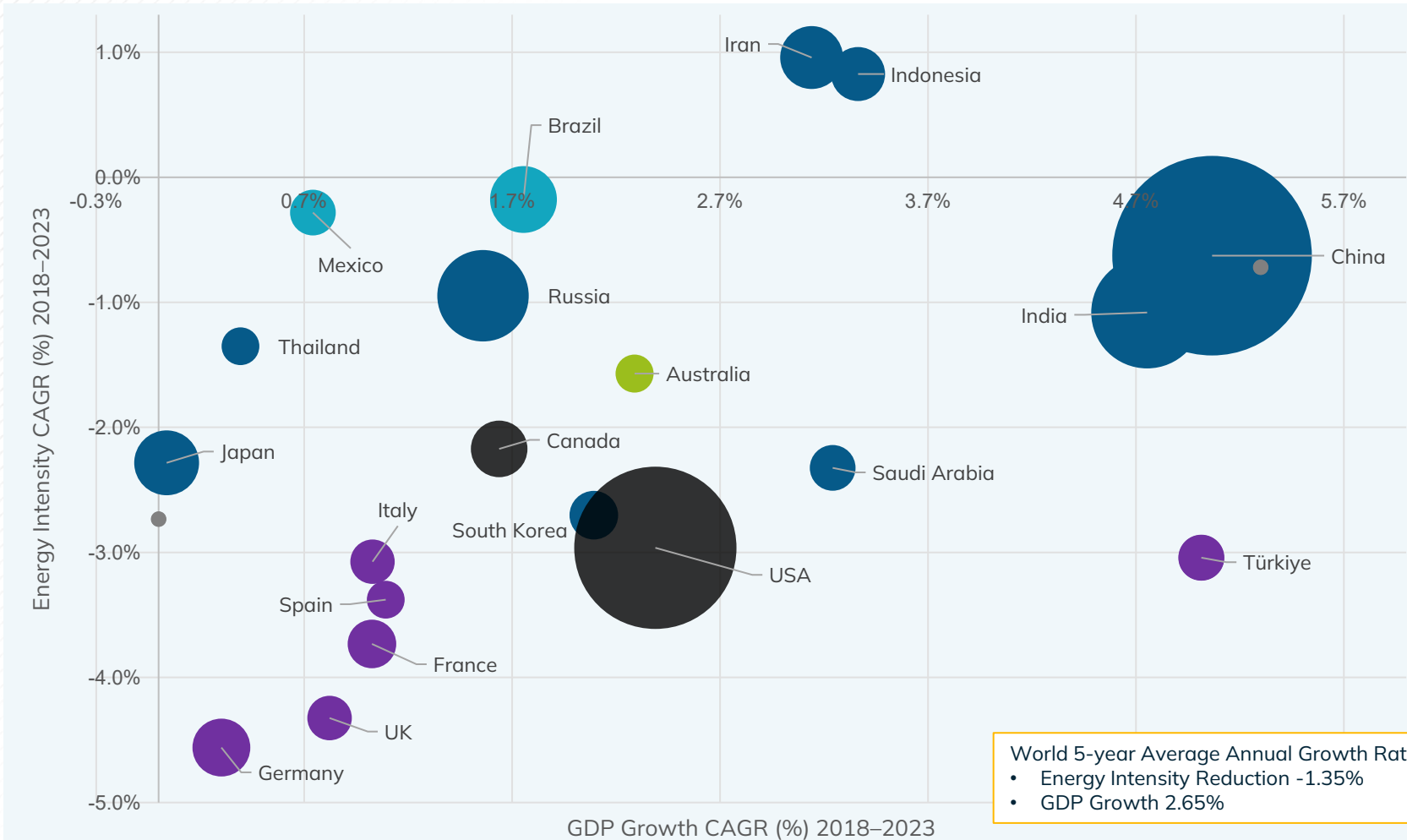
Note: Energy intensity is defined as total energy supply divided by gross domestic product (GDP).

