The Commonwealth Sustainable Energy Transition

Pathways and Progress Report

August 2025

The Commonwealth Sustainable Energy Transition Agenda

The Commonwealth Sustainable Energy Transition

Pathways and Progress Report

August 2025

The Commonwealth
Sustainable Energy
Transition Agenda

Authors: Anthony Polack and Victor Kitange

The authors are very grateful to Naadira Ogeer of the Commonwealth Secretariat for helpful comments offered in the preparation of this report. This report is an update of the 2022 Commonwealth Sustainable Energy Transition Report authored by Paul Precht with assistance from Ujala Batool, Jennifer Chen and Aaraby Mohanathas. The views and opinions expressed in this report are the responsibility of the authors and should in no way be attributed to the institutions with which they are affiliated or to the Commonwealth Secretariat.

Commonwealth Secretariat
Marlborough House
Pall Mall
London SW1Y 5HX
United Kingdom

www.thecommonwealth.org

Published by the Commonwealth Secretariat.

Contents

List of Figures v

List of Tables vii

Acronyms and Abbreviations ix

Executive Summary xi

1. Introduction 1

2. Background 3

2.1 The Commonwealth 3

2.2 Commonwealth Heads of Government Meeting 3

2.3 The Paris Agreement and NDCs 5

2.4 Energy and SDG7 5

2.5 The Commonwealth in context 5

2.6 Commonwealth Climate Finance Access Hub 7

3. NDCs and Energy Policies of Member Countries 9

3.1 Updated NDC submissions 9

3.2 NDC comparability 10

3.3 NDC key highlights 10

4. Summary of Progress under SDG7 by Region 14

A note on data sources 14

4.1 Africa 14

4.2 Asia 17

4.3 The Caribbean and the Americas 26

4.4 Europe 30

4.5 The Pacific 31

5. Energy Transition and Changing Geopolitics 35

5.1 Energy resilience and security 35

5.2 Clean technology and innovative solutions 35

5.3 Distributed renewable energy solutions 36

5.4 Carbon pricing/markets 36

6. Financing Energy Transition in SIDS 40

6.1 General context 40

6.2 SIDS context 40

6.3 Barriers and solutions 41

7. Policy Recommendations 46

7.1 Government engagement and leadership 46

7.2 Financing the energy transition 46

7.3 Fiscal incentives 47

7.4 Energy security 47

7.5 Distributed renewable energy solutions 48

7.6 Carbon pricing/markets 48

Appendix A: The CSET Agenda 49

Appendix B: CHOGM 2024 Communiqué 50

Appendix C: SDG7 Comparison Table 52

Appendix D: NDC Targets and Selected Actions 56

Endnotes 80

List of Figures

Figure 1	SDG7.1.1 electrification, 2000–2022 by region.	xii
Figure 2	SDG7.1.2 clean cooking access rate, 2000–2022 by region.	xiii
Figure 3	SDG7.2.1 renewable energy, 2000–2021 by region.	xiii
Figure 4	SDG7.3.1 energy intensity, 2000–2021 by region.	xiv
Figure 5	SDG7.a.1 international financial flows, 2000–2022 by region.	xiv
Figure 6	SDG7.b.1 installed renewable electricity-generating capacity, 2000–2022 by region.	xv
Figure 7	Transition indicators for Commonwealth countries vs the world.	xv
Figure 8	International financial flows to support the energy transition for Commonwealth countries vs the world.	xvi
Figure 9	Installed renewable electricity-generating capacity in Commonwealth countries vs the world.	xvi
Figure 3.1	Energy access progress, SDG7.1.	11
Figure 4.1	Current Commonwealth SDG7 status by region.	14
Figure 4.2	SDG7.1.1 electrification, 2000–2022, Africa.	15
Figure 4.3	SDG7.1.2 clean cooking access rate, 2000–2022, Africa.	16
Figure 4.4	SDG7.2.1 renewable energy, 2000–2021, Africa.	17
Figure 4.5	SDG7.3.1 energy intensity, 2000–2021, Africa.	19
Figure 4.6	SDG7.a.1 international financial flows, 2000–22, Africa.	19
Figure 4.7	SDG7.b.1 installed renewable electricity-generating capacity, 2000–2022, Africa.	20
Figure 4.8	SDG7.1.1 electrification, 2000–2022, Asia.	20
Figure 4.9	SDG7.1.2 clean cooking access rate, 2000–2022, Asia.	21
Figure 4.10	SDG7.2.1 renewable energy, 2000–2021, Asia.	21
Figure 4.11	SDG7.3.1 energy intensity, 2000–2021, Asia.	22
Figure 4.12	SDG7.a.1 international financial flows, 2000–2022, Asia.	22
Figure 4.13	SDG7.b.1 installed renewable electricity-generating capacity, 2000–2022, Asia.	25
Figure 4.14	SDG7.1.1 electrification, 2000–2022, Caribbean and Americas.	25
Figure 4.15	SDG7.1.2 clean cooking access rate, 2000–2022, Caribbean and Americas.	26

Figure 4.16 SDG7.2.1 renewable energy, 2000–2021, Caribbean and Americas. 26

Figure 4.17 SDG7.3.1 energy intensity, 2000–2021, Caribbean and Americas. 29

Figure 4.18 SDG7.a.1 international financial flows, 2000–2022, Caribbean and Americas. 29

Figure 4.19 SDG7.b.1 installed renewable electricity-generating capacity, 2000–2022, Caribbean and Americas. 29

Figure 4.20 SDG7.2.1 renewable energy, 2000–2021, Europe. 31

Figure 4.21 SDG7.3.1 energy intensity, 2000–2021, Europe. 31

Figure 4.22 SDG7.1.1 electrification, 2000–2022, Pacific. 32

Figure 4.23 SDG7.1.2 clean cooking access rate, 2000–2022, Pacific. 32

Figure 4.24 SDG7.2.1 renewable energy, 2000–2021, Pacific. 32

Figure 4.25 SDG7.3.1 energy intensity, 2000–2021, Pacific. 33

Figure 4.26 SDG7.a.1 international financial flows, 2000–2022, Pacific. 33

Figure 4.27 SDG7.b.1 installed renewable electricity-generating capacity, 2000–2022, Pacific. 33

Figure 6.1 Investment requirement in the power sector. 41

List of Tables

Table 1	Latest Commonwealth regions' SDG7 indicators and alignment with NDCs.	xvii
Table 2	Latest Commonwealth regions' SDG7 indicators (7.a.1 and 7.b.1).	xviii
Table 2.1	Commonwealth member countries by region.	3
Table 2.2	SDG7 targets and indicators.	6
Table 2.3	Emissions per capita, 2022.	6
Table 2.4	Real economic growth rates (% change).	7
Table 2.5	Global energy demand and emissions, 2020–2024 (% change).	8
Table 3.1	Mitigation base year, reduction targets and conditionality.	11
Table 4.1	SDG7 progress of member countries, Africa	18
Table 4.2	SDG7 progress of member countries, Asia.	23
Table 4.3	SDG7 progress of member countries, Caribbean and Americas.	24
Table 4.4	SDG7 progress of member countries, Europe.	27
Table 4.5	SDG7 progress of member countries, Pacific.	28
Table 5.1	Carbon pricing in Commonwealth member countries.	37
Table C1	SDG7 Comparison Table.	52
Table D1	Updated NDCs, African Commonwealth countries.	56
Table D2	Updated NDCs, Asian Commonwealth countries.	67
Table D3	Updated NDCs, Pacific Commonwealth countries.	70
Table D4	Updated NDCs, Caribbean and Americas Commonwealth countries.	75
Table D5	Updated NDCs, European Commonwealth countries.	79

Acronyms and Abbreviations

AFOLU	agriculture, forestry and other land use
AI	Artificial Intelligence
BAU	business-as-usual
CARICOM	Caribbean Community
CCFAH	Commonwealth Climate Finance Access Hub
CCS	carbon capture and storage
CCUS	carbon capture, utilisation and storage
CHOGM	Commonwealth Heads of Government Meeting
CNG	compressed natural gas
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COP	Conference of the Parties
CSET	Commonwealth Sustainable Energy Transition
CWC	Commonwealth country
ETS	emissions trading scheme
EU	European Union
EV	electric vehicle
GCF	Green Climate Fund
GDP	gross domestic product
$GgCO_2e$	gigagram of CO_2e
GHG	greenhouse gas
Ha	hectare
HFC	hydrofluorocarbon
ICJ	International Court of Justice
IEA	International Energy Agency
IMF	International Monetary Fund
INDC	Intended Nationally Determined Contribution
IPPU	industrial processes and products use
IRENA	International Renewable Energy Agency
ITMO	Internationally Transferred Mitigation Outcome
$KtCO_2e$	kiloton of CO_2e

LDC	least developed country
LED	light-emitting diode
LLDC	landlocked developing country
LPG	liquefied petroleum gas
LT-LEDS	long-term low emission development strategy
LUC	land use change
LULUCF	land use, land use change and forestry
MJ	mega joule
$MtCO_2e$	metric ton of CO_2e
MW	megawatt
MWh	megawatt-hour
N/A	not available
NCQG	New Collective Quantified Goal
NDC	Nationally Determined Contribution
OECD	Organisation for Economic Co-operation and Development
PPP	purchasing price parity
PV	photovoltaic
REDD+	Reducing Emissions from Deforestation and Forest Degradation plus the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries
SDG	Sustainable Development Goal
SEforALL	Sustainable Energy for All
SIDS	small island developing states
TFEC	total final energy consumption
UK	United Kingdom
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UN-OHRLLS	UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States
USA	United States of America
WGEO	World Green Economy Organization
WHO	World Health Organization

Executive Summary

The Paris Agreement and the seventh Sustainable Development Goal (SDG) – on ensuring access to affordable, reliable, sustainable and modern energy for all – are intrinsically linked. Key targets of SDG7 include achieving universal access to electricity, ensuring the use of clean cooking solutions, doubling the global rate of improvement in energy efficiency by 2030 and substantially increasing the share of renewable energy globally. The aim of the Paris Agreement is to reduce greenhouse gas (GHG) emissions and reach net zero emissions worldwide by 2050, thereby limiting global average temperature rise to well below 2°C above preindustrial levels, while pursuing efforts to limit the increase to 1.5°C.

Significant changes are required of economies to transition energy sources from non-renewable hydrocarbon-based fuels to non-carbon fuels and renewable energy sources. To fulfil these ambitions, the magnitude of change required will be challenging, and will bring disruption, uncertainties and opportunities.

The evolving geopolitical landscape is significantly influencing the goal of a just, equitable and inclusive energy transition, with impacts in areas such as energy security, economic equality, global technology competition and the well-being of vulnerable communities. Countries must navigate the challenges these geopolitical uncertainties and tensions pose while maintaining their commitment to the collective global objective of addressing the existential threat of climate change.

Achieving an inclusive, equitable and just energy transition is essential to meeting the climate change targets outlined in the Paris Agreement and SDG7. This transition should be grounded in meaningful and effective social dialogue and include participation from all stakeholders, including governments, Indigenous Peoples, local communities, women, youth and children. Also, it requires addressing energy poverty through policies and programmes that ensure affordable energy access and guarantee clean energy for all.

Government policy support has been pivotal in promoting the development and deployment of clean technologies, leading to a period of rapid growth in sectors such as solar photovoltaic and wind turbine technologies. Furthermore, countries must strive to develop internationally competitive local supplies of goods and services crucial for the energy transition by implementing appropriate trade and industrial policies.

Small island developing states (SIDS) in the Commonwealth have made progress in terms of increasing renewable energy in their energy mix; however, fossil fuel still represents over 80 per cent of their total final energy consumption.[1] This high dependency on fossil fuel, largely imported, has constrained their fiscal space, drained their foreign exchange and contributed to increasing carbon emissions as well as heightened vulnerability to external shocks. Many SIDS have made commitments to achieve 100 per cent renewable energy by 2030 and net zero emissions goals by 2050. However, several barriers, many unique to SIDS, must be addressed if they are to attract the significant investment and financing required to achieve these goals.

This third Commonwealth Sustainable Energy Transition (CSET) Report examines the current global trends in energy transitions and their impact in relation to achieving the climate change goal of carbon neutrality by 2050, as well as the 2030 SDG7. Additionally, it discusses the policy responses that Commonwealth countries

(CWCs) are making to ensure energy transitions are equitable, just and inclusive, fairly distributing the benefits and managing costs across regions and vulnerable groups and communities.

The report focuses on progress towards these goals in Commonwealth countries (CWCs), with an emphasis on the SDG7 targets and indicators and the Nationally Determined Contributions (NDCs) of these countries towards meeting the goals of the Paris Agreement. As an update of the second edition of the Commonwealth's flagship 2022 report, 'The Commonwealth Sustainable Energy Transition: Pathways and Progress', its purposes are to:

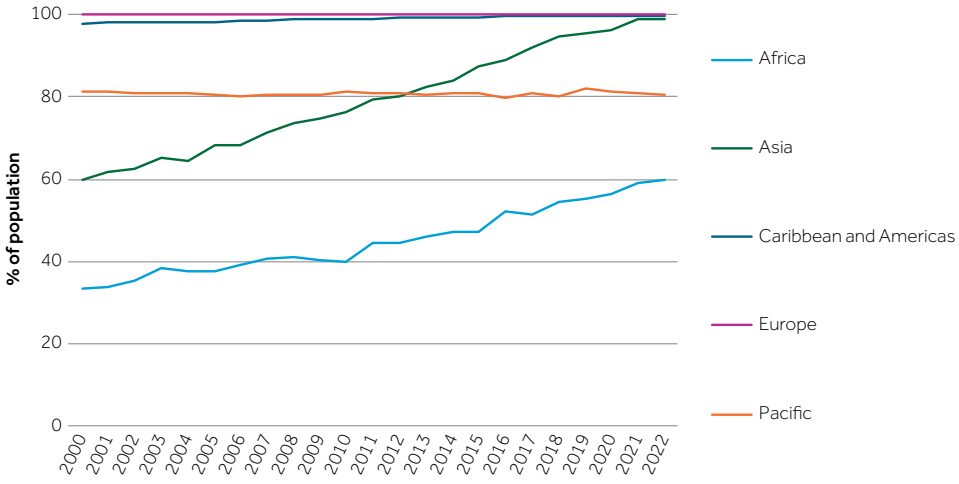
- facilitate the sharing of current knowledge, insights, developments and progress on efforts to achieve SDG7 and NDCs by CWCs;
- create opportunities for CWCs to encourage and support accelerated action towards achievement of SDG7 and climate goals across the Commonwealth; and
- inform government decisions that shape clean energy transition pathways in CWCs and support action by governments aimed at achieving SDG7 and commitments under the Paris Agreement.

SDG indicators for Commonwealth countries

Electrification

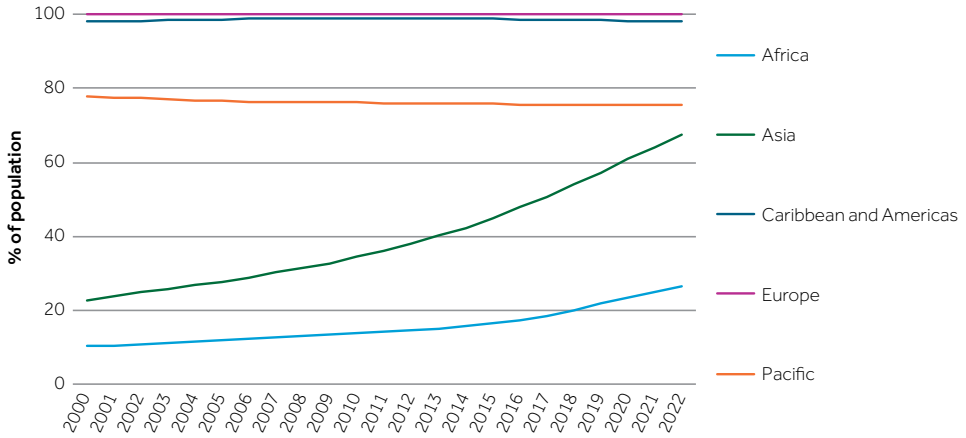
The CWCs of Asia, the Caribbean and the Americas, and Europe have generally achieved 100 per cent electrification rates (Figure 1). Africa has the lowest rate of electrification, at 59.8 per cent, followed by the Pacific (especially Papua New Guinea, Solomon Islands and Vanuatu), at 80.5 per cent. The number of people with access to electricity continued to increase in the African region in 2022, with an average annual growth rate since 2012 of 3.09 per cent, whereas that in the Pacific region decreased by 0.02 per cent, if the countries that are already 100 per cent electrified are excluded.

