

SDG7 Technical Advisory Group

Policy Brief on Advancing SDG7 in Asia and the Pacific

Draft of 17 April

NOT FOR CIRCULATION – DO NOT REFERENCE

This draft was shared with participants of the Expert Group Meeting in Support of SDG7 review at the HLPF 2023, 11-12 May, as background information.

Lead author: UN ESCAP

ADVANCING SDG 7 IN ASIA AND THE PACIFIC

I. Key Messages/Summary

The Asia-Pacific region is a key player in global energy consumption and a major source of greenhouse gas (GHG) emissions, accounting for over half of both. With energy contributing to three-quarters of total GHG emissions, achieving Sustainable Development Goal 7 (SDG 7) in the region is vital in addressing the climate change crisis and advancing progress on other SDGs. Energy is intertwined with many other SDGs, including poverty reduction, food security, health, education, and water access. Expanding access to clean energy in line with SDG 7 can deliver multiple benefits including improved health outcomes, job creation, and reduced poverty and inequality. Remarkably, energy is linked to two-thirds of the 169 SDG targets, underlining the crucial role it plays in sustainable development.

Despite significant progress made, the pace of transitioning to clean energy is uneven and incremental, highlighting the need for scaled-up technical and financial support. A just energy transition is also critical, with disadvantaged economies requiring particular focus to ensure all nations benefit from clean and sustainable energy. This is especially important as some countries lack the necessary policies, capacities, or financing mechanisms to support accelerated progress, which may leave vulnerable economies behind in the energy transition. To this end, regional cooperation can play a crucial role in facilitating commitments and efforts to advance SDG 7 in the Asia-Pacific, particularly given the current geopolitical shifts and energy market turmoil of 2022 and 2023. With setbacks challenging many economies, increased targeted support is needed to ensure a sustainable energy future for all.

Access to electricity

As of 2021, 98.6 per cent of the population had access to electricity in Asia-Pacific. There is a small disparity between electricity access rates in urban and rural areas, but the gap is closing and universal access seems to be within reach. However, while the electrification gap narrowed to almost one percentage point, it is obvious that tracking electrification progress has a number of challenges. There are limitations in household survey data coverage. The binary view of electricity access taken for SDG 7 can overshadow the important considerations of affordability, quality and reliability of electricity supply.

Access to clean cooking

Around 1.2 billion people, or nearly 24 per cent of the population in (2021) relied on polluting and unhealthy cooking fuels and technologies. The pace of improvement at the regional level is not rapid enough, particularly in rural areas to reach universal access to clean cooking by 2030.

Energy intensity

The pace of improvement in region energy intensity is slowing, leading to the risk that the region will not reach its SDG 7 targets. Energy intensity in emerging economies continues to be relatively high compared to advanced countries. Many smaller countries are not achieving sufficient improvement, and this means that further policy attention in this area is required

Renewables

In 2020, the share of modern renewable energy in total final energy consumption was 12.5 per cent. While modern renewable energy capacity is increasing, but the pace is not fast enough, and with some

exceptions, remains concentrated in a small number of wealthier and larger economies. The slowest increase observed continues to be in the heat and transport sectors .

Box - Priority Actions for the Asia-Pacific region over the next 3 years:

- Increase access to electricity in underserved areas by investing in off-grid and mini-grid solutions that utilize renewable energy sources to reach the last mile.
- Implement policies and regulations that support the deployment of clean cooking technologies, such as electric cookstoves, LPG and biogas systems, and, to reduce reliance on traditional biomass fuels.
- Encourage the adoption of energy-efficient appliances and lighting systems through consumer education campaigns and financial incentives.
- Promote the development of local renewable energy markets by providing policy and regulatory support and improving access to financing with a focus on the heat and transport sector.
- Strengthen regional cooperation and knowledge sharing to enhance energy security and increase the use of renewable energy sources.
- Enhance availability and quality of energy data and information to support evidence-based decision-making and monitoring of progress towards SDG 7.

Box - Priority Actions Towards 2030:

- Achieve universal access to affordable, reliable, and modern energy services, with a focus on electrification and clean cooking.
- Increase the share of renewable energy in the energy mix, aiming for at least 50 per cent by 2030, through the deployment of large-scale renewable energy projects and the integration of distributed renewable energy sources into the grid.
- Implement energy efficiency measures in all sectors, with a particular focus on industry, buildings, and transportation.
- Phase out fossil fuel subsidies and redirect those resources towards investments in renewable energy and energy efficiency.
- Develop innovative financing mechanisms, such as green bonds, to support the scaling up of renewable energy and energy efficiency projects.

II. SDG 7 Progress in the Asia-Pacific Region

ELECTRIFICATION

Between 2016 and 2021, almost 380 million people gained access to electricity in Asia and the Pacific. Over this period, the region's population increased by 180 million, leading to a rise in the rate of electrification from 94.0 per cent to 98.6 per cent (target 7.1.1). In 2021, urban access rates continued to rise to near universal access, reaching 99.8 per cent, and rural areas are also closing the gap with 97.7 per cent. At the subregional level, access rates continued to trend upward, though the Pacific remained relatively flat. Nationally, progress was varied, with the greatest average annual growth rates for the period recorded in Afghanistan, Bhutan, Cambodia and Nepal, each with between 4.3 per cent and 10.2 per cent annual gains.