1: EJ = Exajoule = 1000 PJ

SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report Datasets

18 highest energy consumption countries have decreased energy intensity, while Indonesia and Iran increased their energy intensity since 2018

Growth of Energy Intensity and GDP of Top 20 Energy Consuming Countries, 2018-2023

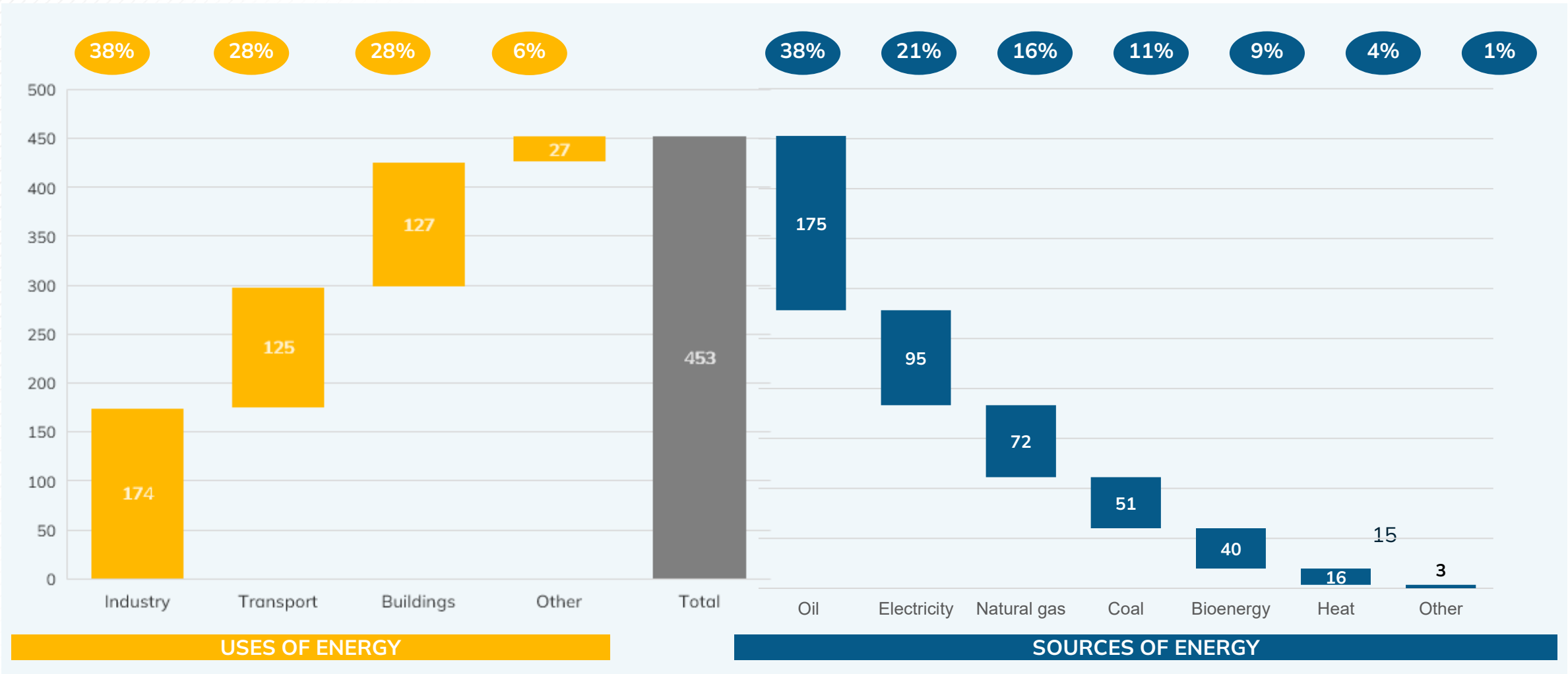


- Comparison among the top 20 energy consumers shows:
- **18 of the top 20 high energy consuming countries** have improved their energy intensity over the last five data years (2018-2023).
 - **UK, France, Germany, Turkey** have been improving their energy intensity the most when reflecting their GDP growth against other top 20 peers.
 - **Indonesia and Iran** have performed poorly in their energy intensity reduction when considering their GDP growth against other top 20 peers.
 - **Changes in energy intensity reflect shifts in energy efficiency and economic structure:** a country can improve intensity by growing its services sector even without deploying new technology. Countries worsening intensity (notably Iran and Indonesia) face a dual opportunity: adopt efficiency standards for industry and diversify away from energy-intensive sectors toward higher-value, lower-energy activity.

