Global Tracking Framework 2017

Asia-Pacific Progress in Sustainable Energy

ACCESS TO ENERGY

UNITED NATIONS
ESCAP
Economic and Social Commission for Asia and the Pacific

by 2030

ensure universal access to modern energy services

PROGRESS IN INCREASING ACCESS TO ELECTRICITY

2012-2014 RESULTS: ELECTRIFICATION

In the years 2012-2014:

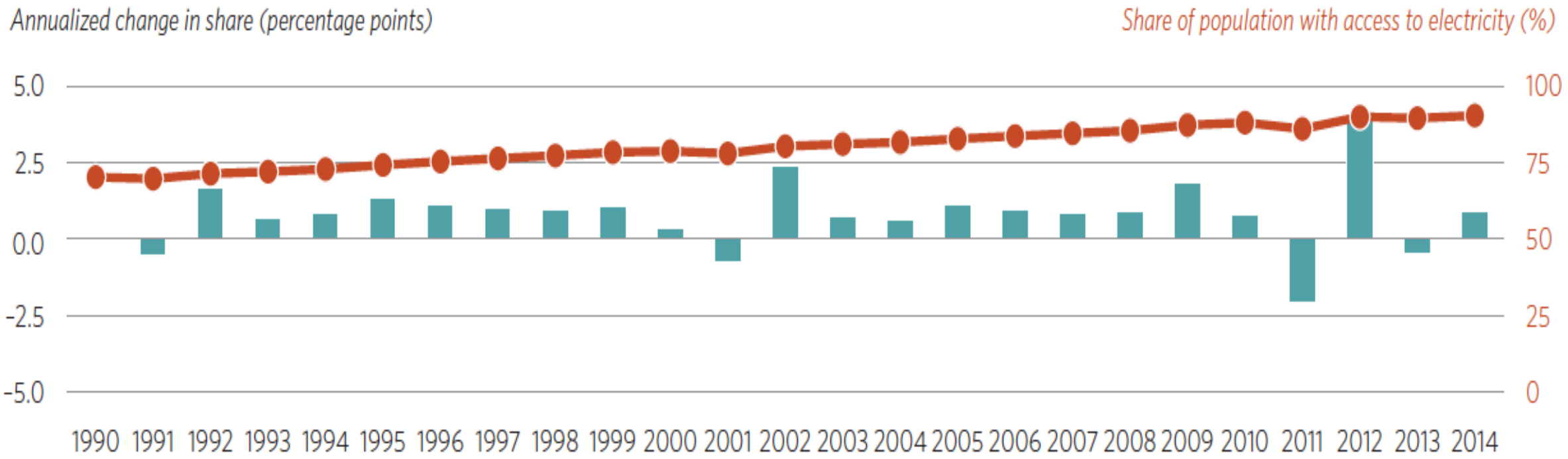
- **93.1 million** people gained access to electricity.
- The rate of electrification rose from **89.8%** to **90.3%**.

2012-2014 RESULTS: ELECTRIFICATION

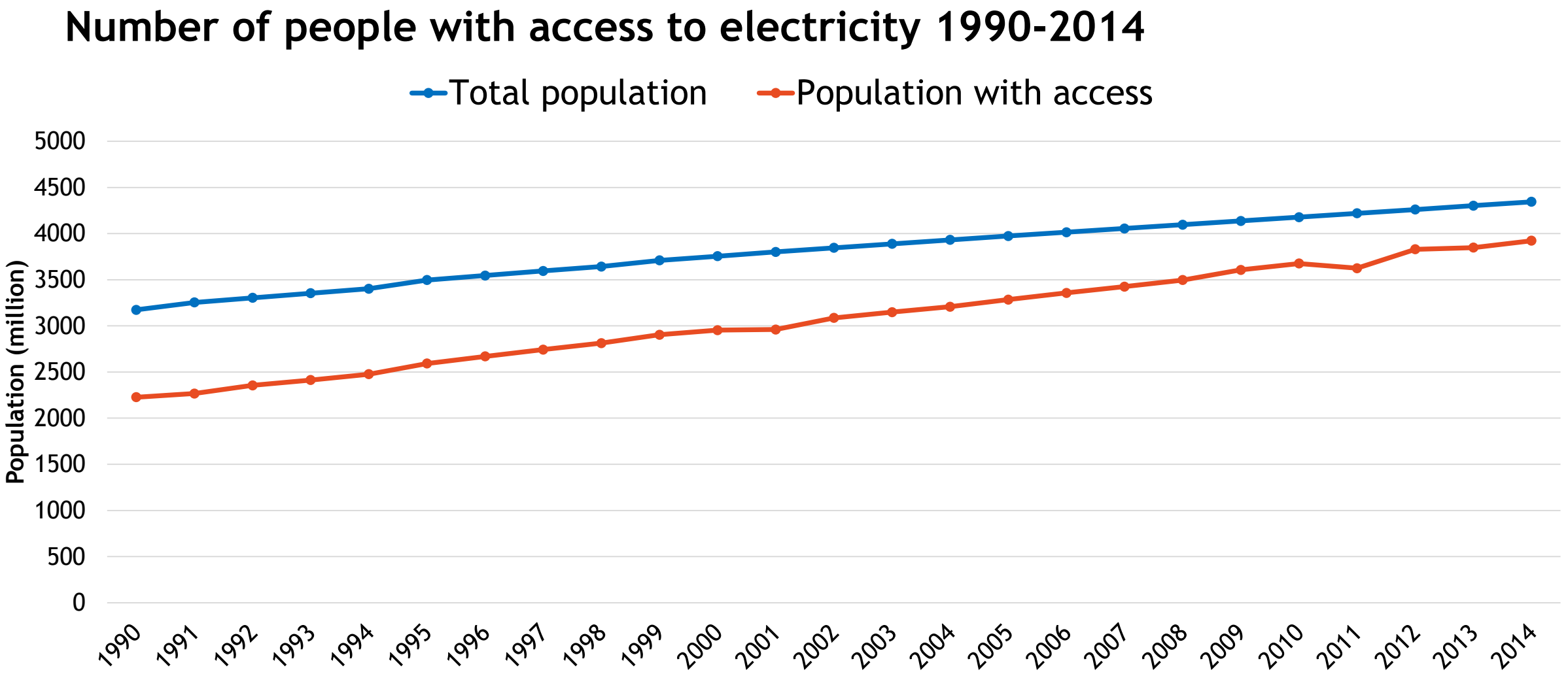
- ***Regional progress in electrification continued, but slowed.***