The growing electrification rates can be attributed to significant government efforts to expand and upgrade national power grids while reaching decentralized households and community systems in hard-to-reach areas, often with the help of the private sector.

Although significant progress has been made on electrification, approximately 67 million people remain without access to electricity, especially in low- and lower-middle-income countries and mostly

in rural areas. In addition, last-mile electrification remains a challenge, as does the quality and reliability of the existing electricity supply needed to support productive and sustainable livelihoods.

Reaching the end-of the-line and off-grid households of the region with affordable, adequate and reliable electricity remains the greatest challenge to achieving universal access. The long-term sustainable operation of rural decentralized systems and the provision of energy access to more than the lowest-tier households have proven difficult in some contexts. Although public, private and international actors have introduced numerous business models and technical approaches, regular maintenance activities are more challenging; moreover, the bundling of system operations across regions is financially inefficient because of the absence of service and equipment standards. Without ongoing financial support, some off-grid communities will remain vulnerable to business of small operators and suppliers.

ACCESS TO CLEAN COOKING

In the Asia-Pacific region, almost 1.2 billion people – nearly one quarter of the region’s population – remain without access to clean cooking. In 2021, the regional rate of access to clean cooking reached 73.9 per cent, up from 51.1 per cent in 2010. As of 2021 clean cooking access is not on track to meet SDG 7 especially in rural areas where it is 57 per cent. Although there have been small gains in closing the gap between those with and without access to clean cooking, the average annual increase in access has been only one per cent over the period 2010-2021. Progress in expanding access to clean cooking has been quite significant over the last decade, with the rate of yearly increase in access (120 million) threefold population growth (41 million). Nevertheless, without a significant growth in population expected in the immediate term, hundreds of millions of people will remain reliant on polluting and unhealthy cooking fuels and technologies in 2030.

The transition to clean cooking faces a significant obstacle in affordability. However, there are promising and innovative approaches that are slowly emerging as possible solutions. For instance, in India, subsidized LPG cooking schemes have been introduced with great ambition. Meanwhile, other countries such as Bhutan and Indonesia are embracing the shift from gas to electric cooking, which is becoming a more viable option. This shift is being supported by electricity subsidies and provision of free induction stoves, which are encouraging households to switch from kerosene to electricity stoves.

To bridge the gap and achieve SDG 7 on clean cooking, radically increased investments are required to promote the adoption of clean cooking solutions. Such investments may take various forms. For example these can include government subsidies and financial incentives to make clean cooking solutions more affordable and accessible to low-income households, public-private partnerships to leverage private sector expertise and financing for clean cooking solutions, investments in research and development of new technologies and fuels that are affordable, scalable, and environmentally sustainable, and increased international development assistance and donor funding to support clean cooking initiatives in developing countries.

RENEWABLE ENERGY

Climate change, and the growing affordability of renewables are driving many countries to focus their national energy development plans on renewables. During the 2021 COP-26 summit, several nations including Malaysia, Nepal, Pakistan, Philippines, Republic of Korea, Singapore, Sri Lanka and Viet Nam all announced new commitments to phase-down coal. Although renewable energy installations are increasing, they still make up a relatively small share of total energy consumption in many countries

due to the overall growth in energy demand. In 2020, modern renewable energy accounted for 12 per cent of the regional total final energy consumption, helping to push the overall share of renewables, (including modern and traditional forms) to its highest point at 19.1 per cent.

The region is undergoing a shift towards a more diverse mix of modern renewable energy sources. Since 2020, the combined installed capacity of wind and solar has surpassed that of hydropower, with solar energy in particular experiencing rapid growth. In 2021, Asia-Pacific's solar installed capacity reached 485 GW, representing a significant increase of approximately 19 per cent compared to the previous year.

Renewable energy auctions have been instrumental in driving the adoption of wind and solar power, leading to increased investment and reduced costs in the Asia-Pacific region, which has become a global leader in this field. Despite an impressive six-fold growth in renewable generating capacity since 2010, a significant gap remains between the progress made by wealthier nations and developing countries. Upper-middle- and high-income countries have witnessed a remarkable three-fold surge in renewable energy installations, while low- and lower middle income countries have made only minimal progress on a per capital basis as illustrated in the figure.

Figure 4: Renewable electricity capacity per capita, by ESCAP, 2010-2021

Despite some progress towards cleaner energy systems, there is still a long way to go. The current rate of progress is not enough to meet the growing demand for renewable energy. The high cost of deploying renewable energy, as well as the lack of technical and financial capacity, are significant barriers for many countries to achieve the necessary level of renewable energy deployment.

To overcome these challenges, there needs to be increased technical and financial support on a larger scale. Additionally, it is crucial to prioritize the needs of developing economies in the transition to cleaner and sustainable energy. This is essential to ensure that all nations can enjoy the benefits of clean energy and that the transition is fair and equitable.