Figure 1 SDG7.1.1 electrification, 2000–2022 by region.



Source: UN Statistics Division SDG Indicators Database 2022; UN Population Division (2022). Weighted by population.

Figure 2 SDG7.1.2 clean cooking access rate, 2000–2022 by region.



Source: UN Statistics Division SDG Indicators Database 2022; UN Population Division (2022). Weighted by population.

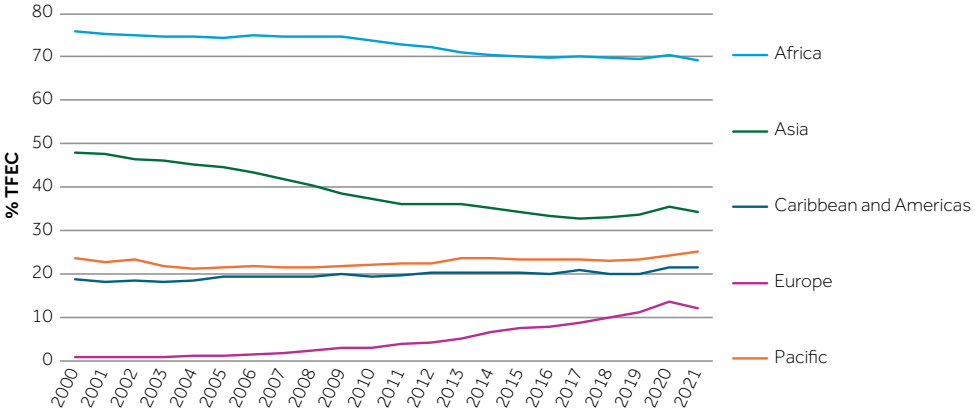
Clean cooking

The populations of the European CWCs, and those of Canada, Australia and New Zealand, have long had universal access to clean cooking (Figure 2). With some access gap to close, Caribbean CWCs have access to clean cooking at very close to 100 per cent. The clean cooking access rate in those CWCs without universal access has been growing at 5.81 per cent annually since 2012, with that of Asian CWCs growing at 5.94 per cent and African CWCs at 6.17 per cent. African CWCs have the lowest clean cooking access rate, at 26.35 per cent in 2022.

Renewable energy

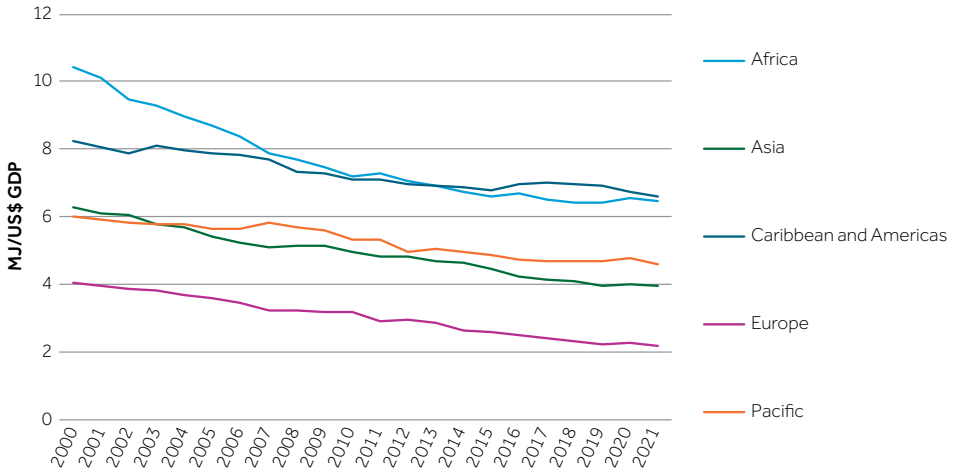
The share of renewable energy in total final energy consumption (TFEC) is decreasing in the CWCs of Africa and Asia, has remained relatively constant in the CWCs of the Caribbean and the Americas and of the Pacific and is increasing in the CWCs of Europe (Figure 3). The renewable energy share in TFEC is declining in some Commonwealth developing countries. This is because the energy used for cooking represents a high percentage of TFEC in these countries, and the use of

Figure 3 SDG7.2.1 renewable energy, 2000–2021 by region.



Source: UN Statistics Division SDG Indicators Database (2021); UN Population Division (2021). Weighted by population.

Figure 4 SDG7.3.1 energy intensity, 2000–2021 by region.



Source: UN Statistics Division SDG Indicators Database (2021); UN Population Division (2021). Weighted by population.

solid biomass fuel, which is classified as renewable energy, for cooking is generally decreasing. This has resulted in a more efficient use of energy and often a transition to non-renewable fuels.

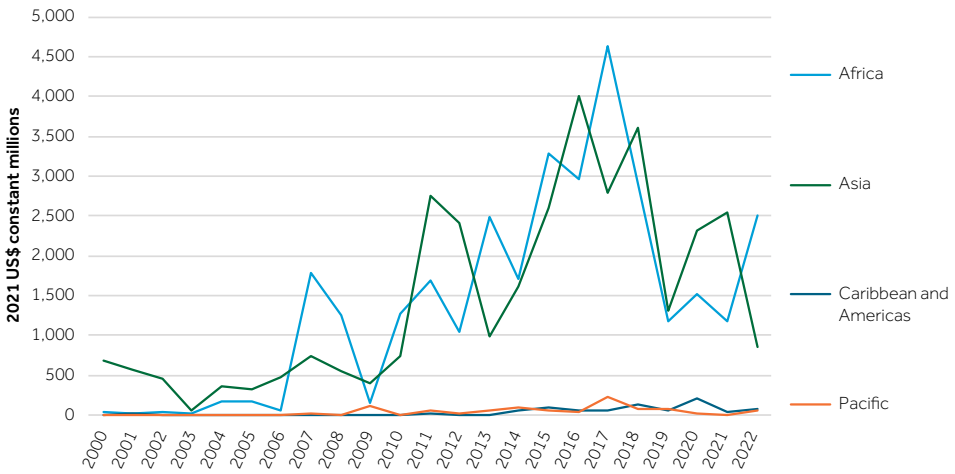
Energy efficiency

The indicator for energy intensity is mega joules (MJ) of energy per unit of US dollar gross domestic product (GDP). This has been declining in CWCs at an average rate of 1.55 per cent annually since 2011 (Figure 4). Less energy is required for each unit of production as Commonwealth economies become more and more energy efficient.

International financial flows

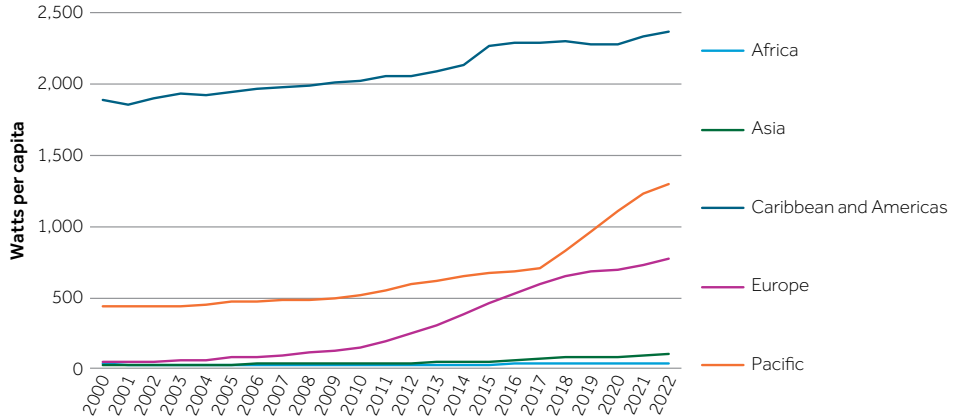
Developing CWCs received US$67 billion in support of the energy transition between 2000 and 2022 (Figure 5). These finance flows have increased significantly in recent years, especially in Africa and Asia, although they have been highly cyclical in nature.

Figure 5 SDG7.a.1 international financial flows, 2000–2022 by region.



Source: UN Statistics Division SDG Indicators Database (2022).

Figure 6 SDG7.b.1 installed renewable electricity-generating capacity, 2000–2022 by region.



Source: UN Statistics Division SDG Indicators Database (2022); UN Population Division (2022).

About 97 per cent has gone to Asian and African CWCs, although developing countries in the Pacific and the Caribbean have received more on a per capita basis.

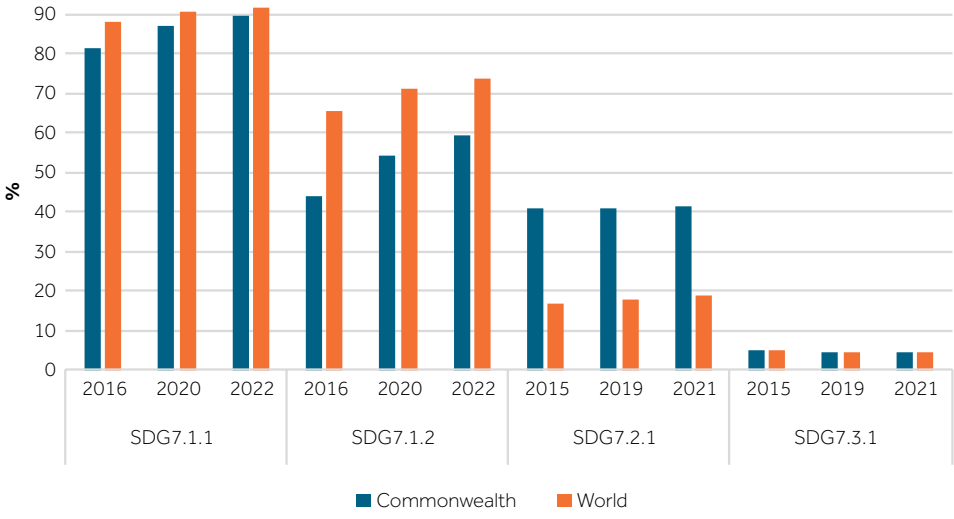
Renewable energy-generating capacity per capita

Figure 6 shows that installed renewable electricity-generating capacity per capita has been increasing significantly in recent years. Progress in the Caribbean and the Americas is skewed as Canada's population and hydro power capacity dominates the region. Similarly, Australia and New Zealand's population and renewable energy capacity are much greater than those of the smaller developing Pacific CWCs. The UK has led Europe to having the strongest renewable energy growth of CWCs over the past 15 years or so.

SDG7 Commonwealth and world comparison

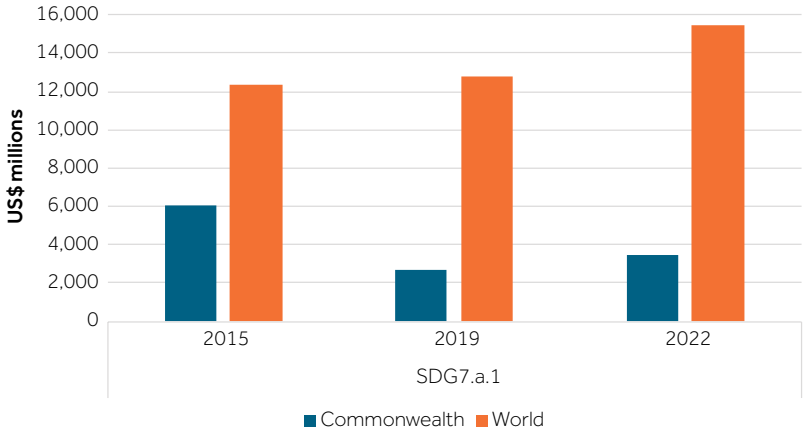
In terms of access to electricity and access to clean cooking, Figure 7 shows CWCs are behind the world as a whole. This would be because the Commonwealth has such

Figure 7 Transition indicators for Commonwealth countries vs the world.



Source: UN Statistics Division SDG Indicators Database (2021, 2022); UN Population Division (2021, 2022).

Figure 8 International financial flows to support the energy transition for Commonwealth countries vs the world.



Source: UN Statistics Division SDG Indicators Database (2022).

a high proportion of the population in developing countries. Conversely, it shows CWCs have higher shares of renewable energy than that of the world generally. However, contrary to the intention of the SDG7 target, this figure is declining. The declining share of renewable energy sources likely indicates a transition for energy consumers in these countries to more modern energy sources that may not be renewable but that results in more efficient energy use in those countries. Energy intensities in CWCs are within global trends.

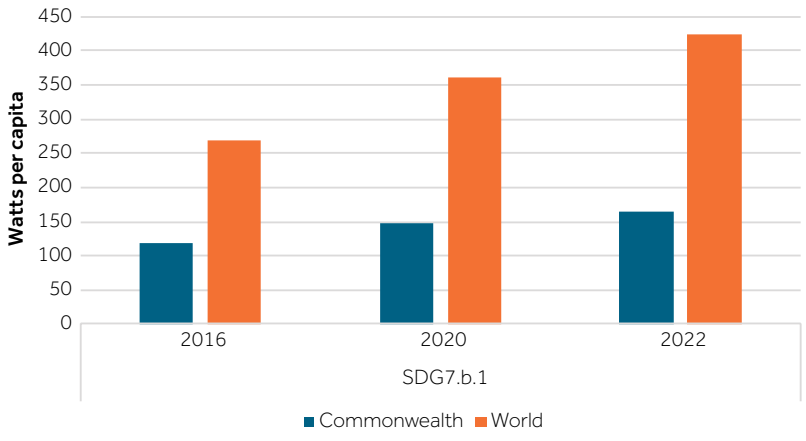
As noted above, indicator 7.a.1 is highly cyclical. From 2015 to 2022, international financial flows to support the energy transition in developing countries declined in CWCs in comparison with flows to the world in total, which grew during this period (Figure 8).

Installed renewable electricity-generating capacity per capita in CWCs grew at a slower rate than for the world between 2016 and 2022 (Figure 9).

SDG7 Commonwealth regional comparison

Table 1 presents a Commonwealth regional comparison of indicators for key SDG7 targets between 2015–2016 and 2021–2022. Most indicators show mixed but better

Figure 9 Installed renewable electricity-generating capacity in Commonwealth countries vs the world.



Source: UN Statistics Division SDG Indicators Database (2022); UN Population Division (2022).

Table 1 Latest Commonwealth regions' SDG7 indicators and alignment with NDCs.

Commonwealth region	SDG7.1.1			SDG7.1.2			SDG7.2.1			SDG7.3.1			NDC alignment (%)	
	2016	2020	2022	2016	2020	2022	2015	2019	2021	2015	2019	2021	2018	2020
Africa	52.18	56.27	59.81	17.48	23.36	26.35	70.21	69.48	69.19	6.59	6.41	6.47	58.00	58.00
Asia	88.95	96.34	98.73	47.76	60.96	67.36	34.43	33.84	34.39	4.45	3.96	3.97	60.00	58.00
Caribbean and Americas	99.50	99.80	99.85	98.64	98.26	98.03	20.43	20.14	21.49	6.78	6.93	6.61	55.00	51.00
Europe	100.00	100.00	100.00	100.00	100.00	100.00	7.77	11.42	12.19	2.59	2.22	2.20	40.00	40.00
Pacific	79.64	81.16	80.52	75.71	75.65	75.52	23.44	23.39	25.17	4.86	4.69	4.62	51.00	51.00
Commonwealth	81.19	87.06	89.36	43.86	54.25	59.25	41.07	40.92	41.51	4.91	4.53	4.56	53.00	52.00
World	88.20	90.50	91.36	65.26	71.08	73.59	16.70	17.69	18.71	4.94	4.66	4.59	N/A	N/A
Key	**Very strong**			**Strong**			**Moderate**			**Weak**			**Very weak**	

Source: UN Statistics Division SDG Indicators Database (2021, 2022); UN Population Division (2021, 2022).

SDG7.1.1: Proportion (%) of population with access to electricity.
SDG7.1.2: Proportion (%) of population with primary reliance on clean fuels and technologies for cooking.
SDG7.2.1: Renewable energy share (%) in TFEC.
SDG7.3.1: Energy intensity measured in terms of primary energy and GDP (MJ per US$ purchasing price parity (PPP) 2017).
NDC alignment: Degree of potential alignment between country's climate and sustainable development objectives.

Table 2 Latest Commonwealth regions' SDG7 indicators (7.a.1 and 7.b.1).