2012-2014 RESULTS: ELECTRIFICATION

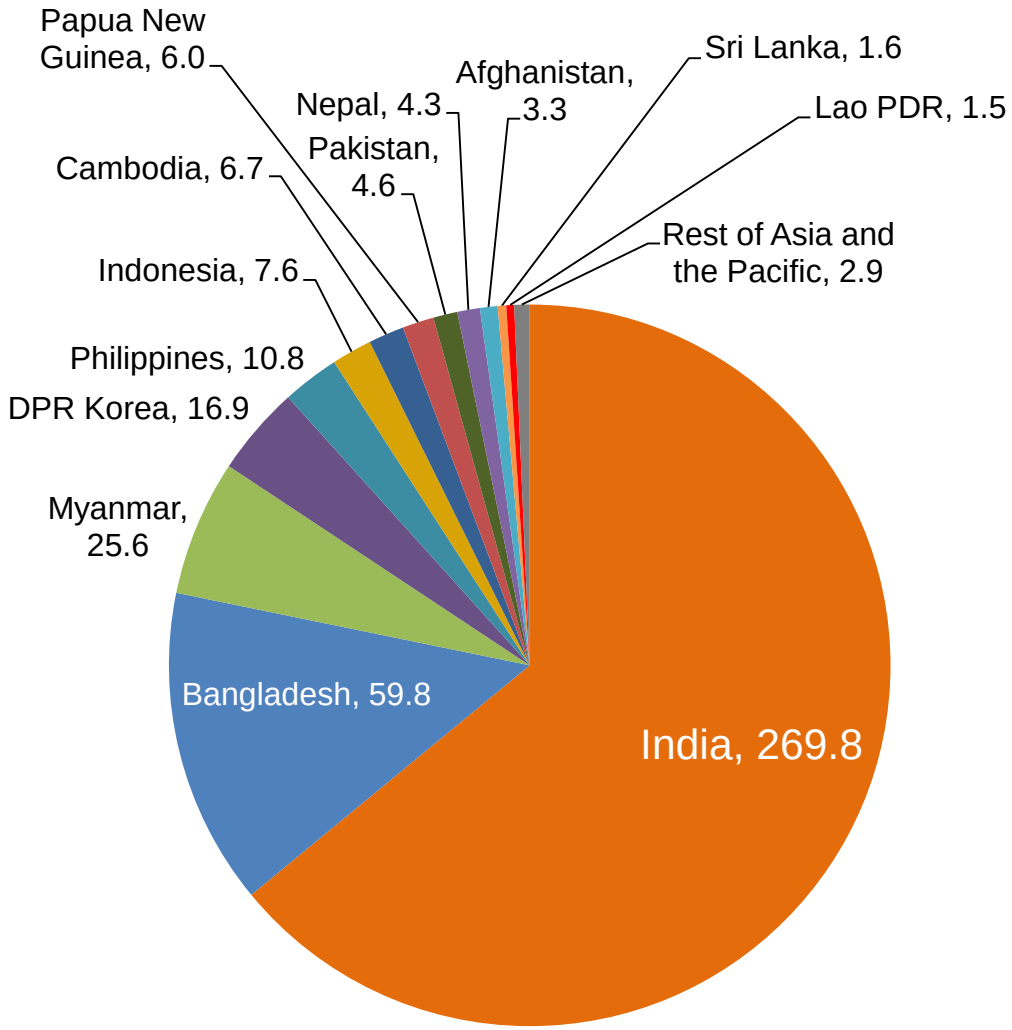
Reporting period	Electrification rate	Average annual change in share	No. of people who gained access
2010-2012	90.3%	2.2%	154.1 million
2012-2014	89.4%	0.5%	93.1 million