Text box on JETPs

Major financing deals such as the Just Energy Transition Partnership (JETPs) have the potential to significantly increase renewable energy deployment and energy efficiency, while also phasing out coal power plants. Similarly, the ASEAN Catalytic Green Finance Facility can provide crucial support to de-risk green projects and mobilize public and private financing. Other promising developments include the Asian Development Bank- backed Energy Transition Mechanism and Climate Investment Funds, which aim to incentivize the private sector to support early phase out of coal power plants in India, Indonesia, and the Philippines, with potential expansion to other countries in the region. Furthermore, the Regional Comprehensive Economic Partnership, a free trade agreement between 10 southeast Asian economies and Australia, China, Japan, New Zealand and the Republic of Korea which came into effect in 2022, can help narrow development gaps and maximize the mutual benefits of the energy transition.

TEXT BOX [EVs Penetration in Asia]

TEXT BOX [GREEN GRID]

ENERGY EFFICIENCY

The annual improvement rate of primary energy intensity in Asia Pacific has slowed to 1.3 per cent between 2015 and 2020, compared to the 2.8 per cent reductions levels during 2010 – 2015. Unfortunately, at these levels, the pace of energy intensity improvement in the region is not keeping up with the 2010-2030 global target rate of 2.6 per cent. In fact, from 2020 to 2030, the region needs to accelerate its annual energy intensity improvement rate to 3.2 per cent to meet the SDG 7.3 target.

Achieving the global SDG 7.3 target will require significant scaling up of energy efficiency policies and investments. However, several challenges stand in the way of achieving this, including low prioritization, limited opportunity identification, insufficient policy and regulatory support, financing hurdles, and inadequate awareness of the benefits of energy efficiency.

It is crucial to integrate energy efficiency into national and regional development planning to ensure proper consideration and allocation of resources. China serves as a prime example in the region of how setting ambitious energy performance requirements for large-scale facilities can aid in meeting efficiency targets. Through its Five-Year Development Plan for the energy sector, China aims to reduce energy consumption per unit of GDP by 13.5 per cent from 2020 levels.

To promote energy efficiency and reduce energy demand, there is a need to raise awareness about the benefits of high-efficiency choices through various means such as adequate labelling, consumer awareness campaigns, and incentives. In order to accomplish this, governments must obtain better data across the range of end-uses to increase minimum energy performance standards (MEPS) on products. It is essential to introduce, tighten, and enforce national MEPS for appliances, as this prevents the dumping of inefficient technologies on less-developed energy efficiency markets. Harmonizing regional MEPS and standardized labelling, such as through the ASEAN subregion's efforts, can offer benefits throughout the supply chain, lowering manufacturing costs, simplifying compliance for officials, and opening up cross-border markets that can take advantage of economies of scale, contributing to affordability.

In the building sector, the introduction of energy efficiency building codes is vital to ensuring good building energy performance and supporting affordability of energy services through reduced energy demand. Passive design strategies for buildings and urban areas are an emerging focus area within building regulations and urban planning. Such strategies also support the reduction of the building sector's energy consumption and greenhouse gas emissions.

III. Policy Implications/Recommendations

1. **Strengthen policies and regulations:** Governments in the region need to put in place stronger policies and regulations that promote the deployment of renewable energy technologies, encourage energy efficiency, and provide incentives for investment in the energy sector. This can be achieved through targeted policy interventions, such as tax incentives, subsidies, and feed-in tariffs.
2. **Encourage private sector investment:** The private sector plays a critical role in advancing SDG 7, and governments should incentivize and encourage private sector investment in the energy sector. Governments can create an enabling environment for private sector investment through targeted policies and regulations that support renewable energy development, energy efficiency, and clean cooking solutions.
3. **Increase access to finance:** Access to finance remains a major challenge for the energy sector in the Asia Pacific region. Governments should therefore work to increase access to finance for energy projects, particularly for small-scale projects and those targeting underserved communities. This can

be achieved through the establishment of dedicated financing mechanisms and partnerships with financial institutions.

4. **Address energy poverty:** Despite progress in recent years, energy poverty remains a significant challenge in the Asia Pacific region. Governments should prioritize the provision of access to modern energy services for all, particularly for low-income and marginalized communities. This can be achieved through targeted policies and programs that provide incentives for the deployment of off-grid renewable energy solutions and promote energy efficiency.

5. **Promote regional cooperation:** The Asia Pacific region is characterized by vast differences in energy access and development, and greater regional cooperation is needed to advance SDG 7. Governments should therefore work together to develop a regional energy strategy that promotes the deployment of renewable energy technologies, encourages energy efficiency, and promotes access to modern energy services.

6. **Empower civil society:** Civil society plays a critical role in advancing SDG 7, and governments should work to empower civil society organizations to engage in the energy sector. This can be achieved through targeted policies and programs that provide capacity building and funding support for civil society organizations working on energy access issues.

7. **Enhance data collection and monitoring:** Reliable data is essential for effective policymaking and monitoring progress towards SDG 7. Governments should therefore invest in enhancing data collection and monitoring systems for the energy sector, particularly for energy access and renewable energy deployment.