Commonwealth region	SDG7.a.1			SDG7.b.1		
	2015	2019	2022	2016	2020	2022
Africa	3,277.60	1,185.65	2,500.31	34.56	42.50	44.29
Asia	2,607.57	1,312.75	861.74	62.04	85.94	100.98
Caribbean and Americas	104.33	64.47	87.64	2,286.08	2,277.12	2,368.86
Europe	N/A	N/A	N/A	531.57	698.90	777.16
Pacific	61.46	85.77	50.99	679.51	1,112.43	1,301.82
Commonwealth	6,050.96	2,648.64	3,500.68	117.49	146.63	163.48
World	12,329.42	12,757.79	15,432.51	268.46	360.37	424.14

Source: UN Statistics Division SDG Indicators Database (2022); UN Population Division (2022).

SDG7.a.1: International financial flows to developing countries in support of clean energy and renewable energy (US$ millions), total.

SDG7.b.1: Installed renewable electricity-generating capacity (watts/capita).

CSET Report 2022 numbers may not have included Canada in the Caribbean and the Americas and Australia and New Zealand in the Pacific. CSET Report 2022 numbers for 7.b.1 may be simple averages where new numbers are population weighted average.

performance over their 2016 levels shown in the 2019 report, and 2020 levels shown in the 2022 report. This is apart from on SDG7.2.1: renewable energy as a percentage of TFEC, with very low shares in Europe and the Caribbean and the Americas, as well as Asia, although the renewable shares of CWCs in the European and Pacific regions are increasing slowly. Table 1 also shows the alignment of Commonwealth country NDCs with SDG7 targets, expressed as the degree of potential alignment between a country's climate and sustainable development objectives. This alignment has not been updated in this report as only 21 updated or new NDCs have been received.[2]

Table 2 shows international financial flows in support of clean energy and renewable energy have decreased annually by 7.52 per cent in Commonwealth developing countries since 2015 but have increased annually by 3.26 per cent globally. Greater financial support is needed to accelerate progress on the energy transition in these CWCs.

Summary comments

Progress is being made towards the energy transition, but it is evident that it is not happening at the scale, depth and pace required to meet the targets and goals of SDG7 or the Paris Agreement.[3] This is being exacerbated by the inadequate nature of climate finance and international financial flows to developing countries in support of clean energy.

The above summary of the status of SDG7 indicators is presented by region. The data for SDG7.1.1 show that, in CWCs that have less than 100 per cent access, an average of 2.19 per cent of the population have gained access to electricity annually since 2012. For SDG7.1.2, the clean cooking access rate in CWCs that do not have 100 per cent access has been improving at 5.81 per cent of the population annually since 2012. The share of renewable energy in TFEC in the Commonwealth has been falling by 0.22 per cent each year since 2011. This decline in the renewable energy share likely reflects a transition from the use of biomass to more efficient modern sources of energy, especially in the high population regions of Africa and Asia. While among the lows, in Europe (Cyprus, Malta, the UK), Canada and Australia, the share

of renewable energy in TFEC is increasing. Energy intensity in the Commonwealth, measured in MJ/US$ GDP (constant US$), has been declining at an annual rate of 1.55 per cent since 2021, most rapidly in Europe.

As of early 2025, 52 CWCs have submitted updated or second NDCs, with 14 more submissions from CWCs since the last CSET Report, in 2022. Meanwhile, seven CWCs have already submitted NDCs 3.0. It should be noted that the NDCs of many developing country members of the Commonwealth are conditional on international sourcing of finance, technology transfer and their capacity to ensure implementation.

1. Introduction

The Commonwealth Sustainable Energy Transition (CSET) Agenda is a collaborative platform for Commonwealth countries (CWCs) and development partners to take a collective action towards accelerating the energy transition to achieve net zero commitments under the Paris Agreement and facilitate the achievement of Sustainable Development Goal (SDG) 7: access to affordable, reliable, sustainable and modern energy for all by 2030. Implementation of the CSET Agenda is anchored on the following three key pillars, leveraging existing programmes of the Commonwealth.

1. *Inclusive Transitions* – advocating and promoting equitable and inclusive measures that recognise and address in a meaningful way the impact of energy transitions on economies, communities and industries.
2. *Technology and Innovations* – propagating advances in technology solutions and innovations as well as research and development for sustainable energy systems; leveraging synergies and fostering strong partnerships between the public and private sectors.
3. *Enabling Frameworks* – supporting the development of enabling frameworks, including policy, laws, regulations and standards; governance institutions; and implementation tools for accelerating energy transitions.

The Commonwealth Secretariat, through its CSET Agenda, publishes this CSET flagship publication known as 'The Commonwealth Energy Transition: Pathways and Progress' periodically (previously in 2019 and 2022) to inform CWCs about progress on the energy transition in the Commonwealth.

This report covers the state of play in the Commonwealth regarding progress towards the achievement of SDG7 and insights and implications for key actors, including governments. It also includes progress on Nationally Determined Contributions (NDCs) of CWCs under the Paris Agreement. The report draws from published data by international bodies accredited with the global dissemination of such data, including UN agencies, the World Bank, the International Energy Agency (IEA), the International Renewable Energy Agency (IRENA) and the World Health Organization (WHO). It is updated with the latest available data to track progress and inform advocacy for action by CWCs in respect of SDG7 and their NDCs under the Paris Agreement.

The report represents a continuation and extension of data collection and analysis that supports the broader ongoing work of the Commonwealth Secretariat in supporting the CSET Agenda. Its main purpose is to facilitate the sharing of the most current knowledge, insights, developments and progress on efforts to achieve SDG7 and the NDCs by CWCs and thereby create opportunities for CWCs to encourage and support accelerated actions towards the achievement of sustainable energy and climate goals across the Commonwealth.

More specifically, this report:

- updates the data provided in the second edition with the most recent indicators on energy transition progress and addresses data gaps considering new data availability;
- analyses and assesses the progress of CWCs, with a particular focus on developing countries, towards achieving SDG7;
- updates the review of individual NDCs of CWCs under the 2015 Paris Agreement, including those that have been revised and updated since 2022;
- takes stock of existing trends, challenges, achievements and approaches used in accelerating energy transition in CWCs and across the globe and draws out lessons and recommendations for policy-makers, investors and other key stakeholders;
- examines the global geopolitics of energy transition, energy resilience, security and access; inclusive and just transition; clean

technological and innovative solutions; and energy transition financing, and their implications for CWCs towards achieving the SDG7 and the Paris Agreement goals;

- reviews the policy implications of the outcomes of the 28th and 29th Conferences of the Parties (COP28 and COP29) of the United Nations Framework Convention on Climate Change (UNFCCC), and the roadmap to COP30 on the energy transition for Commonwealth countries.

2. Background

This chapter provides a background to the Commonwealth, the Commonwealth Heads of Government Meeting (CHOGM), the Paris Agreement and SDG7, and outlines some context for the energy transition.

2.1 The Commonwealth

The Commonwealth is a voluntary association of 56 member countries and home to 2.7 billion people. The countries span Africa, Asia, the Caribbean and the Americas, Europe and the Pacific and are diverse – they are among the world's largest, smallest, most developed and least developed countries, with 25 CWCs having a 2023 population of fewer than 1.5 million people, five CWCs with per capita gross domestic product (GDP) of less than US$1,000/year and another eight CWCs at less than $2,000/year.

All members subscribe to the Commonwealth's values and principles, as outlined in the Commonwealth Charter (2013),[4] and have an equal voice regardless of size or economic stature.

The 56 Commonwealth countries represent 29 per cent of the 193 members of the UN, 33.6 per cent of 2023 global population[5] – growing slightly faster than other countries of the world, so its share of population is slowly increasing – and 13.5 per cent of 2023 global GDP.[6] Also, currently among CWCs:

- 33 CWC members in the World Bank's Small States Forum represent 62.3 per cent of the 53 members of that forum.
- 14 least developed country (LDC) CWCs represent 30.4 per cent of the 46 countries classified by the UN as LDCs.
- 7 landlocked developing country (LLDC) CWCs represent 22.6 per cent of the 31 countries classified by the UN as LLDCs
- 25 small island developing state (SIDS) CWCs represent 64 per cent of the 39 countries classified by the UN as SIDS.

Table 2.1 Commonwealth member countries by region.

Africa	Asia	Caribbean and Americas
Botswana[a,c]	Bangladesh[b]	Antigua and Barbuda[a,d]
Cameroon	Brunei Darussalam[a]	The Bahamas[a,d]
Eswatini[a,c]	India	Barbados[a,d]
Gabon[a]	Malaysia	Belize[a,d]
The Gambia[a,b]	Maldives[a,d]	Canada
Ghana	Pakistan	Dominica[a,d]
Kenya	Singapore[d]	Grenada[a,d]
Lesotho[a,b,c]	Sri Lanka	Guyana[a,d]
Malawi[b,c]	Pacific	Jamaica[a,d]
Mauritius[a,d]	Australia	St Kitts and Nevis[a,d]
Mozambique[b]	Fiji[a,d]	Saint Lucia[a,d]
Namibia[a]	Kiribati[a,b,d]	St Vincent and the Grenadines[a,d]
Nigeria	Nauru[a,d]	Trinidad and Tobago[a,d]
Rwanda[b,c]	New Zealand	Europe
Seychelles[a,d]	Papua New Guinea[a,d]	Cyprus[a]
Sierra Leone[b]	Samoa[a,d]	Malta[a]
South Africa	Solomon Islands[a,b,d]	United Kingdom
Tanzania[b]	Tonga[a,d]	
Togo[b]	Tuvalu[a,b,d]	
Uganda[b,c]	Vanuatu[a,d]	
Zambia[b,c]		

Source: Commonwealth Secretariat.
a. Small states – The Commonwealth[7]
b. LDCs – UN-OHRLLS[8]
c. LLDCs – UNCTAD[9]
d. SIDS – UN-OHRLLS[10]

2.2 Commonwealth Heads of Government Meeting

Normally, leaders of CWCs meet every two years for the CHOGM to shape the Commonwealth agenda and priorities and discuss issues affecting the Commonwealth and the wider world. At the last CHOGM, in 2024 in Samoa, under the theme 'One Resilient Common Future', Commonwealth leaders recognised:[11]

- the existential nature of the climate crisis and the goal of limiting global warming in accordance with the Paris Agreement and its target of 1.5°C and a commitment to achieving energy security;
- a recommitment to phasing out inefficient fossil fuel subsidies that do not address energy poverty or just transitions as soon as possible, taking into account the Paris Agreement and countries' different national circumstances, pathways and approaches, and to transitioning to global net zero emissions by 2050;
- the outcomes of the first Global Stocktake under the Paris Agreement and the commitment by parties to submit their next round of NDCs at least 9–12 months ahead of COP30, with CWCs encouraged to submit ambitious, economy-wide emission reduction targets covering all greenhouse gases (GHGs), sectors and categories, aligned with limiting global warming to 1.5°C, as informed by the latest science and the outcomes of the first Global Stocktake, in light of different national circumstances;
- a recommitment to contributing to global efforts agreed under the first Global Stocktake, including tripling global renewable energy capacity and doubling the global average annual rate of energy efficiency improvements by 2030;
- the importance of transitioning away from fossil fuels in energy systems in a just, orderly and equitable manner, accelerating action during this critical decade to achieve global net zero emissions by 2050, in keeping with the science;
- the need to accelerate industrial decarbonisation, including in hard-to-abate sectors, in line with national circumstances, while acknowledging that there remains a significant gap between current global emissions trajectories and the temperature goal of the Paris Agreement;
- the importance of COP29 for scaling up climate action, ambition and financing, and of the agreement on the New Collective Quantified Goal (NCQG) on climate finance, prior to 2025, from a floor of US$100 billion per year taking into account the needs and priorities of developing countries in the context of meaningful mitigation actions and transparency on implementation;
- the Commonwealth Climate Finance Access Hub (CCFAH), which has helped members access over $363 million in climate financing, and the need to commit to its sustainable growth and financing;
- the need to triple global renewable energy capacity by 2030 and to commit, where possible, to making efforts towards collaborating in the development, and voluntary and mutually agreed transfer, of affordable low-emission technologies;
- a recommitment to a just and equitable transition to resilient, clean and renewable energy systems, including fulfilment of 2030 Agenda commitments, and to renewables deployment that must be accompanied in this decade by a rapid increase in energy efficiency improvements, as well as the need for deep, rapid and sustained reductions in GHG emissions in line with 1.5 degree Celsius pathways, making efforts in a nationally determined manner, taking into account the Paris Agreement and different national circumstances, pathways and approaches;
- the need to improve access to affordable energy and modern cooking solutions, enhance cross-border power trade, create green jobs and enable an inclusive, technology-driven transition, to be achieved through collaboration with development finance institutions and private sector investments, and fostering regulatory and policy environments that facilitate financial flows that are inclusive of marginalised groups, women and girls, youth, and Indigenous Peoples and local communities;
- the importance for some of the concept of 'climate justice' as envisaged in the Paris Agreement when taking action to address climate change, and also of taking climate action in a manner that is equitable and inclusive and that respects, promotes and considers respective obligations on human rights;

- the importance of critical minerals for the clean energy transition, and a recommitment to support members in the sustainable use and equitable development of natural resources while balancing social and economic benefits, ensuring environmental protections and safeguarding for workers, Indigenous Peoples, all women and affected communities, ensuring the transition is just, equitable and inclusive, leaving no one behind.

The next and 28th CHOGM will be held in 2026 in Antigua and Barbuda, in the capital city of Saint John's.

2.3 The Paris Agreement and NDCs

The Paris Agreement is an international treaty on climate change adopted at COP21 under the UNFCCC in Paris in December 2015. There are now 195 parties to this agreement, including all 56 CWCs. The central goal of the Paris Agreement is to strengthen the global response to the threat of climate change by limiting global warming to well below 2°C and pursuing efforts to limit the temperature increase to 1.5°C, compared to preindustrial levels.[12]

The Agreement requires countries to prepare, communicate and maintain the post-2020 actions they will take to reduce their GHG emissions to reach the goals of the Paris Agreement by means of NDCs. The agreement works on a five-year cycle of increasingly ambitious climate actions to be carried out by countries, so each country must prepare successive NDCs of revised, updated and more ambitious plans.

Monitoring NDCs provides insights into the status and progress of countries in their efforts to achieve the goals of the Paris Agreement. Countries can also obtain useful insights and learnings from the NDCs of other countries regarding potential initiatives and policies that can be pursued for this purpose. This report focuses on mitigation actions in the NDCs of CWCs and examining the extent to which these plans meet the Agreement goals, and any revisions and updates made to these plans since the 2022 report was published.

2.4 Energy and SDG7

In 2015, all UN member states adopted the 17 SDGs as part of the UN's 2030 Agenda for Sustainable Development. The goals are a universal call to action to end poverty, protect the planet and improve the lives and prospects of everyone, everywhere. The UN adopted an ambitious target of achieving the goals by 2030, with now only five years or so remaining to meet that target.

The UN's sustainable development agenda includes a separate goal on energy – SDG7 – to ensure access to affordable, reliable, sustainable and modern energy for all. Energy lies at the heart of the Paris Agreement on Climate Change as well as the Agenda for Sustainable Development. SDG7 recognises that a just and inclusive energy transition will create new jobs, advance gender equality and empower people, communities and societies, although the transition pathways will vary based on the individual situations and needs of countries and regions.[13]

Table 2.2 sets out the SDG7 targets for 2030 and respective progress indicators.

2.5 The Commonwealth in context

Six CWCs (Australia, Canada, Cyprus, Malta, New Zealand and the UK) are members of the European Union (EU) and/or the Organisation for Economic Co-operation and Development (OECD) and can be viewed as higher-income countries. The remaining 50 CWCs are relatively low-income. Countries with higher incomes also have higher spending per capita and higher emissions as a result of higher energy consumption.

While the lower-income countries face lower emissions reductions, their low incomes constrain their ability to achieve these reductions (Table 2.3). Achieving a just and inclusive energy transition for lower-income countries will require financial assistance from the higher-income countries of the world. Many CWCs will need financial assistance in their efforts.

Higher-income CWCs, comprising 5.2 per cent of the total population in the Commonwealth, have a disproportionate share of carbon emissions, emitting carbon dioxide equivalent (CO_2e) at nearly five times the average Commonwealth citizen and nearly six times the average citizen of the 50 lower-income CWCs (Table 2.3). India has the highest share of global emissions, at 7.6 per cent (its per capita emissions are only 2 million tonnes but it has 53.0 per cent of the Commonwealth population), followed by Canada at 1.5 per cent, South Africa at

Table 2.2 SDG7 targets and indicators.