2012-2014 RESULTS: ELECTRIFICATION

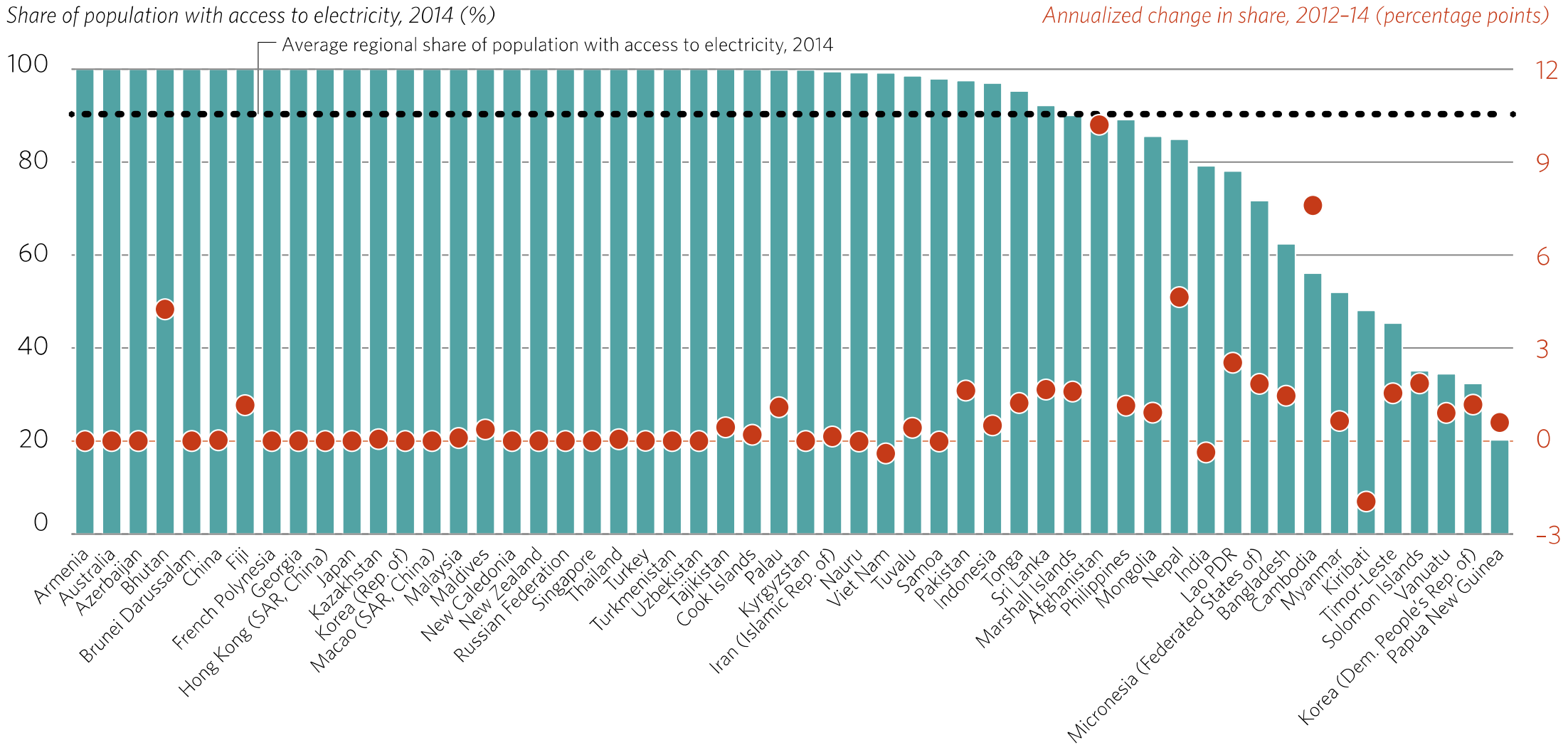


NUMBER OF PEOPLE WITHOUT ACCESS TO ELECTRICITY 2014 (millions)

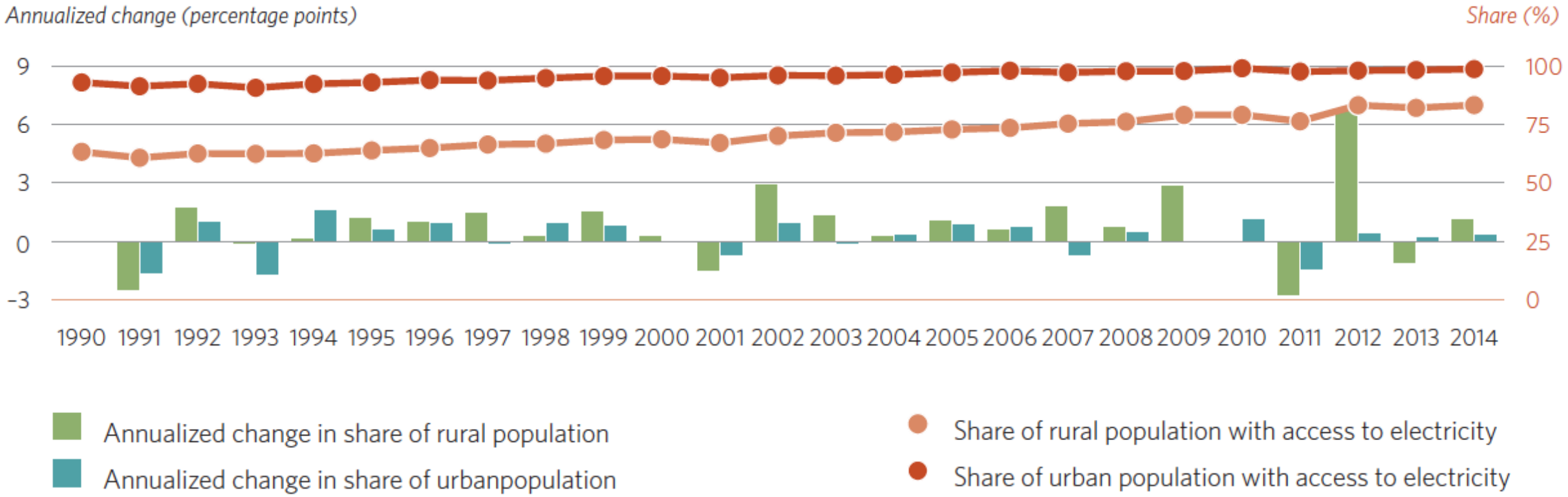


More than 421 million people, or 9.7% of the Asia-Pacific population, remains without access.