Energy is mainly used in industry, transport and buildings with fossil fuel as the dominant source (65%), followed by electricity

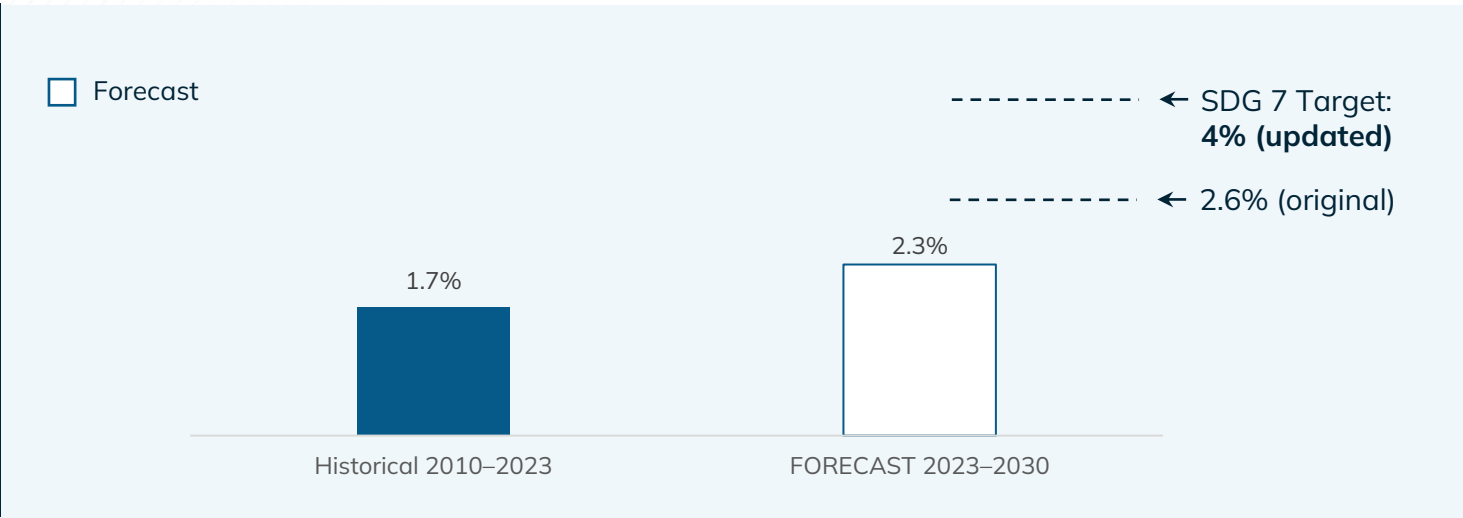
Sources and uses of energy for consumption by sector, EJ, 2024