Target	Indicator	Description
7.1		By 2030, ensure universal access to affordable, reliable and modern energy services
	7.1.1	Proportion of population with access to electricity
	7.1.2	Proportion of population with primary reliance on clean fuels and technology
7.2		By 2030, substantially increase the share of renewable energy in the global energy mix
	7.2.1	Renewable energy share in total final energy consumption (TFEC)
7.3		By 2030, double the global rate of improvement in energy efficiency
	7.3.1	Energy intensity measured in terms of primary energy and GDP
7.a		By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil fuel technology, and promote investment in energy infrastructure and clean energy technology
	7.a.1	International financial flows to developing countries in support of clean energy research and development and renewable energy production, including in hybrid systems
7.b		By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular LDCs, SIDS and LLDCs, in accordance with their respective programmes of support
	7.b.1	Installed renewable energy-generating capacity in developing and developed countries (in watts per capita)

Source: https://sdgs.un.org/goals/goal7

Table 2.3 Emissions per capita, 2022.

2022	Population totals		CO_2 emission totals		Emissions per capita
	Millions	% of Commonwealth	10^9 tonnes	% of Commonwealth	10^9 tonnes/ capita
6 higher-income CWCs	139.11	5.21	12,99.77	23.52	9.34
50 lower-income CWCs	2,532.83	94.79	4,227.60	76.48	1.67
Commonwealth total	2,671.94	100.00	5,527.38	100.00	2.07
Global total	7,975.11	N/A	37,149.79	N/A	4.66

Source: UN Population Division. Emissions data from Our World in Data (2022).

1.1 per cent and Australia at 1.1 per cent – the only CWCs with shares of global emissions greater than 1 per cent.

All six higher-income CWCs are Annex II countries under the Paris Agreement, which means they are to 'take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the

provisions of the Convention'.[14] Lower-income countries also often have lower energy access and will be striving to increase energy access, and consequently energy consumption, as part of their SDG7 targets. Lower-income countries may have the advantage of relying on renewable energy sources to increase energy access, thereby largely leapfrogging the hydrocarbon energy reliance stage that higher-income countries must now transition from.

Since the previous edition of this report, CWC governments have come to terms with the global COVID-19 pandemic and, after a decline during this period, global energy demand grew by 2.2 per cent in 2024, accompanied by an increase in global economic activity by 3.2 per cent. Table 2.4 shows the breakdowns of economic growth in CWCs. As the conflict in Ukraine has continued, global uncertainty has been further exacerbated by conflict in the Middle East, and the impacts on energy prices have continued to be felt. Oil demand increased by 0.8 per cent, coal demand by 1 per cent and gas demand by 2.7 per cent.[15] Global carbon dioxide (CO_2) emissions grew by 0.8 per cent in 2024, partly as a result of record high temperatures. Renewable energy supply grew by 6 per cent in 2024, led by increased electricity generation by solar photovoltaic (PV) technology and wind. The IEA emphasised in its Global Energy Review that energy demand increases in 2024 owed to extreme weather, electrification and digitalisation.[16]

2.6 Commonwealth Climate Finance Access Hub

The Commonwealth has its own programme to assist small and vulnerable member countries to access finances for climate-related projects.[17]

The CCFAH helps these countries unlock the available climate finance. While climate finance may be available to developing countries through a number of international initiatives, most of these countries have limited capacity to access these funds. The CCFAH provides support in:

- developing grant proposals and project pipelines;
- building human and institutional capacity;
- providing technical advisory services; and
- facilitating cross-Commonwealth co-operation and sharing of experiences and expertise by Commonwealth national climate finance advisers, who are deployed and embedded in relevant government ministry departments.

In addition to the general manager based in Mauritius, CCFAH climate finance advisers have been deployed in 19 countries, plus one regional adviser in Africa. As of March 2025, CCFAH had mobilised US$402.09 million in finance for approved projects in 15 countries and the African and Caribbean regions, with $500 million in the pipeline.[18]

Table 2.4 Real economic growth rates (% change).

Region	2019	2020	2021	2022	2023	2024
World (196 countries)	2.64	-4.95	5.68	4.30	3.23	3.00
All CWCs	3.46	-5.10	5.80	6.43	4.09	4.29
African CWCs	3.88	-2.89	5.20	4.91	4.23	3.89
Asian CWCs	3.95	-6.13	9.46	4.74	2.97	3.66
Caribbean and Americas CWCs	1.96	-9.48	7.21	12.90	5.36	6.58
European CWCs	3.75	-5.74	10.65	4.68	3.44	3.12
Pacific CWCs	3.97	-3.25	1.28	3.42	3.34	3.12
Commonwealth LDCs	5.27	-0.77	5.10	4.36	4.71	4.41
Commonwealth LLDCs	4.03	-4.20	6.50	5.39	4.09	3.56
Commonwealth SIDS	3.17	-8.54	5.71	9.47	4.71	5.35
Commonwealth small states	3.14	-7.28	5.74	7.92	4.54	4.92

Source: IMF World Economic Outlook and World Economic Databases. Note that, generally, from 2023 and thereafter are estimates. The averages are simple averages of country growth rates, with no accounting for relative populations or GDP levels.

Table 2.5 Global energy demand and emissions, 2020–2024 (% change).

	2020	2021	2022	2023	2024
Energy demand	−4.0	4.6	1.3	2.1	2.2
Crude oil demand	−8.6	6.1	1.9	1.9	0.8
Natural gas demand	−1.8	4.5	−0.0	0.7	2.7
Coal demand	−4.4	6	1.5	2.0	1.2
Renewable energy demand	3	8.3	N/A	3.1	5.8
CO_2 emissions	−5.2	5.7	N/A	1.2	0.8

Source: IEA Global Energy Review 2021 and 2025, World Energy Outlook 2023 and 2024, and various IEA commodity-specific forecasts for 2022.

3. NDCs and Energy Policies of Member Countries

The rapid change in energy systems has seen momentum building up from the COP28 United Arab Emirates Consensus, which called for deep, rapid and sustained reductions in GHG emissions to align with climate change targets under the Paris Agreement. At COP29 Azerbaijan, momentum was further reinforced when developed countries committed to tripling their financial contributions for climate finance.

January 2025 marked the unveiling of a new third round of NDCs (NDCs 3.0) detailing countries' intended climate actions through 2035. Meanwhile, preparatory action has been underway for COP30 in Belém, Brazil, with the UN and Brazil calling for updated NDC 3.0 climate targets by September 2025.

NDCs are instrumental in shaping the global energy transition, finance and investment landscape. By setting ambitious targets, creating supportive policy frameworks and mobilising climate finance, NDCs are driving the adoption of renewable energy technologies and fostering a sustainable energy future. They provide a roadmap for countries to align their financial flows with climate objectives, attract investments and promote private sector engagement.

The 2015 Paris Agreement establishes a framework for global action on climate change, including mitigation of and adaptation to climate change; the transparent reporting and strengthening of climate policy initiatives, and support for developing nations. More specifically, it:

- aims to limit the global average temperature rise in this century to well below 2°C, while pursuing the preferred scenario of limiting temperature rise to 1.5°C;
- provides that each country submit carbon reduction strategies and targets in their NDCs, outlining their commitments for reducing carbon emissions;
- includes a series of mandatory measures for the monitoring, verification and public reporting of progress towards a country's emissions reduction targets, while accommodating and supporting nations currently lacking the capacity to strengthen their systems; and
- includes a plan to provide financial resources to help developing countries mitigate and increase their resilience to climate change.

A key challenge of the Paris Agreement is to ensure NDCs are sufficient to keep global warming well below 2°C. The strategy for achieving this is for countries to publish new NDCs every five years, committing to increasingly larger emissions reductions – that is, a ratcheting escalation of aspirations on a five-year ambition cycle.

All CWCs are parties to the Paris Agreement, and all have submitted an initial NDC. As of early 2025, 52 CWCs have submitted updated or second NDCs,[19] representing substantive change and progress. NDCs 3.0 are due by the end of 2025, and seven CWCs have already submitted them. Note that a very small number of countries have described their NDCs as 'second', and there is no apparent substantive or consistent difference in approach or content between an 'updated' or a 'second' NDC.

3.1 Updated NDC submissions

These updated/second NDCs have been analysed with a focus on how their emissions reduction targets have changed relative to the targets in the initial NDC. The updated/second NDCs are intended to reflect increased levels of commitments to achieving the Paris Agreement targets, and they have all succeeded in this respect, with a wide range in the extent of increased commitments. In many instances, countries have also increased the sectors of the economy to which their emissions reduction targets apply and the number of GHG gases included in their targets. In terms of progress and accomplishments, see also the tables with country-specific details on SDG7 indicators in Chapter 4.

These emissions reduction targets in updated and second NDCs are summarised and compared against the initial NDCs in Appendix Tables D1–5, by Commonwealth region. The information in these

NDCs is generally very detailed and extensive, is difficult to summarise succinctly and is not readily comparable between countries. Countries provide very different levels of information and detail on the actions and measures they will adopt to achieve their targets.

The summary tables in Appendix D include a high-level summary of selected actions and measures outlined in the second/updated NDCs to achieve their mitigation targets, and where available in NDCs 3.0. The tables also provide estimated costs to achieve the updated/second NDC mitigation targets, where the NDC provides such estimates. The information includes the nature of actions and measures various countries are taking to meet their targets, and indicate their breadth and diversity. These actions and measures differ between countries based on their circumstances; their targets also differ in terms of the degree of information and detail countries provide in their respective NDCs.

Countries are not consistent in how their reduction targets are calculated; that is, some are compared against estimated 2030 business-as-usual (BAU) emissions and some against historical levels of emissions. Given the variety of formats used to present targets, it is not readily evident which countries have more ambitious targets. For example, while some emissions reduction targets may appear to be very ambitious, if they are based on a 2030 BAU scenario, emissions in that country may actually be higher in 2030.

Many smaller and low-income countries are reliant on international financial support to meet their mitigation targets. The reality of this conditionality is that, if such support is not forthcoming in the amounts the countries need to undertake the strategies to achieve these targets, they will not be met.

A general observation is that, not only are countries seeking to increase their efforts to mitigate climate change in their updated/second NDCs, but also the general quality of the NDCs has improved noticeably in terms of the depth of content as well as the obvious effort that has gone into preparing them.

3.2 NDC comparability

The NDC template, though only a suggestion, provides a common structure and format for how information is presented.[20] Consistency on targets, quantifiable measures, mitigation and adaptation allows greater ease of understanding and comparison. For future NDCs, hopefully more widespread adoption of the template will facilitate better comparisons among countries and within countries as subsequent NDCs follow.

As mentioned above, the varying base for targets is a major impediment to the comparability of different NDCs. Future NDCs having both the volumetric and the percentage reductions in GHG emissions will be beneficial for transparency, clarity and comparability.

Many countries are focused on adding renewable energy to their energy mix. Many developing countries are already highly reliant on renewable energy, principally in the form of biomass (see figures in Chapter 4 for each region and individual countries). An important qualification is needed, in respect of adding biomass to meet renewable energy targets, regarding whether these biomass energy-consuming countries are managing their forest resources sustainably. A sustainable forest resource should be close to carbon-neutral, with carbon emissions and carbon absorption levels roughly in balance. An expanding forest is a carbon sink and will reduce the amount of carbon in the atmosphere. A depleting forest resource results in net carbon emissions, and, while it may provide renewable energy, this is not clean energy in terms of its climate change implications.

3.3 NDC key highlights

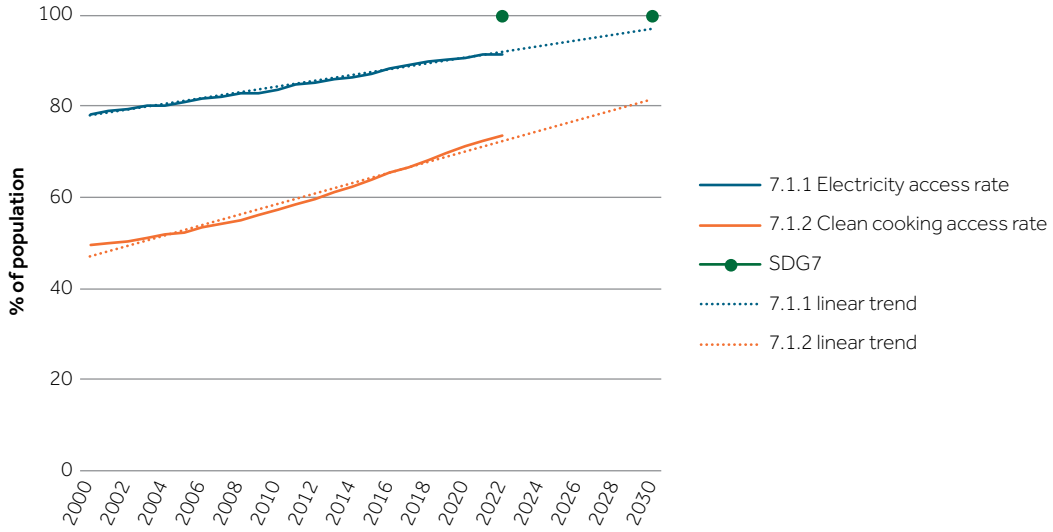
Most countries raised their emissions reduction targets in their updated/second NDCs, and many are now pledging to reach net zero emissions by 2050. IRENA observes that,

> 'Despite efforts to reach carbon reduction targets set through Nationally Determined Contributions (NDCs) and long-term low emission development strategies (LT-LEDS), reductions are projected to be insufficient to keep global average temperatures from rising above 1.5°C of pre-industrial levels by mid-century.'[21]

This observation is based on a review of all NDCs across the world.

IRENA's 2024 World Energy Transitions Outlook observes that the world is on track to miss SDG7's 2030 target of universal energy access, as shown in Figure 3.1.[22] The CWCs are unlikely to fare any better on this indicator.

Figure 3.1 Energy access progress, SDG7.1.



Source: UN Statistics Division SDG Indicators Database.

Table 3.1 attempts to summarise emissions reduction targets in the base year for calculating reductions and unconditional and conditional shares. Not all countries have stated an emissions reduction target; some have provided absolute targets rather than relative targets; and many have used different base years.

This information is all based on updated/second NDCs, and NDCs 3.0 to the extent they are available. Perhaps the most interesting comparison is between emissions reduction targets of the first NDC compared with the updated/second and 3.0 NDC. The summary reveals the incompleteness of data and the challenges of reaching aggregate conclusions based on these data. It also clearly reveals that the emissions reduction targets in the updated/second and 3.0 NDCs are higher than in the first NDCs, and how dependent so many countries' NDCs are on external financial assistance. Many NDCs include the use of Article 6 (carbon trading) of the Paris Agreement to achieve their targets.

As a sample of progress, Climate Tracker rates New Zealand and Singapore's NDCs as highly insufficient; Australia, Canada, Cyprus, Malta, South Africa and the UK's as insufficient; and Kenya, Nigeria and The Gambia's as almost sufficient.[23]

Table 3.1 Mitigation base year, reduction targets and conditionality.

Country	Base year	Emissions reductions (%) in NDC			Conditionality (%) of most recent updated NDC*		Article 6
		1st	2nd	3.0	Unconditional	Conditional	Y/N
Antigua and Barbuda	N/A	N/A	N/A		Partly	Partly	Possibly
Australia	2005	26–8	43		43	0	Possibly
The Bahamas	2030 BAU	30	30		30	0	Yes
Bangladesh	2030 BAU	15	21.8		6.7	15.1	Yes
Barbados	2030 BAU	N/A	70		35	35	Yes
Belize	N/A	N/A	N/A[a]		Partly	Partly	Yes
Botswana	2010	15	N/A[b]		Partly	Partly	Yes
Brunei Darussalam	2015	20	N/A[b]		20	0	Possibly
Cameroon	2010	32	33		32	0	Yes

(*Continued*)

Table 3.1 Mitigation base year, reduction targets and conditionality.