Asia-Pacific countries:
23 have yet to reach universal electrification

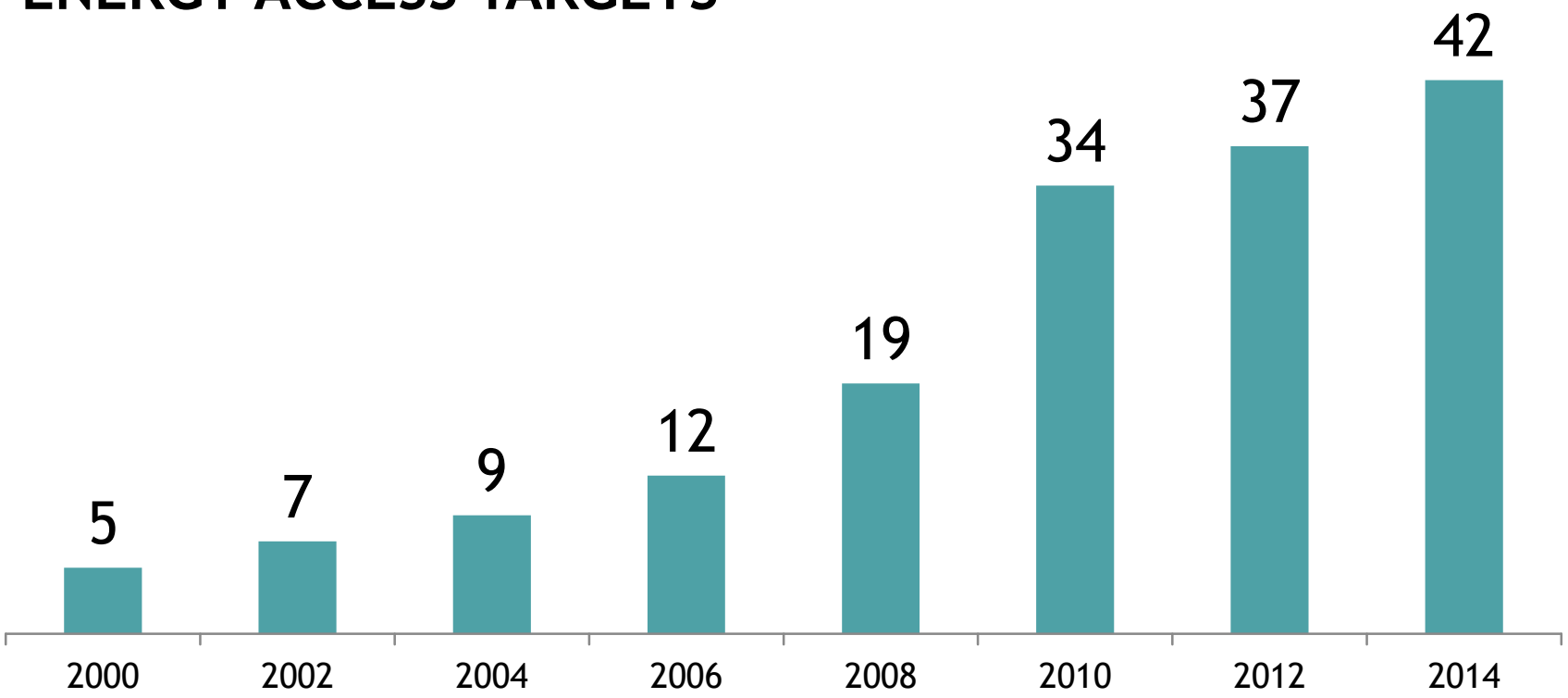


Access to electricity in Asia-Pacific has increased over the last 25 years, with the gap between urban and rural access gradually narrowing



DRIVERS: POLICIES AND PROGRAMMES

NUMBER OF ASIA-PACIFIC COUNTRIES WITH ENERGY ACCESS TARGETS



Data compiled by author from information available in the Asia Pacific Energy Portal. Available from http://asiapacificenergy.org