x% Share of total final energy consumption

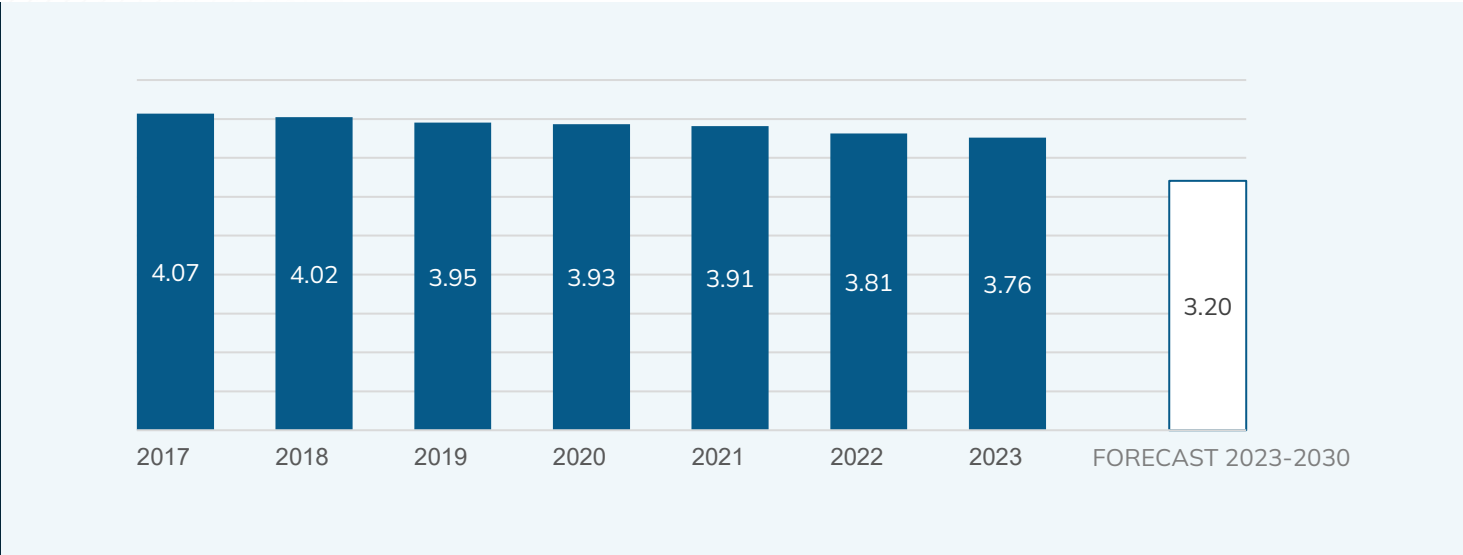


Doubling the energy intensity improvement rate to the world target rate of 4% per year will be needed to achieve SDG 7.3