Country	Base year	Emissions reductions (%) in NDC			Conditionality (%) of most recent updated NDC*		Article 6
		1st	2nd	3.0	Unconditional	Conditional	Y/N
Canada	2005	30	40–45	45–50	40–5	0	Possibly
Cyprus	1990	40	55		55	0	No
Dominica	2014	N/A	N/A[b]		N/A	Partly	Yes
Eswatini	N/A	N/A	19		5	14	No
Fiji	BAU	30	30		20	10	Yes
Gabon							Yes
The Gambia	BAU	N/A	49.8		2.6	47.2	Yes
Ghana	2010	30	N/A[a]		Partly	Partly	Yes
Grenada	2010	40	40		N/A	Partly	No
Guyana	N/A	N/A	N/A[b]		N/A	N/A	Yes
India	2005	33–5	45		Partly	Partly	Yes
Jamaica	BAU	17.8	28.5		25.4	3.1	Possibly
Kenya	2030 BAU	30	32		6.7	25.3	Yes
Kiribati	BAU	61.8	N/A[b]		12.8	49	Possibly
Lesotho	BAU	35	N/A[b]		10	25	No
Malawi	2040 BAU	N/A	51		6	45	
Malaysia	2005	35	45		45	0	Yes
Maldives	2030 BAU	26	100		26	74	Possibly
Malta	1990	40	55		55	0	No
Mauritius	2030 BAU	30	40		40	0	No
Mozambique	2020	N/A	N/A[a]		N/A	N/A	
Namibia	2030 BAU	89	91		14	77	Yes
Nauru	N/A	N/A	N/A		N/A	N/A	No
New Zealand	2005	30	50	51–55	30	0	Yes
Nigeria	BAU	45	47		20	27	Yes
Pakistan	2030 BAU	20	50		15	35	Yes
Papua New Guinea	N/A	N/A	N/A		N/A	N/A	Yes
Rwanda	BAU	N/A	38		16	22	Yes
St Kitts and Nevis	BAU	35	61		Partly	Mostly	
Saint Lucia	2010	2	7	14.7	N/A	N/A	Possibly
St Vincent and the Grenadines	BAU	22	N/A[b]		22	0	
Samoa	N/A	N/A	26		Partly	Partly	Possibly
Seychelles	BAU	29	26.4		All	0	No
Sierra Leone	BAU	N/A	10		N/A	N/A	Yes
Singapore	N/A	0.36	36		N/A	N/A	Yes
Solomon Islands	2030 BAU	50	78		33	45	Yes
South Africa	N/A	N/A	N/A[a]		N/A	N/A	Yes
Sri Lanka	2030 BAU	20	14.5		4	10.5	Yes

(*Continued*)

Table 3.1 Mitigation base year, reduction targets and conditionality.

Country	Base year	Emissions reductions (%) in NDC			Conditionality (%) of most recent updated NDC*		Article 6
		1st	2nd	3.0	Unconditional	Conditional	Y/N
Tanzania	2030 BAU	10–20	30–35		Partly	Partly	Yes
Togo							Possibly
Tonga	2006	N/A	13		N/A	N/A	No
Trinidad and Tobago	BAU	15	N/A[b]		15	0	No
Tuvalu	2010	N/A	N/A		Partly	Partly	Possibly
Uganda	BAU	22	N/A		N/A	N/A	Yes
United Kingdom	1990	40	68	81	68	0	Possibly
Vanuatu	BAU	N/A	N/A		Partly	Mostly	Yes
Zambia	2030 BAU	47	47		25	22	Yes

Source: Authors' analysis of UNFCCC NDC submissions and Carbon Pulse NDC Portal.
* Or first NDC if second NDC not available.
N/A not provided.
N/A[a] absolute reduction provided.
N/A[b] no second NDC provided.

4. Summary of Progress under SDG7 by Region

This chapter provides details on the most recent progress indicators available towards achieving the SDG7 targets, with data up to 2022 for targets 7.1.1, 7.1.2, 7.a.1 and 7.b.1 and to 2021 for targets 7.2.1 and 7.3.1. See Appendix C: SDG7 Comparison Table for a complete country-to-country comparison. The progress for each indicator is presented by region, with details by indicator for each Commonwealth country in that region (Figure 4.1).

A note on data sources

Data for indicators 7.1.1, 7.2.1, 7.3.1, 7.a.1 and 7.b.1 are from the UN Statistics Division Global SDG Indicators Database,[24] with data provided for these indicators complete and updated to 2022 for indicators 7.1.1, 7.1.2, 7.a.1 and 7.b.1 and to 2021 for indicators 7.2.1, and 7.3.1.

Data for indicator 7.1.2 are obtained partially from the UN Statistics Division Global SDG Indicators and partially from the World Bank DataBank.[25] Although both databases are sourced from Global Health Observatory and WHO, the UN SDG database does not report actual values when the clean cooking access is lower than 5 per cent or higher than 95 per cent. In spite of minor inconsistencies, the more complete and more updated UN SDG database is taken as the primary source, and supplemented with World Bank data. For countries with less than 5 per cent or greater than 95 per cent clean cooking access, actual values are based on the World Bank DataBank.

The indicators for each SDG7 target and CWC are provided below by Commonwealth region, with brief comments on these indicators accompanying the respective charts.

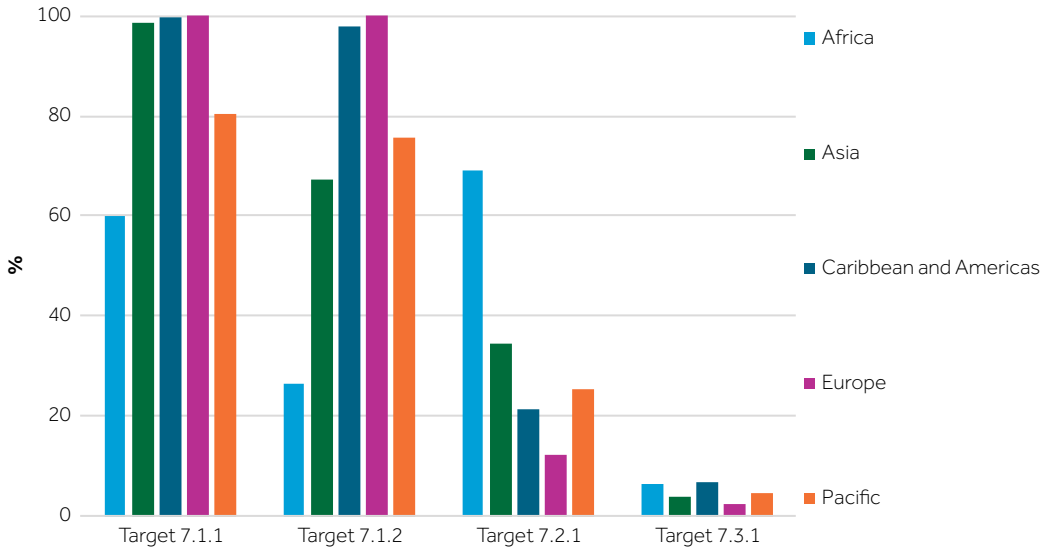
The data used in this study was obtained in May 2025.

4.1 Africa

4.1.1 Africa: access to electricity

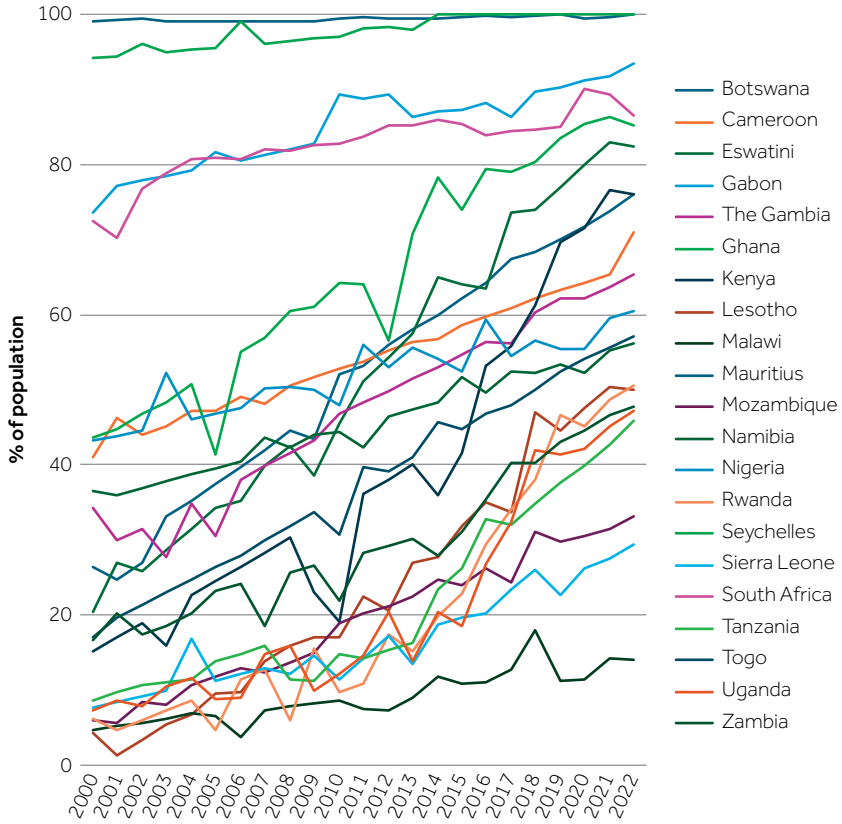
The African SIDS of Mauritius and Seychelles are now at 100 per cent electrification. Tanzania, Rwanda and Uganda are improving their electrification access rate most rapidly, with annual average increases of 12.9 per cent, 12.0 per cent and 11.3 per cent of the population with access to electricity, respectively, since 2012. Those countries with the least access to electrification are Malawi at 13.9 per cent, Sierra Leone at 29.4 per cent and Mozambique at 33.2 per cent of the population with access to electricity in 2022 (Figure 4.2).

Figure 4.1 Current Commonwealth SDG7 status by region.



Source: UN Statistics Division SDG Indicators Database.

Figure 4.2 SDG7.1.1 electrification, 2000–2022, Africa.



Source: UN Statistics Division SDG Indicators Database.

4.1.2 Africa: access to clean cooking

In 2022, 26.4 per cent of the population of Africa's CWCs had access to clean cooking, an increase from 14.5 per cent in 2012 and 10.8 per cent in 2002. Seychelles and Mauritius have the highest access to clean cooking rates among Africa's CWCs, at 100 per cent and 99 per cent, respectively. Nigeria and Rwanda have seen the most rapid increases in clean cooking access since 2012. Uganda, Sierra Leone, Malawi, The Gambia, Mozambique, Rwanda, Zambia and Tanzania all need to address this situation with greater urgency, as their access to clean cooking remains below 10 per cent of the population (Figure 4.3).

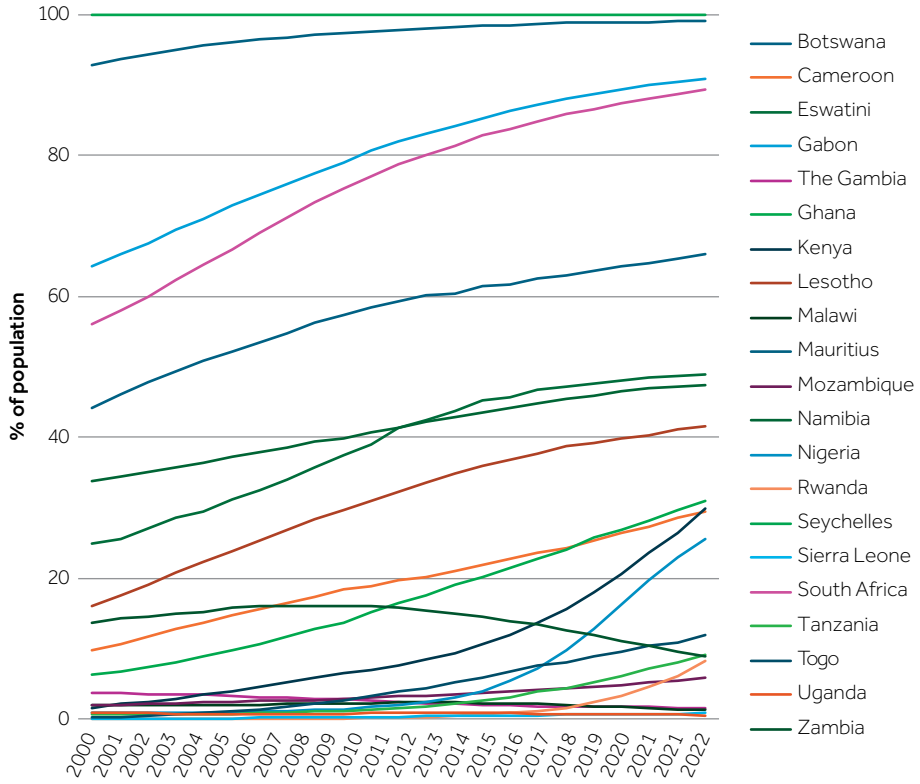
4.1.3 Africa: renewable energy shares

African CWCs have the highest shares of renewable energy in their TFEC of all Commonwealth regions. This is fairly common in LDCs with low levels of energy consumption, low electrification rates and low levels of access to clean cooking. The high share of renewable energy occurs because of the countries' high reliance on biofuels, largely solid biomass, for cooking. While SDG7 is to increase the share of renewable energy, renewable energy shares in African countries may decline, at least in the short to medium term. As energy access and energy consumption levels increase in these countries, they will likely adopt more modern fuels, which may not be renewable energy sources, at least initially. This transition will result in more efficient energy use but also lower renewable energy shares and higher carbon emissions, as many modern and cleaner cooking technologies rely on the use of hydrocarbon fuels. However, e-cooking stove technologies, when deployed, consuming clean electricity supply such as hydropower, increase renewable energy consumption and lead to a reduction in carbon emissions.

4.1.4 Africa: energy intensities

Decreasing energy intensity is generally seen as an indicator of energy efficiency and is a positive indicator of progress towards SDG7 targets. It also occurs as countries undergo structural change in their economies, transitioning from reliance on

Figure 4.3 SDG7.1.2 clean cooking access rate, 2000–2022, Africa.



Source: UN Statistics Division SDG Indicators Database.

energy-intensive agriculture and primary production to more sophisticated and extensive processing of materials and greater dependence on service industries. In the case of Africa in particular, it is difficult to distinguish whether decreases in energy intensity are indicative of energy efficiency or are driven principally by structural changes in energy consumption patterns because of economic growth and structural transformation of their economies.

The economies of Mozambique, Lesotho and Uganda are the most energy-intensive of African CWCs. Mauritius is the least energy-intensive.

4.1.5 Africa: international financial flows

International financial flows as shown regarding SDG7.a.1 include all official loans, grants and equity investments received by countries from foreign governments and multilateral agencies for the purpose of clean energy research and development and renewable energy production. They do not include financial flows from private investors. International financial flows into African countries have increased in the past decade, albeit highly cyclical and often highly focused on specific countries.

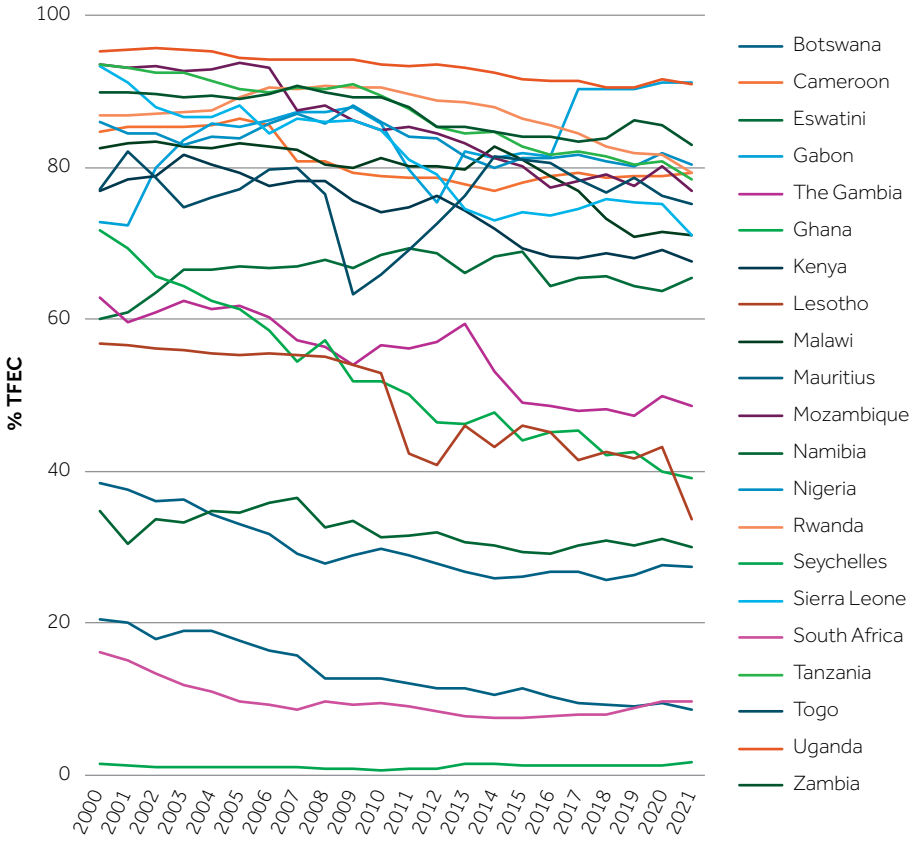
4.1.6 Africa: renewable electricity-generating capacities

Installed renewable electricity-generating capacity per capita is highest in Seychelles, Mauritius and Namibia. The most rapid growth on this indicator since 2012 has been in South Africa. The African region currently ranks lowest among Commonwealth regions on this indicator, as well as ranking lowest on access to electricity under indicator 7.1.1.