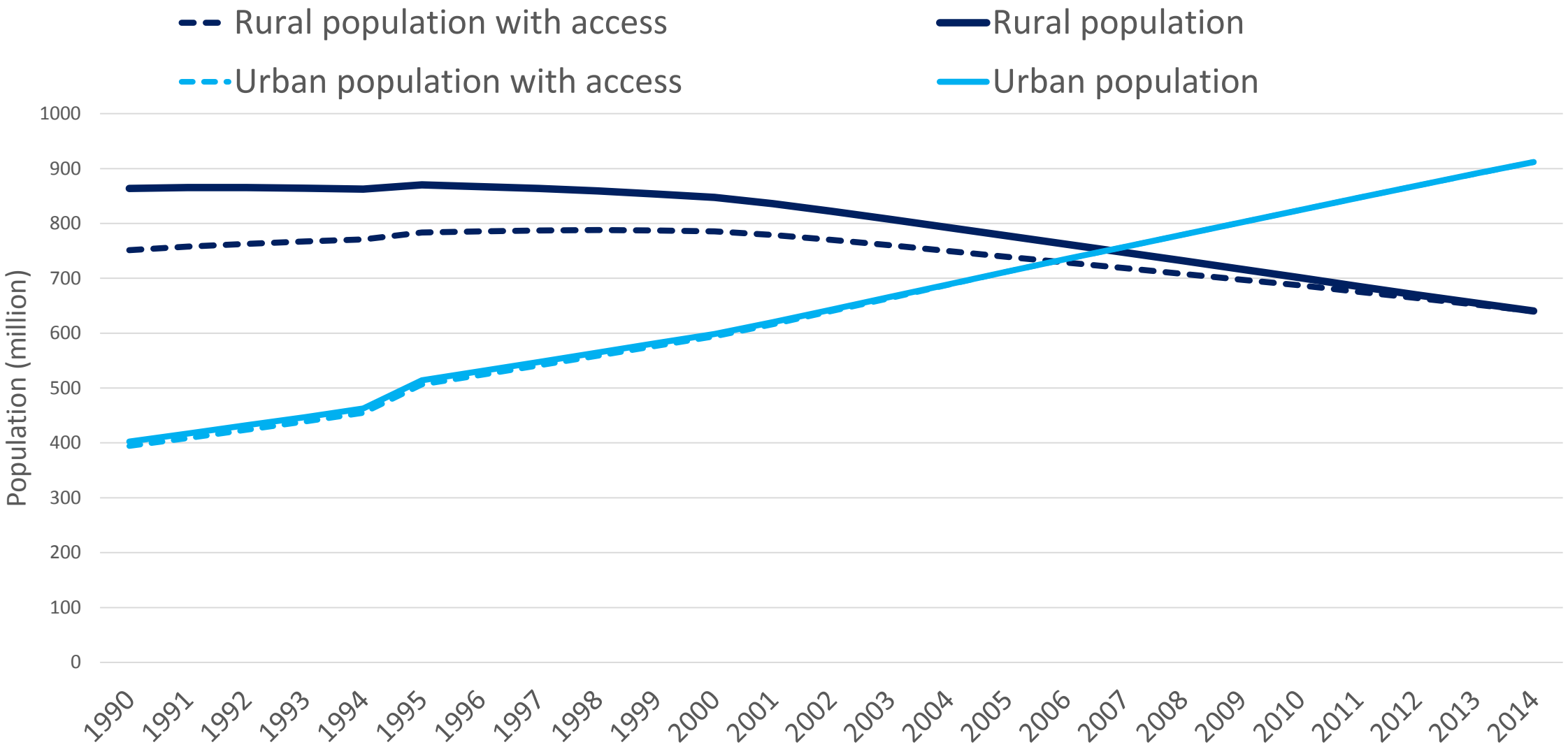
DRIVERS: INFRASTRUCTURE

- ***On- and off-grid infrastructure development increased access rates.***
  - Countries worked to extend, link, and upgrade power systems to support new connections.
  - Small, decentralized systems are proving an increasingly viable option for providing power to remote communities.

DRIVERS: URBANISATION

- ***Urbanization is bringing more people closer to energy services.***

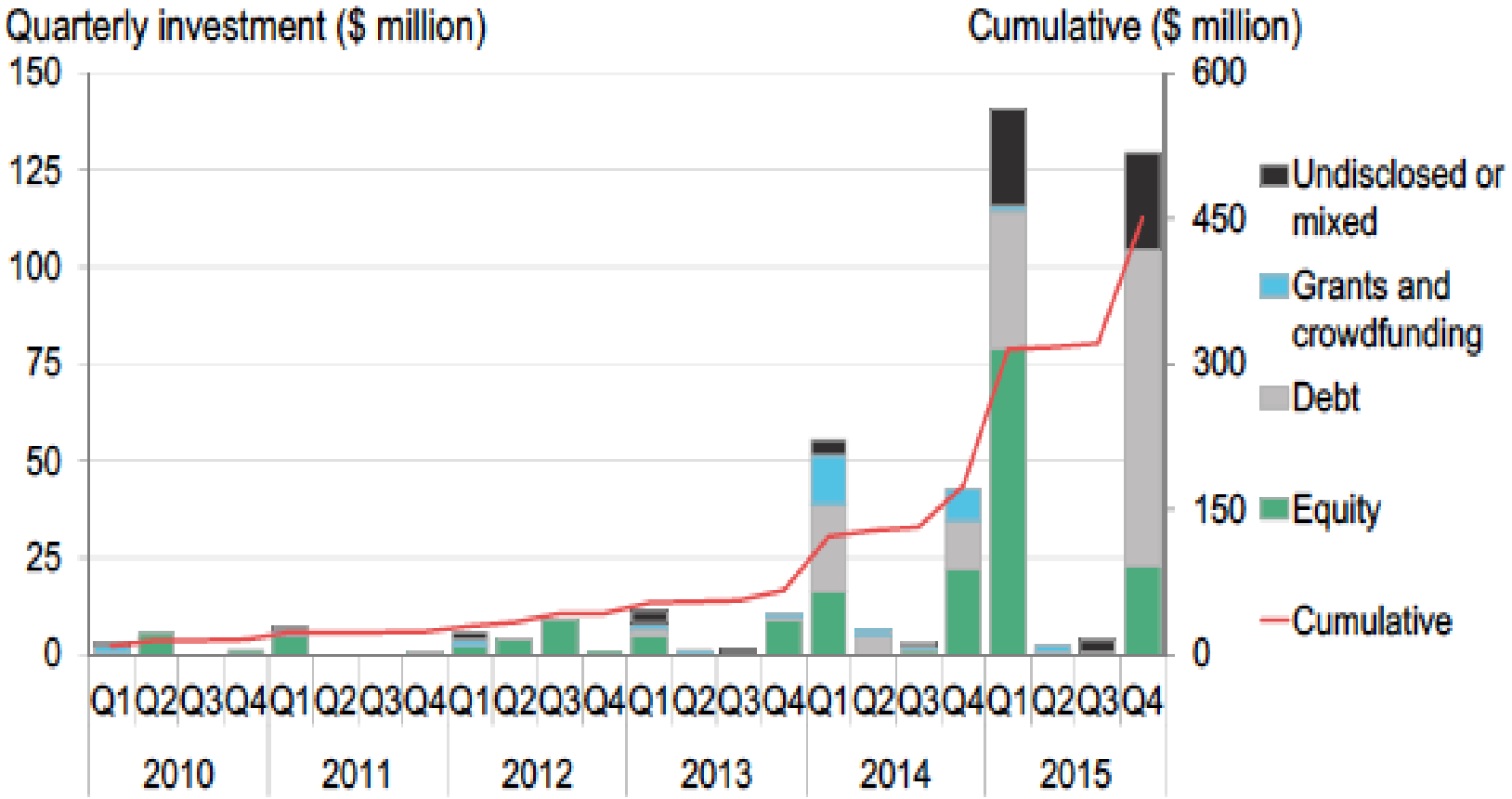
RURAL AND URBAN NUMBER OF PEOPLE WITH ACCESS TO ELECTRICITY IN EAST AND NORTH-EAST ASIA 1990-2014