Projected Annual Primary Energy Intensity Improvement Rates



Energy Intensity, MJ/USD 2021 ppp

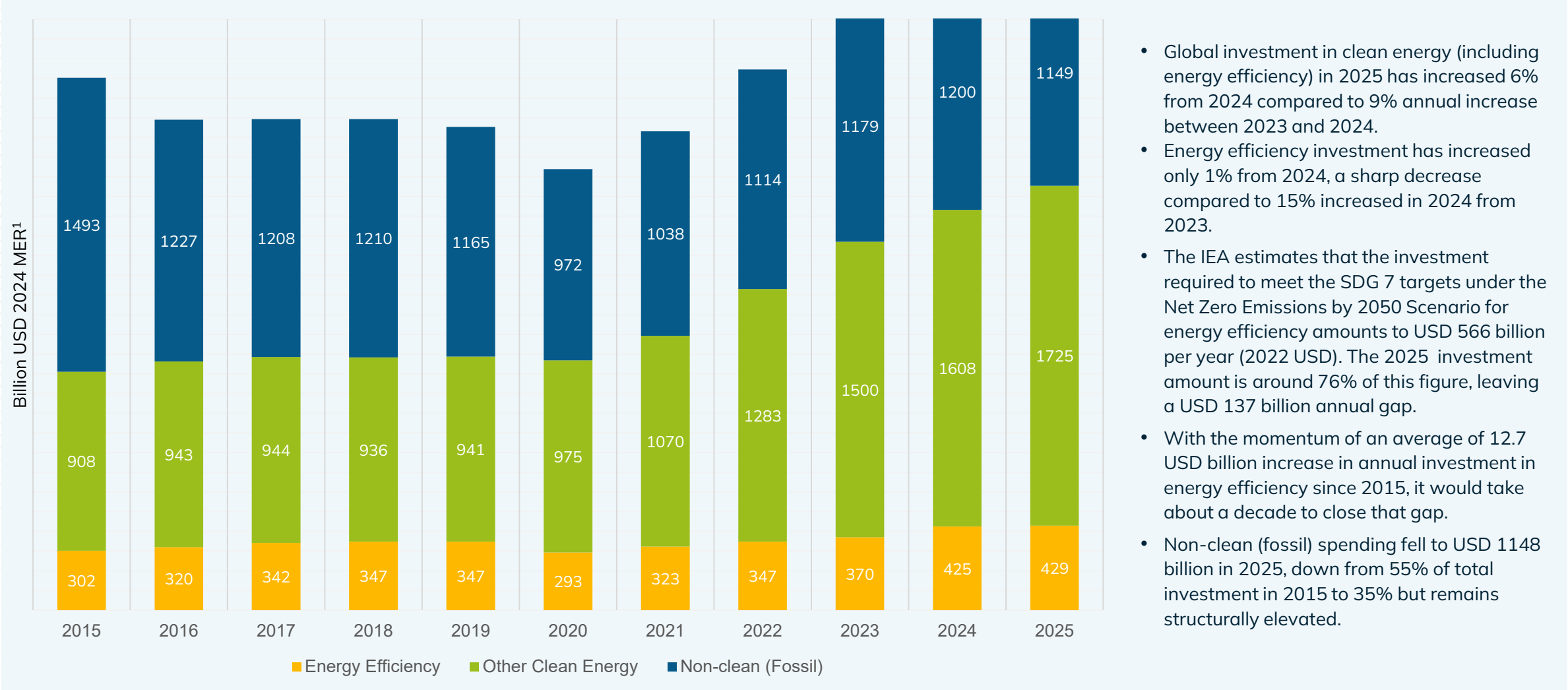


- Slow improvement rates of recent years mean that a 4% annual rate of improvement is necessary from 2024 to achieve SDG7.3 by 2030.
- More aggressive and diverse policy and investments are necessary to achieve the required improvement rate by 2030 across all countries and sectors. The required pace has increased from 2.6% to 4% annually because years of slower-than-needed progress have reduced the time available to reach the SDG 7.3 target.
- High energy consumption economies with high energy intensity or slow progress can have large impacts with stronger improvements.
- However, all countries need to pay more attention to energy efficiency.

SOURCE: SEforALL Analysis
DATA SOURCES: IEA, IRENA, UNSD, World Bank, and WHO (2026) Tracking SDG7 2026 Report & its Datasets

Global investment in energy efficiency in 2025 was USD 429 billion, 1% above 2024 levels

Global Energy Investment, 2015-2025, billion USD

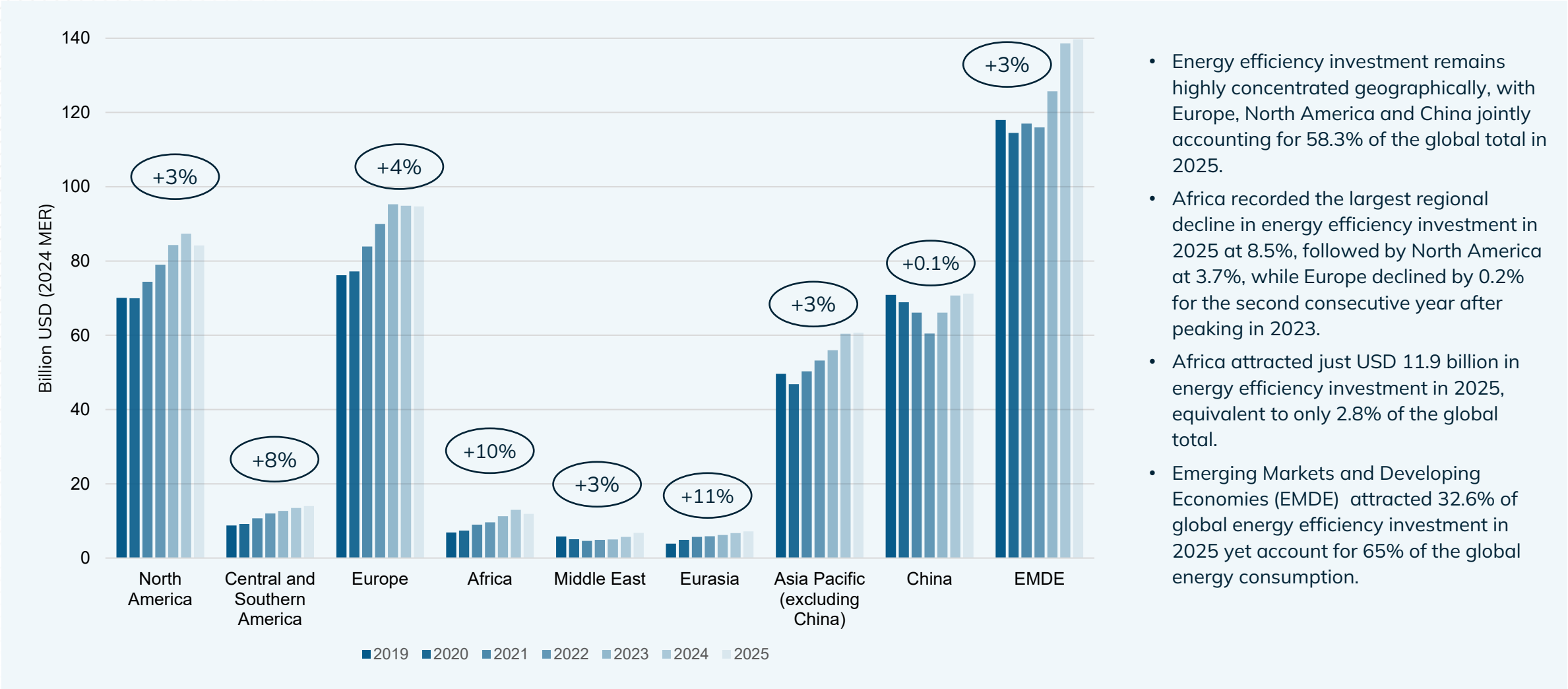


¹ Market Exchange Rate
Data Source: IEA World Energy Investment Datafile 2025

Europe shows decrease in energy efficiency investment in 2025 compared to 2024 levels, for two consecutive years