4.1.7 Africa: transition indicators summary

African CWCs have a considerably higher share of renewable energy in total energy consumption than other Commonwealth regions. As seen in Figure 4.4 and in Table 4.1, this share has been falling rather than increasing in recent years. As discussed previously, the high level of renewable energy in many African countries is owed largely to their high use of biomass rather than modern energy sources. The status of biomass as a renewable energy source is contingent on it being harvested sustainably. As this is often not the case, this indicator may not accurately represent the

Figure 4.4 SDG7.2.1 renewable energy, 2000–2021, Africa.



Source: UN Statistics Division SDG Indicators Database.

contribution of renewable energy to cleaner energy or low emissions. The use of biomass is falling in most countries as more modern energy sources are used, but if it is not replaced by renewable energy sources, emissions are likely to increase as energy access increases. Kenya is an exception in Africa, with the IEA calling it a clean energy champion, with an electricity mix of geothermal, hydro, wind and solar accounting for nearly 90 per cent of power generation in 2023.[26] Mozambique has had the greatest decrease in energy intensity since 1990, starting from a high rate and slowing to a rate more typical of other member countries in Africa in the most recent decade. As discussed above, it is unclear to what extent these declines in energy efficiency are based on energy efficiency versus shifting energy consumption patterns owing to structural economic changes. African CWCs have the highest energy intensity of any of the Commonwealth regions. Key priorities for African CWCs are targeted renewable energy uptake to decarbonise, increase electricity access and increase clean cooking, and targeted energy efficiency initiatives to reduce energy intensity.

The latest progress for SDG7 for Africa's CWCs is provided in Table 4.1.

4.2 Asia

The eight CWCs in the Asian region represent 14 per cent of all CWCs and 70 per cent of the population of all CWCs. The Asian region has also shown the fastest growth in access to electricity and access to clean cooking, reflecting its rapid economic growth, which is bringing large shares of its countries' populations out of poverty. Asia's share of renewable energy is roughly half that of Africa, but it is still relatively high and likely based on similar fuel use factors to those of African CWCs.

4.2.1 Asia: access to electricity

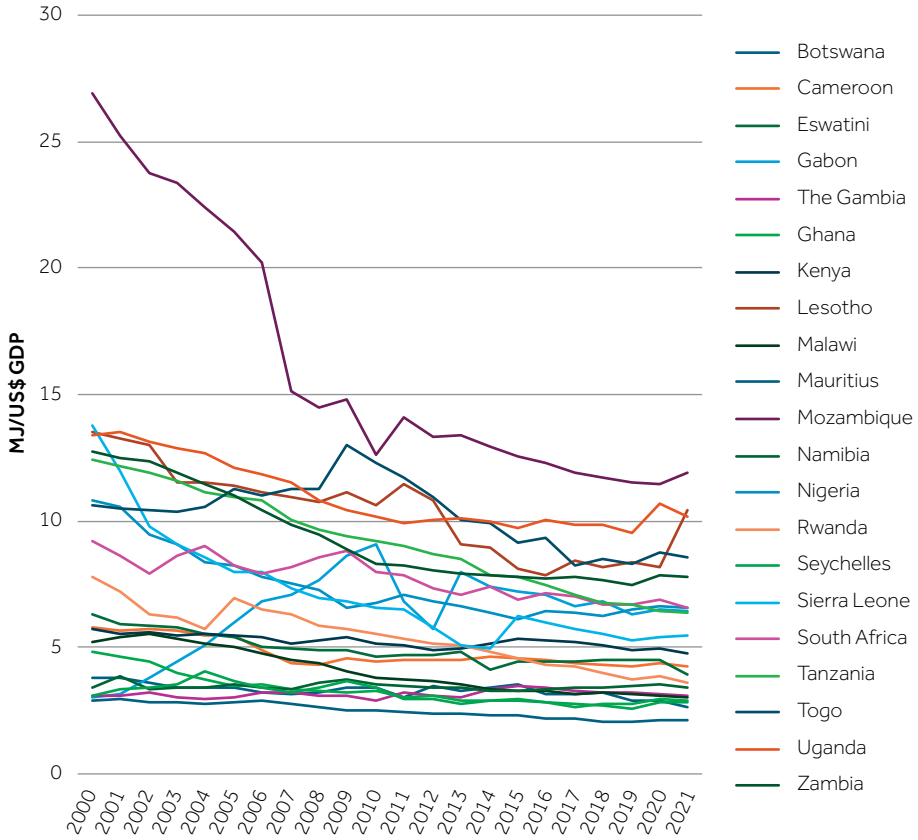
Asian CWCs have made rapid progress in access to electricity, and most are now at 100 per cent access, with India and Bangladesh approaching 100 per cent. Pakistan is at 95 per cent access, and Bangladesh's access rate has grown the most rapidly this century.

Table 4.1 SDG7 progress of member countries, Africa

CWC	7.1.1 electricity access (%)			7.1.2 clean cooking (%)			7.2.1 renewable energy (% TFEC)			7.3.1 energy intensity (MJ/GDP)			7.a.1 international financial flows (10^6 US$)			7.b.1 renewable energy (capacity/capita)		
	2016	2020	2022	2016	2020	2022	2015	2019	2021	2015	2019	2021	2015	2019	2022	2016	2020	2022
Botswana	64.20	71.80	75.94	62.50	64.80	66.00	26.11	26.25	27.36	3.55	2.92	2.68	0.00	0.00	4.78	1.39	2.32	2.38
Cameroon	59.80	64.30	71.00	23.60	27.40	29.40	78.06	78.90	79.24	4.61	4.27	4.23	104.49	8.14	7.19	31.27	31.20	29.61
Eswatini	63.40	80.00	82.30	46.70	48.60	48.90	68.85	64.45	65.40	4.45	4.53	3.91	1.14	14.53	0.06	148.03	143.25	149.07
Gabon	88.10	91.10	93.50	87.20	90.00	90.90	81.94	90.23	91.27	7.22	6.35	6.47	14.33	0.00	0.00	158.94	144.81	138.97
The Gambia	56.40	62.20	65.36	1.90	1.80	1.70	48.95	47.39	48.58	3.48	3.24	3.11	0.00	27.64	27.46	1.46	1.51	1.48
Ghana	79.30	85.40	85.10	22.90	28.30	31.00	44.02	42.60	39.05	2.95	2.78	2.88	66.37	2.53	129.81	55.17	52.79	50.85
Kenya	53.10	71.50	76.00	13.80	23.60	30.00	69.25	68.13	67.67	5.34	4.93	4.76	310.62	218.77	124.01	34.16	44.14	49.04
Lesotho	35.10	47.50	50.00	37.80	40.20	41.50	46.05	41.64	33.63	8.14	8.37	10.42	0.04	14.78	31.38	34.81	33.11	32.45
Malawi	11.00	11.50	13.98	2.20	1.70	1.40	80.98	70.86	71.08	3.31	3.16	3.04	64.06	113.68	80.40	23.17	24.33	26.98
Mauritius	99.70	99.50	100.00	98.70	98.90	99.00	11.49	8.94	8.61	2.32	2.06	2.15	10.38	34.65	0.00	145.35	208.17	209.43
Mozambique	26.20	30.60	33.20	4.20	5.20	6.00	80.06	77.47	76.86	12.54	11.56	11.95	5.86	205.54	121.14	80.07	72.69	70.15
Namibia	49.70	52.30	56.19	44.80	46.90	47.40	29.32	30.22	29.99	3.28	3.48	3.45	0.00	0.02	9.00	165.04	204.07	207.61
Nigeria	59.30	55.40	60.53	7.30	19.80	25.60	81.31	80.08	80.31	6.14	6.50	6.57	51.35	192.74	11.65	11.32	10.44	10.09
Rwanda	29.40	45.20	50.60	1.20	4.60	8.30	86.31	81.80	79.37	4.57	3.72	3.59	0.00	1.73	29.03	9.31	11.02	10.90
Seychelles	100.00	100.00	100.00	100.00	100.00	100.00	1.36	1.21	1.72	2.90	2.58	2.85	0.04	0.00	0.00	79.06	122.26	227.77
Sierra Leone	20.30	26.30	29.40	0.60	0.80	1.00	74.03	75.44	71.14	6.25	5.26	5.49	0.00	0.19	31.33	12.08	12.03	12.10
South Africa	83.90	90.00	86.50	84.90	88.10	89.40	7.58	8.72	9.70	6.93	6.72	6.57	850.50	180.18	1210.09	82.53	162.66	175.08
Tanzania	32.80	39.90	45.80	3.90	7.20	9.20	82.80	80.42	78.31	7.77	6.69	6.38	40.21	6.42	89.21	12.29	11.06	10.43
Togo	46.80	54.10	57.20	7.60	10.40	11.90	81.04	78.63	75.13	9.17	8.30	8.60	5.32	1.26	3.92	8.71	8.74	13.99
Uganda	26.70	42.10	47.10	0.80	0.70	0.60	91.70	90.54	90.95	9.71	9.52	10.20	1666.91	74.89	566.03	20.23	26.92	25.87
Zambia	35.40	44.60	47.83	13.40	10.40	9.00	83.96	86.09	83.04	7.83	7.50	7.82	85.98	87.96	23.82	145.00	134.15	165.03
Average (total for 7.a.1)	52.18	56.27	59.81	17.48	23.36	26.35	70.21	69.48	69.19	6.59	6.41	6.47	3,277.60	1,185.65	2,500.31	34.56	42.50	44.29

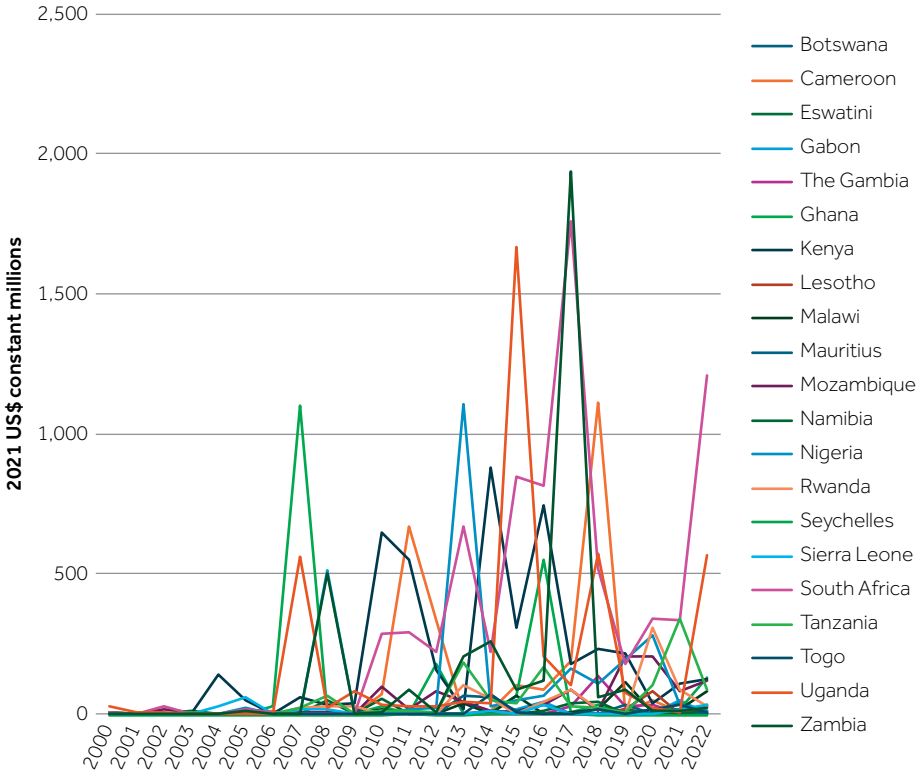
Source: UN Statistics Division SDG Indicators Database.

Figure 4.5 SDG7.3.1 energy intensity, 2000–2021, Africa.



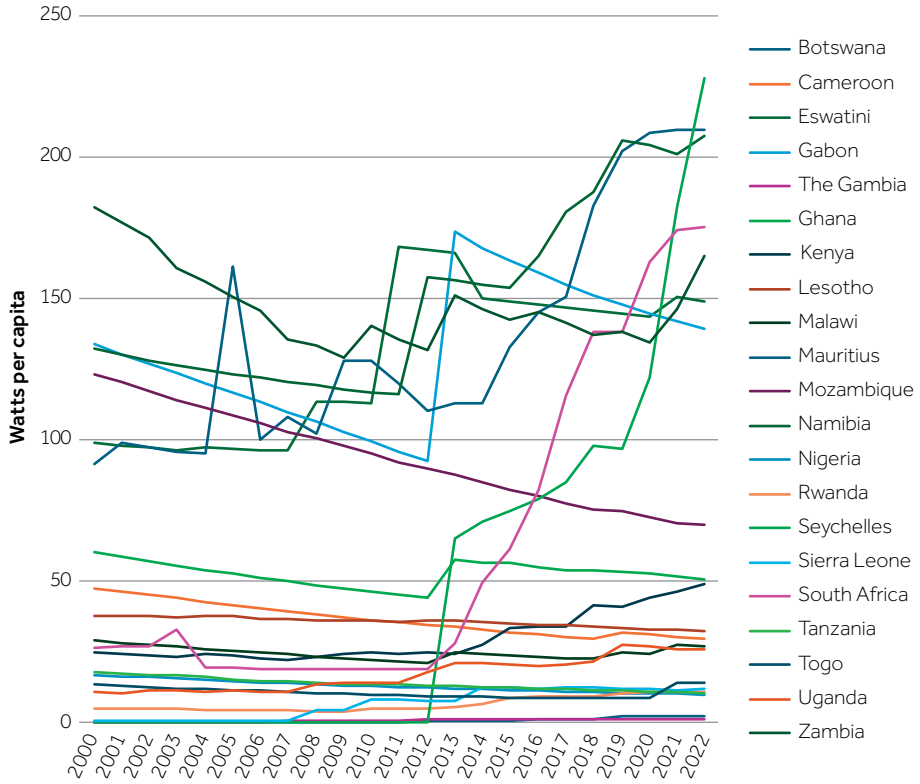
Source: UN Statistics Division SDG Indicators Database.

Figure 4.6 SDG7.a.1 international financial flows, 2000–22, Africa.



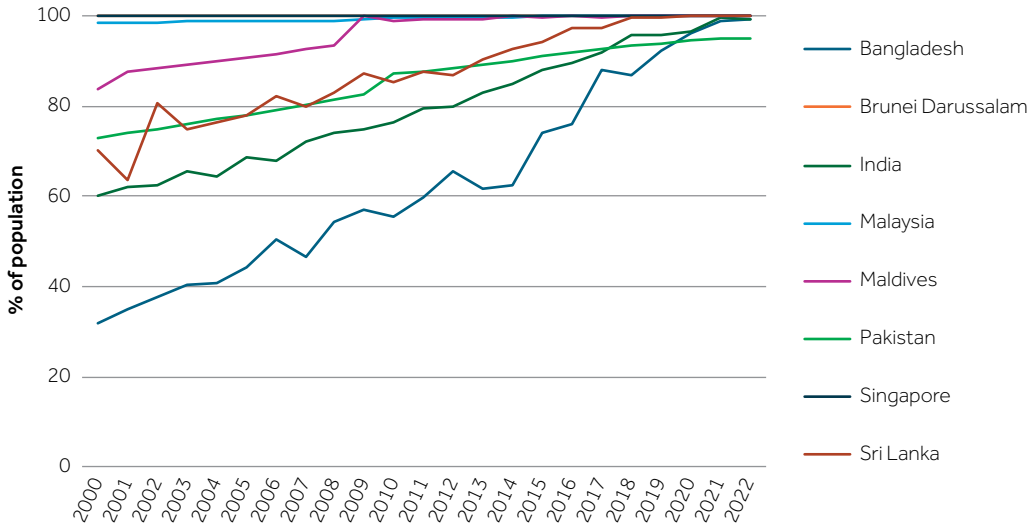
Source: UN Statistics Division SDG Indicators Database.