DRIVERS: PRIVATE SECTOR

- ***Private sector interest and participation in electrification is growing.***

INVESTMENT IN OFF-GRID SOLAR COMPANIES AND INTERMEDIARIES BY ASSET CLASS, AFRICA AND ASIA



Source: Bloomberg New Energy Finance, GOGLA. Note: no dates were available for an additional $60 million of investments. Includes funds raised by intermediaries with energy access mandates that are likely to focus heavily on off-grid solar.

CHALLENGES: INSUFFICIENT FINANCING AND INVESTMENT

- $45 billion in investment is required globally on an annual basis.
  - 2012 investment was $9 billion, leaving $36 billion investment unfilled that year.
- Achieving higher tiers of access requires significantly more investment.
- Government budgets are insufficient to meet needed investment levels.

CHALLENGES: UNDERDEVELOPED POLICY, REGULATION, AND STANDARDIZATION

- Potential overlaps of electrification efforts between government agencies, utilities, and private actors;
- Regulatory uncertainty or lack of policy inhibits private sector investment;
- Inadequate standards for decentralized systems create regulatory challenges as well as inefficiencies for on-going maintenance.

CHALLENGES: REACHING RURAL AREAS

Rural areas create challenges due to:

- Small settlements located far from power supplies;
- High costs of building and maintaining infrastructure in rural areas;
- Low demand, poor collection rates, subsidized tariffs → low or negative returns for utility operators.

CHALLENGES: IMPROVING CAPACITY AND AFFORDABILITY OF OFF-GRID SYSTEMS

Benefits and uptake are constrained by:

- Low-capacity off-grid power systems;
- Shorter hours of availability;
- Relatively higher costs of energy services.

CHALLENGES: PROVIDING RELIABLE ACCESS AND EQUITABLE BENEFITS

- Socioeconomic benefits of electrification are tied to the quality of energy service and the ability to consume power.
- Benefits accrue to those who have access to and can afford to consume higher levels of energy.