Energy Efficiency Investment by Region, 2019-2025, billion USD

x% Average annual growth rate 2019-2025



- Energy efficiency investment remains highly concentrated geographically, with Europe, North America and China jointly accounting for 58.3% of the global total in 2025.
- Africa recorded the largest regional decline in energy efficiency investment in 2025 at 8.5%, followed by North America at 3.7%, while Europe declined by 0.2% for the second consecutive year after peaking in 2023.
- Africa attracted just USD 11.9 billion in energy efficiency investment in 2025, equivalent to only 2.8% of the global total.
- Emerging Markets and Developing Economies (EMDE) attracted 32.6% of global energy efficiency investment in 2025 yet account for 65% of the global energy consumption.

ENERGY. CLIMATE. DEVELOPMENT.

SECTION THREE

Key Messages & Conclusions

Key Messages (2025-2030)

1

A new milestone proves the model; now triple the pace.

Mission 300 has connected over 50 million people since July 2023 at nearly double the prior rate - but that's one-sixth of the goal with four years left, so the pace must roughly triple to reach 300 million and outrun population growth.

2

Asia is closing its clean cooking gap while Africa's keeps growing.

The two regions carry similar deficits today, but their paths have diverged: Asia's is falling steeply while Africa's regional deficit is still rising. Closing the cooking gap through eCooking is important. Schools and public institutions are the fastest-scaling entry point to advance progress.

3

Rising electricity access rates aren't denting the rural deficit.

Africa's electricity access rate rose 17 points since 2010, yet the absolute number barely moved - the population trap - and the gap is overwhelmingly rural (83% urban vs 33% rural), so scale mini-grids and off-grid solar fast enough to outpace demographics.

4

The hardest electricity cases are falling further behind — target them deliberately.

12 of the 22 largest electricity-deficit countries* improved more slowly in 2019-24 than in 2014-19, and the lowest-access states (South Sudan, Chad, Malawi) are losing ground in absolute terms, whether through outright declines in access or because population growth and external shocks outstrip new connections - so the countries furthest behind need tailored, intensified support, not the same average effort.

5

Renewable energy growth and energy efficiency improvements are not keeping pace with the 2030 trajectory.

Modern renewable energy must grow 13.7% annually and energy intensity must improve 4% annually (nearly three times the 1.5% improvement achieved in 2023) to meet 2030 targets, thus requiring much faster deployment.

6

Global renewable energy and energy efficiency progress will depend on a handful of high-impact economies.

The 20 top energy-consuming countries account for 75% of global energy consumption yet most remain below the world average on renewable energy or energy intensity, making them the highest impact focus for policy, finance and technical support.

7

Higher investment in renewable energy and energy efficiency will be needed through 2030.

Renewable energy investment is projected to decline while energy efficiency investment grew just 1% requiring greater capital mobilisation particularly in developing countries.

*The 22 countries are Nigeria, DR Congo, Ethiopia, Tanzania, Uganda, Mozambique, Niger, Madagascar, Malawi, Chad, Sudan, Angola, Burkina Faso, Kenya, Mali, South Sudan, Burundi, Zambia, Côte d'Ivoire, Pakistan, Myanmar, and DPR Korea.

Conclusions and Recommendations

Conclusions

SDG7 is off track on every target, and on current trends 2030 will be missed across the board. 655 million people still lack electricity and around 2 billion lack clean cooking; renewables remain just 18% of final energy consumption, and energy intensity is improving at less than half the rate required. Progress continues, but it is slowing.

The unfinished agenda is increasingly African, and increasingly rural. Africa holds ~89% of the world's unelectrified population, has overtaken Asia as the largest clean cooking deficit region, and is the only region whose renewable share has declined since 2010 - while population growth, particularly in the poorest, most rural and fragile communities, keeps absolute numbers from falling.