Figure 4.7 SDG7.b.1 installed renewable electricity-generating capacity, 2000–2022, Africa.



Source: UN Statistics Division SDG Indicators Database.

Figure 4.8 SDG7.1.1 electrification, 2000–2022, Asia.

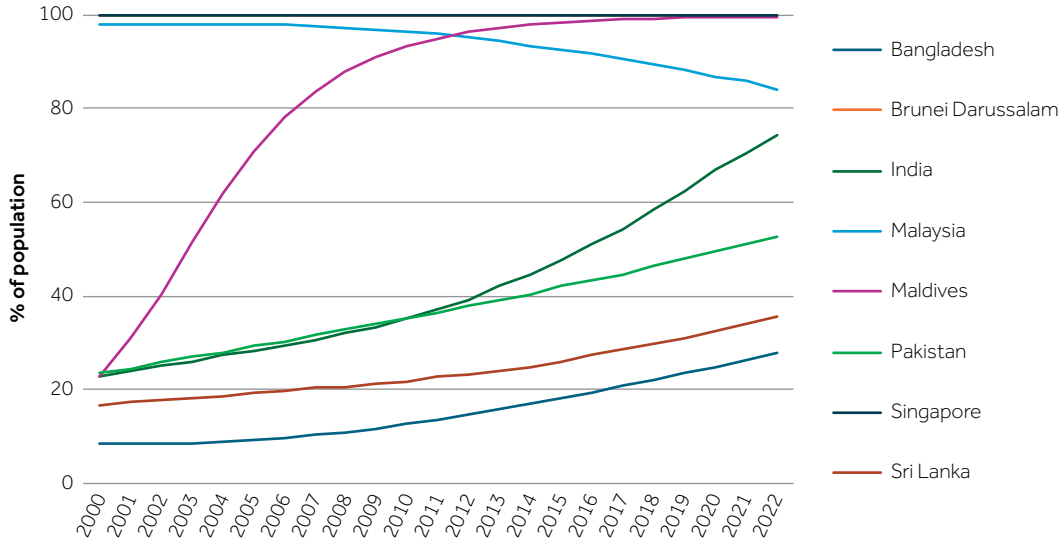


Source: UN Statistics Division SDG Indicators Database.

4.2.2 Asia: access to clean cooking

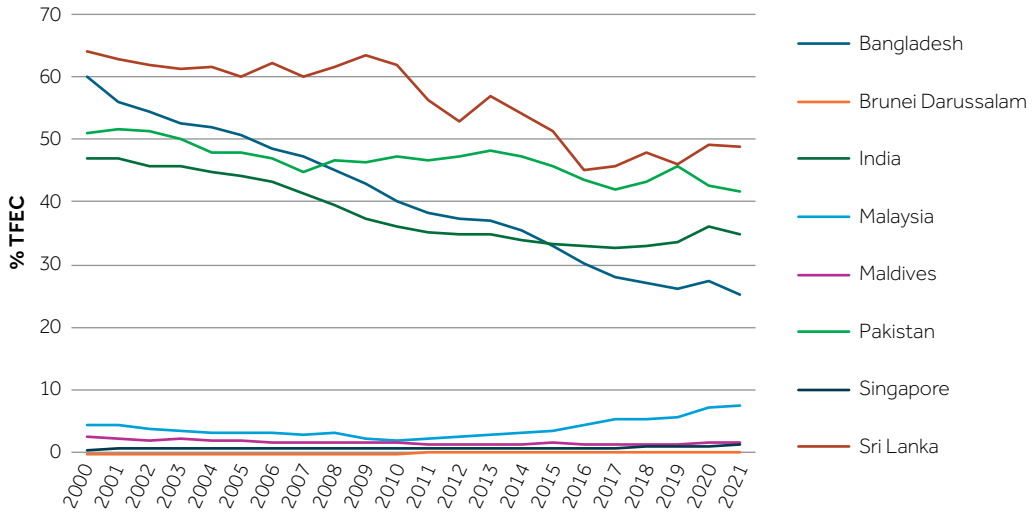
The Southeast Asian countries of Singapore and Brunei Darussalam have long had access to clean cooking rates at or close to 100 per cent; they have more recently been joined by Maldives. India has shown strong growth in recent years but, along with Pakistan, Sri Lanka and Bangladesh, remains well below 100 per cent. Malaysia's clean cooking

Figure 4.9 SDG7.1.2 clean cooking access rate, 2000–2022, Asia.



Source: UN Statistics Division SDG Indicators Database.

Figure 4.10 SDG7.2.1 renewable energy, 2000–2021, Asia.



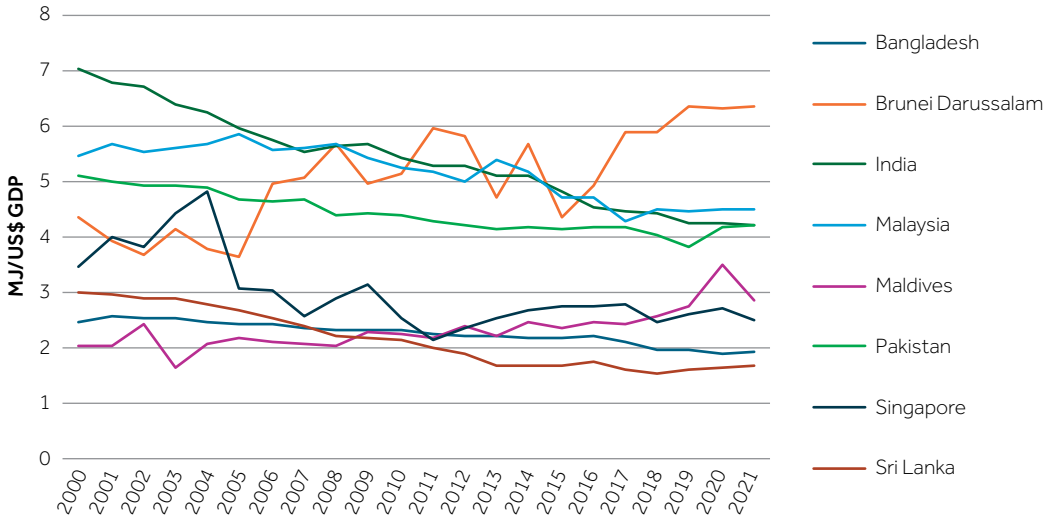
Source: UN Statistics Division SDG Indicators Database.

rate has decreased steadily, from close to 100 per cent to 84 per cent since the early 2000s. The reason for this decrease is unclear, but several factors may be contributing, including economic and energy crises, making cleaner cooking fuels such as liquified petroleum gas (LPG) less affordable; policy shifts and subsidies, impacting affordability and adoption rates; and cultural or affordability, causing some population to revert to traditional cooking.

4.2.3 Asia: renewable energy shares

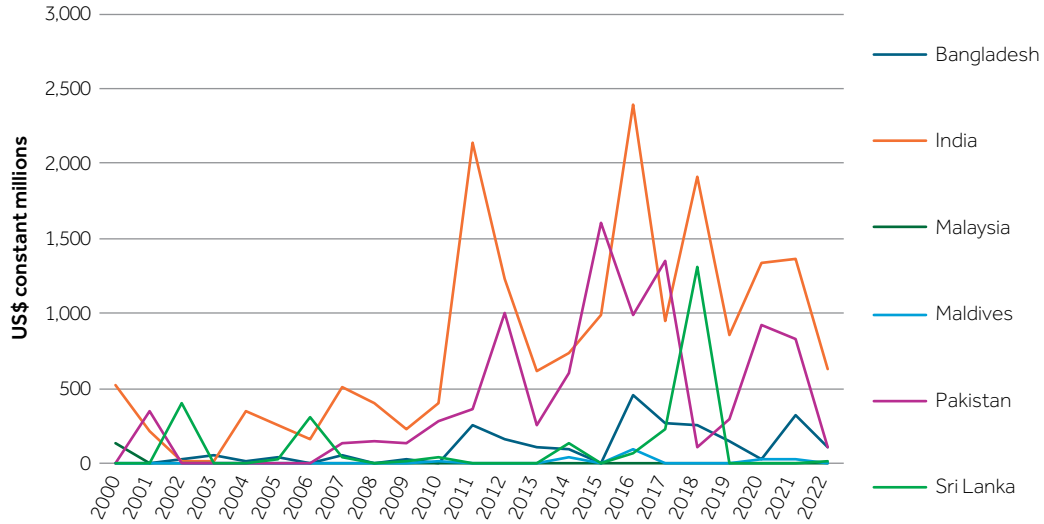
Biomass use in Asia, like that of Africa, is slowly decreasing in the transition to more modern forms of energy. Brunei Darussalam, Malaysia and Singapore consume mostly non-renewable energy, indicating they have a long way to go to reach the SDG7 targets. Brunei Darussalam is a very small country with a wealthy economy based on oil and gas production. Malaysia has a larger share of renewable energy and is the only country showing growth in its share, but as a substantial oil and gas producer it remains highly dependent on these fuels. Singapore is so densely populated it has little space for solar or wind farms. Although Singapore is making increasing use of rooftop solar and offshore floating solar farms, it remains highly reliant on imported hydrocarbon fuels as its principal energy sources.

Figure 4.11 SDG7.3.1 energy intensity, 2000–2021, Asia.



Source: UN Statistics Division SDG Indicators Database.

Figure 4.12 SDG7.a.1 international financial flows, 2000–2022, Asia.



Source: UN Statistics Division SDG Indicators Database.

4.2.4 Asia: energy intensities

In aggregate, energy intensity is not decreasing very rapidly in Asia, probably because of energy-intensive industrialisation occurring in many of these countries. India, Malaysia and Pakistan are among the most energy-intensive, but, of these three countries, only India's energy intensity is declining.

4.2.5 Asia: international financial flows

International financial flows to support the energy transition have increased in recent years, and India has been the largest beneficiary so far, followed by Pakistan. While this indicator does not measure the gap in terms of financial needs, many developing countries remain badly in need of financial support from these and other sources.

4.2.6 Asia: renewable energy-generating capacities

Malaysia has seen the largest growth in renewable energy-generating capacity per capita in recent years, albeit from a low base. This is interesting as Malaysia is a major petroleum-producing country –

Table 4.2 SDG7 progress of member countries, Asia.

CWC	7.1.1 electricity access (%)			7.1.2 clean cooking (%)			7.2.1 renewable energy (% TFEC)			7.3.1 energy intensity (MJ/GDP)			7.a.1 international financial flows (10^6 US$)			7.b.1 renewable energy (capacity/ capita)		
	2016	2020	2022	2016	2020	2022	2015	2019	2021	2015	2019	2021	2015	2019	2022	2016	2020	2022
Bangladesh	75.9	96.2	99.4	19.4	24.9	28.0	33.1	26.1	25.0	2.2	2.0	1.9	8.5	150.4	112.1	2.5	3.5	4.7
Brunei Darussalam	100.0	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0	4.3	6.4	6.3	N/A	N/A	N/A	2.8	3.3	10.9
India	89.6	96.5	99.2	50.9	66.8	74.5	33.4	33.5	34.9	4.8	4.3	4.2	991.4	861.8	627.3	67.5	96.3	115.0
Malaysia	99.9	100.0	100.0	91.6	86.9	84.1	3.4	5.7	7.5	4.7	4.4	4.5	0.2	0.0	0.0	253.5	258.2	266.5
Maldives	100.0	100.0	100.0	98.8	99.6	99.7	1.5	1.3	1.4	2.3	2.8	2.9	6.8	4.4	0.7	19.6	55.1	71.5
Pakistan	91.8	94.5	95.0	43.3	49.4	52.6	45.9	45.9	41.6	4.1	3.8	4.2	1600.1	296.0	103.1	41.2	55.3	59.1
Singapore	100.0	100.0	100.0	100.0	100.0	100.0	0.7	0.9	1.1	2.7	2.6	2.5	N/A	N/A	N/A	53.8	89.9	141.6
Sri Lanka	97.5	100.0	100.0	27.3	32.6	35.5	51.3	46.1	48.8	1.7	1.6	1.7	0.5	0.2	18.5	91.6	113.0	130.9
Average (total 7.a.1)	88.9	96.3	98.7	47.8	61.0	67.4	34.4	33.8	34.4	4.5	4.0	4.0	2,607.6	1,312.8	861.7	62.0	85.9	101.0

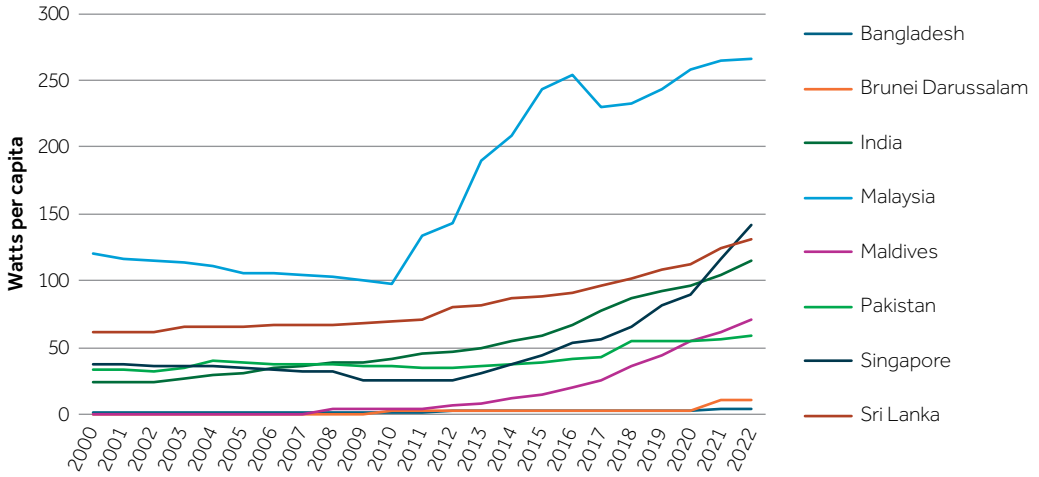
Source: UN Statistics Division SDG Indicators Database; UN Population Division.

Table 4.3 SDG7 progress of member countries, Caribbean and Americas.