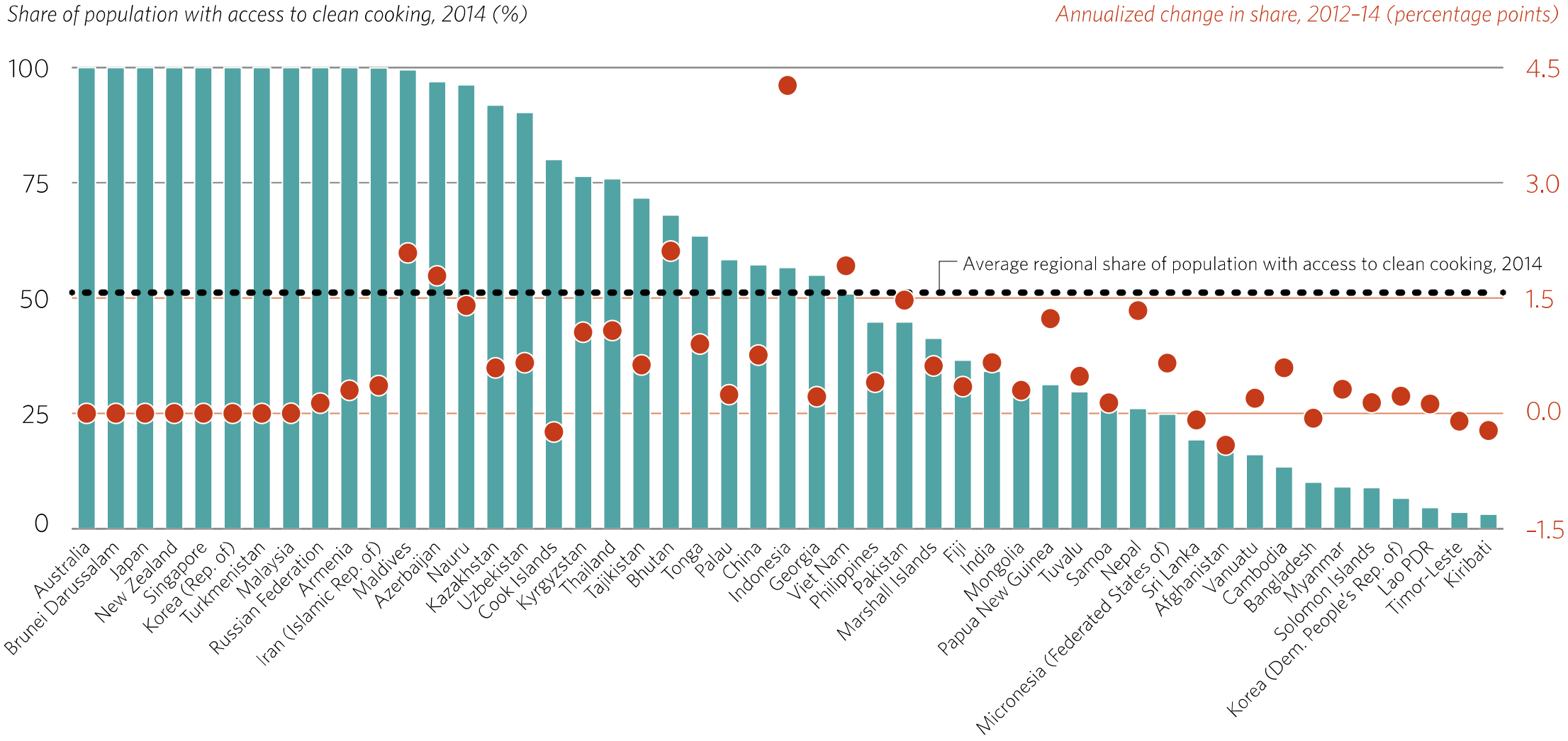
PROGRESS IN INCREASING ACCESS TO CLEAN COOKING

2012-2014 RESULTS: CLEAN COOKING

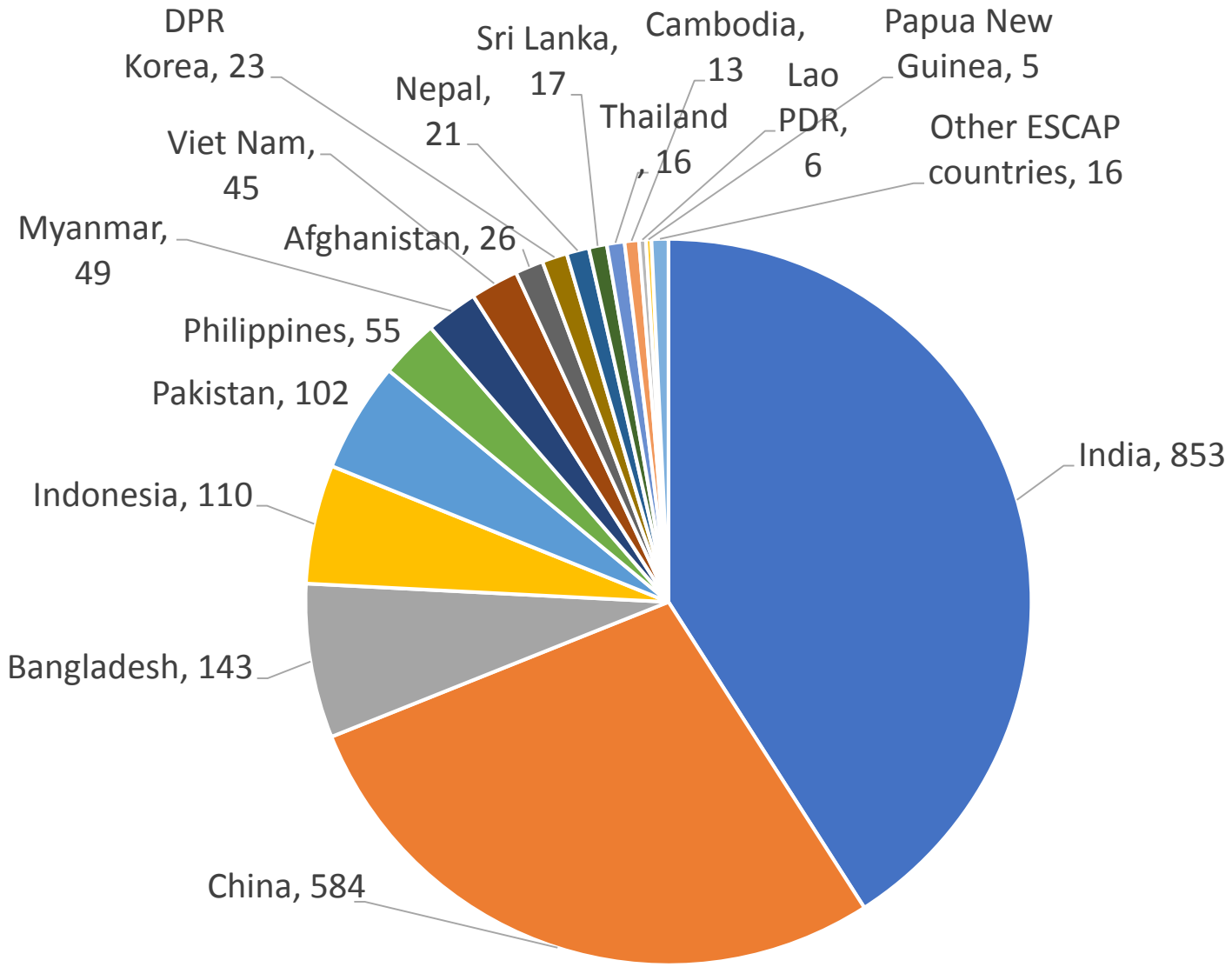
- ***Progress remains slow in increasing access to clean cooking (with some national cases of reported declining access rates), falling well short of the pace needed.***

Progress remains steady and slow

Asia-Pacific countries:
32 have yet to reach universal clean cooking



PEOPLE WITHOUT ACCESS TO CLEAN COOKING 2014 (millions)



Nearly 2.1 billion people remain without access to clean cooking.