Yet the challenge is manageable, precisely because it is concentrated. Roughly 20 countries hold most of the access gaps, and the ~20 highest-consuming economies hold most of the renewable energy and efficiency opportunities - but the two access gaps need different tools, with eCooking bridging them where electricity is reliable.

What is missing is pace and finance, not solutions. Reaching 2030 demands approximately 177 million connections and 400 million clean cooking gains each year, roughly 14% annual growth in modern renewables, and roughly 4% yearly energy intensity improvement - underpinned by far greater, better-targeted investment in developing economies.

Recommendations

- 1. Scale infrastructure investments through coordinated initiatives like Mission 300.**
Aggressively fund renewable energy generation, efficient transmission, last-mile distribution, mini-grids and standalone solar by leveraging coordinated frameworks to attract private sector investors.
- 2. Direct targeted de-risking capital to underserved developing country power grids.**
Deploy blended finance, first-loss capital, and currency-risk mitigation to lower entry barriers for private developers, unlocking the capital needed for scale-ready solar and wind.
- 3. Scale electrification using energy storage, energy efficiency and demand flexibility.**
Electrify cooking, transport, and heating by integrating energy storage, smart grids, and dynamic tariffs that incentivise energy-efficient technologies and demand flexibility to use surplus renewable generation.
- 4. Build the green workforce and manufacturing to capture the value of the transition.**
Pair skills and technical training with efforts to scale regional value chains by anchoring domestic manufacturing of efficient lighting, air conditioning, solar PV, batteries, and e-mobility in national and regional policy.
- 5. Use impact metrics that are people-centred to drive decision-making.**
Move tracking from binary connection counts to indicators that capture the impact on people, with milestones calibrated to projected populations so that neither population growth nor fossil fuel investment erodes access to sustainable energy gains.

ENERGY. CLIMATE. DEVELOPMENT.

SECTION FOUR

Appendix

AFRICA

While only 1 additional African country will achieve universal access by 2030 with the current rate of improvement, 47 countries will remain with unelectrified populations and 18 of them will have significant numbers of unelectrified populations (10 million or more)

Countries expected to achieve universal access by 2030	 Cabo Verde	
Countries expected to have ~10 million or more unelectrified population by 2030	 Angola	 Malawi
	 Burkina Faso	 Mali
	 Burundi	 Mozambique
	 Chad	 Niger
	 Côte d'Ivoire	 Nigeria
	 DR Congo	 South Sudan
	 Ethiopia	 Sudan
	 Kenya	 Tanzania
	 Madagascar	 Uganda

Methodology: Defining universal electricity access by 2030

A country is classified as newly achieving universal electricity access by 2030 only where its 2030 projection satisfies all three: of the following conditions:

- (i) less than 1% of the population remains without access;
- (ii) fewer than 30,000 people remain without access in absolute terms;
- (iii) the country recorded a non-zero deficit in 2024



ASIA

5 additional Asian countries will achieve universal access by 2030 with the current rate of improvement, while 9 countries will still have unelectrified populations

Countries expected to achieve universal access by 2030	 Cambodia	 Nepal
	 India	 Tajikistan
	 Indonesia	
Countries expected to have unelectrified population by 2030	 Afghanistan	 Pakistan
	 Bangladesh	 Philippines
	 DPR Korea	 Syria
	 Lao PDR	 Yemen
	 Myanmar	



REST OF THE WORLD

7 non-African / Asian countries will achieve universal access by 2030 if they continue to deliver at the current levels

Countries currently projected to achieve universal access by 2030	 Belize	 Paraguay
	 Costa Rica	 Suriname
	 Dominican Republic	 Uruguay
	 Kiribati	

Exception — small states below the absolute threshold but above 1%

A small number of countries are projected to fall below the 30,000-person absolute threshold by 2030 while remaining at or above 1% of their population without access, owing to their small population size. Under the methodology these are not classified as having achieved universal access, as both criteria must be met. The cases are:

- Fiji (approximately 10,400 people, 1.1%)
- Micronesia (5,800, 5.0%)
- Grenada (2,300, 2.0%)
- Marshall Islands (1,100, 3.4%)

In each instance the absolute deficit is minimal, and the outcome reflects the sensitivity of a percentage threshold in very small populations.





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