2012-2014 RESULTS: CLEAN COOKING

- ***Some countries demonstrated impressive progress in increasing access rates over the 2000-2014 period.***

DRIVERS: INCREASED GOVERNMENT FOCUS

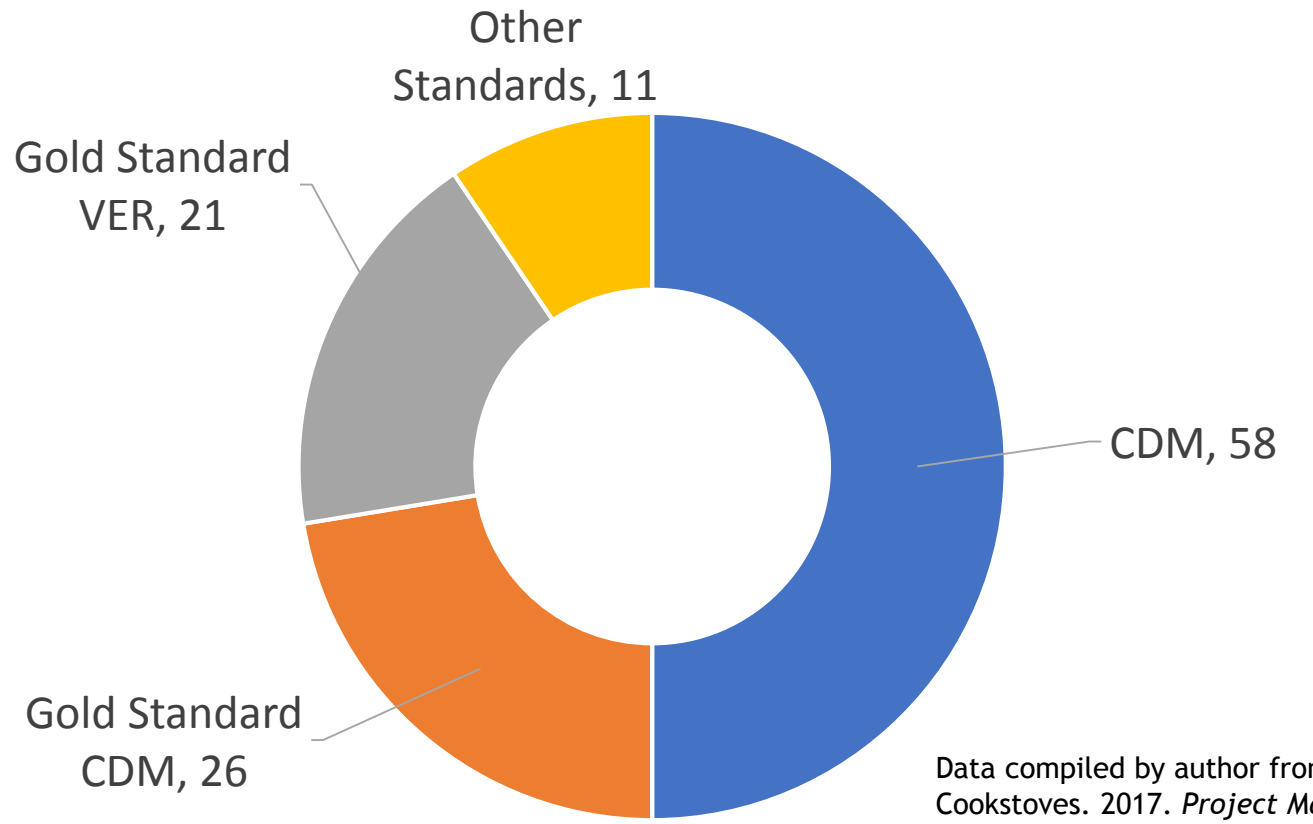
- ***Policies and programmes were implemented with recent introductions suggesting future increased rates of improvement***
  - Policy targets and programmes;
  - RD&D for clean cooking technologies;
  - Subsidy mechanisms to lower cost of clean fuels and cooking appliances.

DRIVERS: NEW SOURCES OF FINANCE

- ***Carbon financing is supporting development of the clean cooking sector.***

DRIVERS: CARBON FINANCE

CARBON FINANCE PROJECTS BY STANDARD IN ASIA AND THE PACIFIC



Data compiled by author from Global Alliance for Cookstoves. 2017. *Project Map*. Available from http://carbonfinanceforcookstoves.org/tools/project-map/?scale=all&standard=all&issuing=

CHALLENGES: POLICY INTEGRATION

- Clean cooking is not well-linked within broader energy and development policy frameworks;
- Programmes are often ad hoc, underfunded, and poorly monitored.

CHALLENGES: COMPETITION WITH TRADITIONAL COOKING OPTIONS

Clean cooking options are not always:

- Available and affordable;
- Equal or superior in performance and utility;
- Designed with consideration of cultural preferences.

CHALLENGES: UNCERTAIN DELIVERY OF INTENDED BENEFITS

- Studies suggest intended health benefits may not be delivered.
- More data is required to understand health and gender benefits of clean cooking.

CHALLENGES: INSUFFFICIENT FINANCING AND INVESTMENT

- $4.4 billion in investment is required globally on an annual basis;
  - 2012 investment amounted to just $0.1 billion, leaving a $4.3 billion gap;
- Financial institutions have yet to mainstream clean cooking into lending portfolios;
- Small- and medium-scale entrepreneurs of clean cooking solutions often lack access to investment and working capital.

CONCLUSIONS: FACTORS FOR EXPANDING ACCESS TO SUSTAINABLE ENERGY

- Getting the design right - delivering energy services that meet consumer needs;
- Working toward greater affordability;
- Expanding markets for clean energy solutions;
- Increasing women's participation in decision-making and productive activities.
- Engaging the private sector;
- Broadening investment and finance options;
- Increasing data quality and sharing knowledge;
- Better understanding and quantification of the benefits of various approaches to energy access.

Thank you.