CWC	7.1.1 electricity access (%)			7.1.2 clean cooking (%)			7.2.1 renewable energy (% TFEC)			7.3.1 energy intensity (MJ/GDP)			7.a.1 international financial flows (10^6 US$)			7.b.1 renewable energy (capacity/capita)		
	2016	2020	2022	2016	2020	2022	2015	2019	2021	2015	2019	2021	2015	2019	2022	2016	2020	2022
Antigua and Barbuda	100.0	100.0	100.0	100.0	100.0	100.0	0.4	0.7	0.9	4.7	4.3	4.8	7.6	0.0	0.0	38.8	138.8	137.2
The Bahamas	100.0	100.0	100.0	100.0	100.0	100.0	1.4	1.1	1.1	2.4	2.6	2.9	0.0	0.6	0.0	6.2	8.0	22.1
Barbados	100.0	100.0	100.0	100.0	100.0	100.0	3.0	3.4	5.5	4.1	4.2	4.0	0.1	37.3	0.0	53.8	175.3	248.7
Belize	93.3	96.8	98.6	83.2	82.9	82.5	30.3	30.4	26.6	4.6	4.9	4.8	0.0	0.3	0.0	179.6	250.7	244.3
Canada	100.0	100.0	100.0	100.0	100.0	100.0	22.3	22.4	23.8	6.8	6.9	6.6	0.0	0.0	0.0	2699.4	2674.7	2779.2
Dominica	97.8	100.0	100.0	89.1	87.6	86.7	8.7	7.6	8.8	3.1	2.9	3.0	0.0	9.8	0.0	107.2	99.9	98.9
Grenada	91.8	93.4	94.2	89.5	86.7	84.8	10.5	10.4	10.2	2.4	2.7	2.8	1.9	0.2	0.0	18.9	29.8	29.8
Guyana	89.0	92.3	93.0	100.0	100.0	100.0	25.0	11.3	13.2	4.0	4.0	2.8	1.6	16.0	86.3	64.1	66.8	65.9
Jamaica	96.6	99.7	100.0	82.7	76.4	72.8	12.1	9.2	10.5	3.9	4.4	3.9	93.1	0.2	0.3	68.4	91.0	90.8
St Kitts and Nevis	100.0	100.0	100.0	100.0	100.0	100.0	1.6	1.3	1.6	2.5	2.4	2.6	0.0	0.0	0.0	86.5	109.4	109.4
Saint Lucia	99.8	100.0	100.0	95.1	93.6	92.5	11.5	10.0	9.7	3.0	2.8	3.4	0.0	0.0	0.6	5.7	22.4	22.3
St Vincent and the Grenadines	99.7	100.0	100.0	93.8	91.8	90.0	4.3	5.4	5.0	2.6	2.3	2.5	0.0	0.0	0.0	78.5	88.7	90.6
Trinidad and Tobago	100.0	100.0	100.0	100.0	100.0	100.0	0.4	0.4	0.5	18.3	18.8	18.7	0.0	0.0	0.4	2.7	2.6	2.7
Average (total 7.a.1)	99.5	99.8	99.8	98.6	98.3	98.0	20.4	20.1	21.5	6.8	6.9	6.6	104.3	64.5	87.6	2,286.1	2,277.1	2,368.9

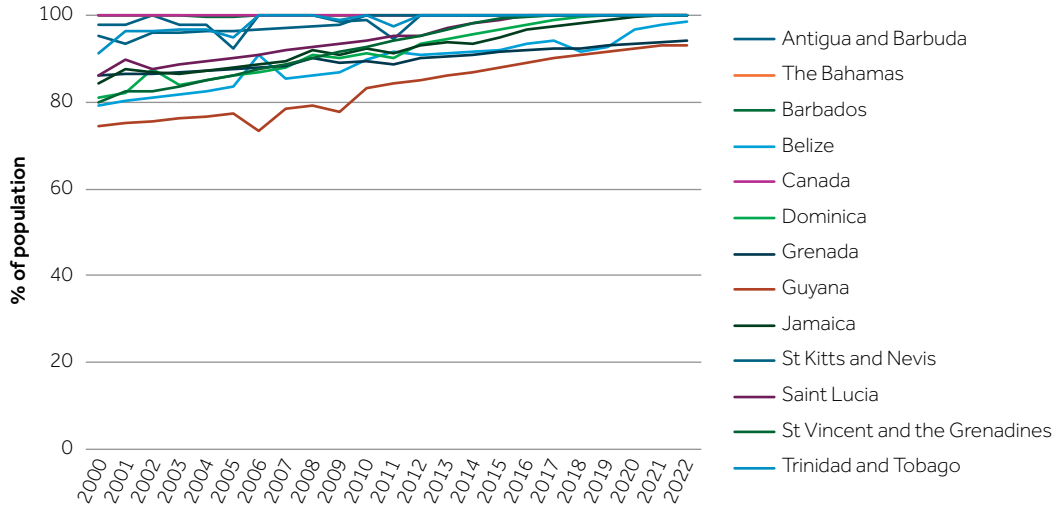
Source: UN Statistics Division SDG Indicators Database.

Figure 4.13 SDG7.b.1 installed renewable electricity-generating capacity, 2000–2022, Asia.



Source: UN Statistics Division SDG Indicators Database.

Figure 4.14 SDG7.1.1 electrification, 2000–2022, Caribbean and Americas.



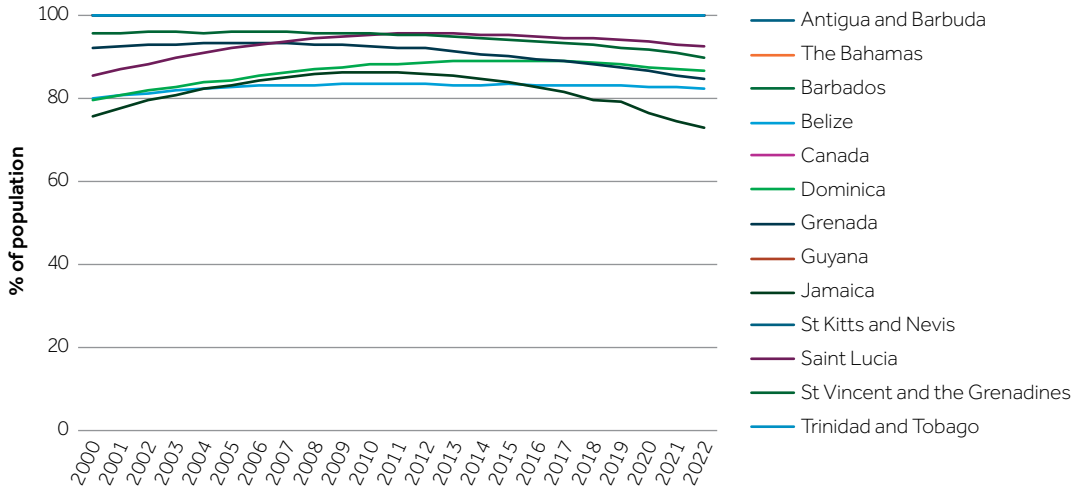
Source: UN Statistics Division SDG Indicators Database.

but has high hydro potential.[27] Bangladesh and Brunei Darussalam have the lowest levels of this indicator.

4.2.7 Asia: transition indicators summary

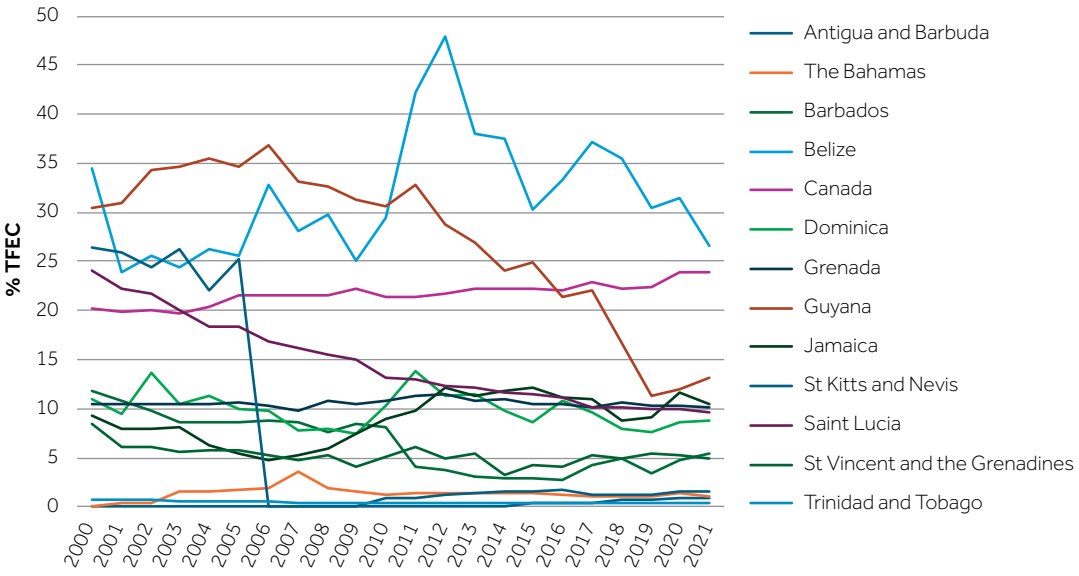
Electricity access is increasing rapidly in Asian CWCs, with all countries having greater than 98 per cent access in 2022 except Pakistan, at 95 per cent access. Clean cooking access remains low in 2022 for India, Pakistan, Sri Lanka and Bangladesh, although it is increasing in all these countries, especially in India and Bangladesh in recent years. Maldives has made the most progress in clean cooking access and is almost at 100 per cent. The share of renewable energy in Asian countries is declining rather than increasing, like all regions except Europe, and likely for similar reasons to those discussed above regarding African countries. Asian region energy intensity is declining rather slowly. International finance has begun to flow, in a very unevenly distributed way, to Asian countries. Installed renewable energy electricity-generating capacity has increased in the past decade, most markedly in Malaysia. Key priorities include the uptake of renewable energy to further decarbonise, and targeted clean cooking.

Figure 4.15 SDG7.1.2 clean cooking access rate, 2000–2022, Caribbean and Americas.



Source: UN Statistics Division SDG Indicators Database.

Figure 4.16 SDG7.2.1 renewable energy, 2000–2021, Caribbean and Americas.



Source: UN Statistics Division SDG Indicators Database.

4.3 The Caribbean and the Americas

4.3.1 Caribbean and Americas: access to electricity

All CWCs in the Caribbean and Americas have 100 per cent access to electricity, with the exception of Belize, Grenada and Guyana. These countries have over 93 per cent of their population with access to electricity, and those access rates are increasing.

4.3.2 Caribbean and Americas: access to clean cooking

The populations of the Caribbean and Americas CWCs all have greater than 82 per cent access to clean cooking, with the exception of Jamaica, where the rate of access has been decreasing at an annual average rate of 1.64 per cent since 2012. Belize, Dominica, Grenada, Saint Lucia and St Vincent and the Grenadines have also had small decreases in access since 2012. Antigua and Barbuda, The

Table 4.4 SDG7 progress of member countries, Europe.

CWC	7.1.1 electricity access (%)			7.1.2 clean cooking (%)			7.2.1 renewable energy (% TFEC)			7.3.1 energy intensity (MJ/US$)			7.a.1 international financial flows (10^6 US$)			7.b.1 renewable energy (capacity/capita)		
	2016	2020	2022	2016	2020	2022	2015	2019	2021	2015	2019	2021	2015	2019	2022	2016	2020	2022
Cyprus	100.00	100.00	100.00	100.00	100.00	100.00	10.41	11.97	15.63	2.92	2.57	2.45	N/A	N/A	N/A	210.14	322.88	480.75
Malta	100.00	100.00	100.00	100.00	100.00	100.00	5.98	7.43	8.62	1.50	1.28	1.21	N/A	N/A	N/A	210.09	373.65	423.15
United Kingdom	100.00	100.00	100.00	100.00	100.00	100.00	7.73	11.44	12.15	2.59	2.22	2.20	N/A	N/A	N/A	539.73	708.33	785.45
Average (total 7.a.1)	100.00	100.00	100.00	100.00	100.00	100.00	7.77	11.42	12.19	2.59	2.22	2.20	N/A	N/A	N/A	531.57	698.90	777.16

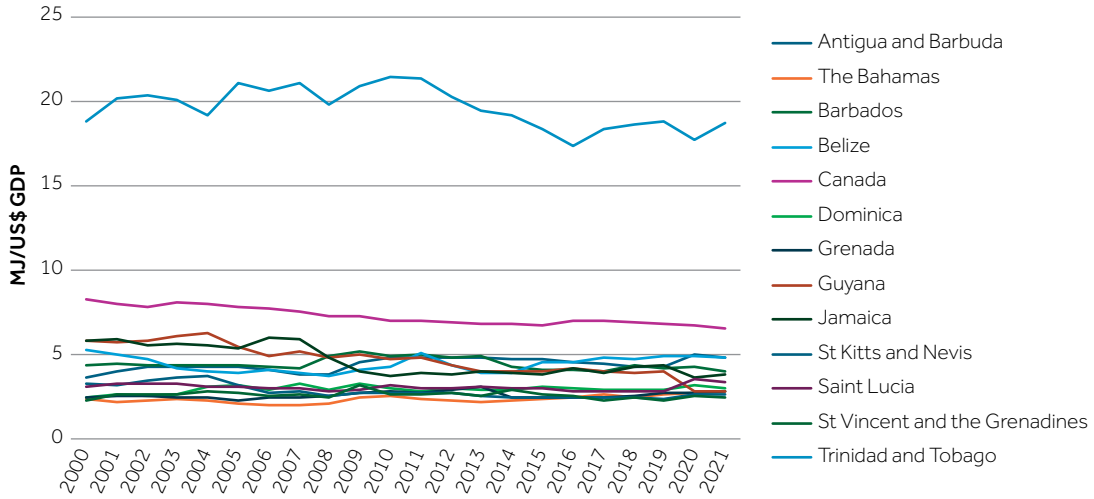
Source: UN Statistics Division SDG Indicators Database.

Table 4.5 SDG7 progress of member countries, Pacific.

CWC	7.1.1 electricity access (%)			7.1.2 clean cooking (%)			7.2.1 renewable energy (% TFEC)			7.3.1 energy intensity (MJ/ GDP)			7.a.1 international financial flows (10^6 US$)			7.b.1 renewable energy (capacity/capita)		
	2016	2020	2022	2016	2020	2022	2015	2019	2021	2015	2019	2021	2015	2019	2022	2016	2020	2022
Australia	100.00	100.00	100.00	100.00	100.00	100.00	9.42	10.32	12.32	4.53	4.36	4.10	N/A	N/A	N/A	799.28	1543.79	1864.94
Fiji	93.40	97.10	92.00	42.70	51.80	56.10	32.74	26.48	29.70	2.30	2.15	2.27	1.80	0.13	0.03	212.82	229.21	235.98
Kiribati	92.60	91.00	94.42	7.20	11.80	14.80	47.48	42.19	42.23	6.65	7.38	6.85	0	0	0.06	24.33	25.41	24.48
Nauru	99.70	100.00	99.99	100.00	100.00	100.00	0.10	0.59	1.65	8.45	6.93	6.94	8.6	11	0.00	62.08	201.46	249.68
New Zealand	100.00	100.00	100.00	100.00	100.00	100.00	29.31	28.04	28.85	4.62	4.05	3.77	N/A	N/A	N/A	1565.74	1474.77	1504.18
Papua New Guinea	13.50	20.50	19.00	9.10	9.60	10.00	55.33	53.18	54.50	6.11	6.12	6.54	8.4	0.1	11.03	36.81	33.79	32.86
Samoa	98.90	100.00	98.30	32.65	37.25	39.60	37.06	34.21	35.95	4.81	4.85	4.90	0	0	0.03	81.02	135.54	131.00
Solomon Islands	58.20	72.90	76.00	8.40	8.80	8.70	48.64	48.36	49.13	5.60	4.93	5.07	6.8	46.4	0.02	5.18	5.08	7.21
Tonga	97.00	99.90	100.00	75.50	85.50	89.50	1.94	1.77	1.77	3.07	3.86	4.65	14.1	2.5	3.12	42.29	78.07	141.47
Tuvalu	97.30	99.40	100.00	69.10	73.80	75.20	2.98	6.32	5.04	3.01	2.83	2.79	8.6	6.2	0.09	204.75	208.87	204.38
Vanuatu	57.80	67.30	71.60	8.70	7.10	6.40	35.62	31.63	24.64	4.10	4.03	5.17	7.3	0.2	36.61	32.85	38.85	37.13
Average (total 7.a.1)	79.64	81.16	80.52	75.71	75.65	75.52	23.44	23.39	25.17	4.86	4.69	4.62	55.6	66.4	50.99	679.51	1,112.43	1,301.82

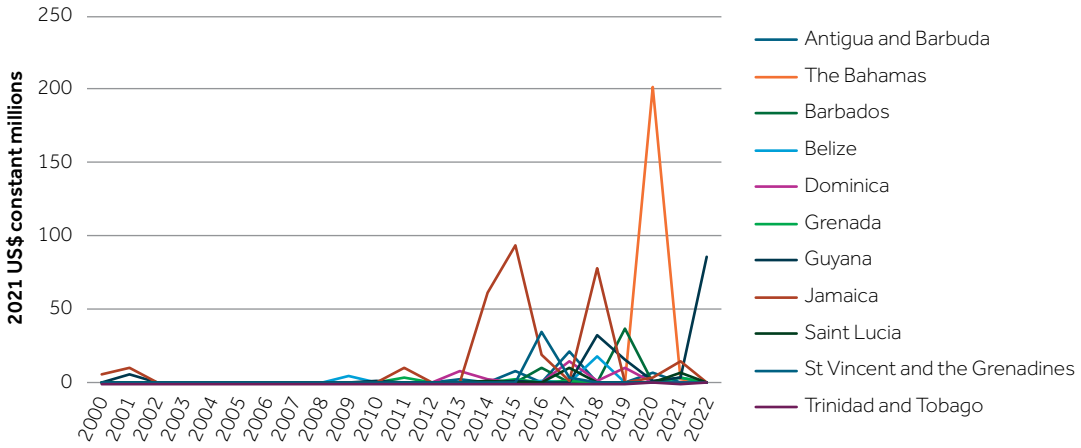
Source: UN Statistics Division SDG Indicators Database.

Figure 4.17 SDG7.3.1 energy intensity, 2000–2021, Caribbean and Americas.



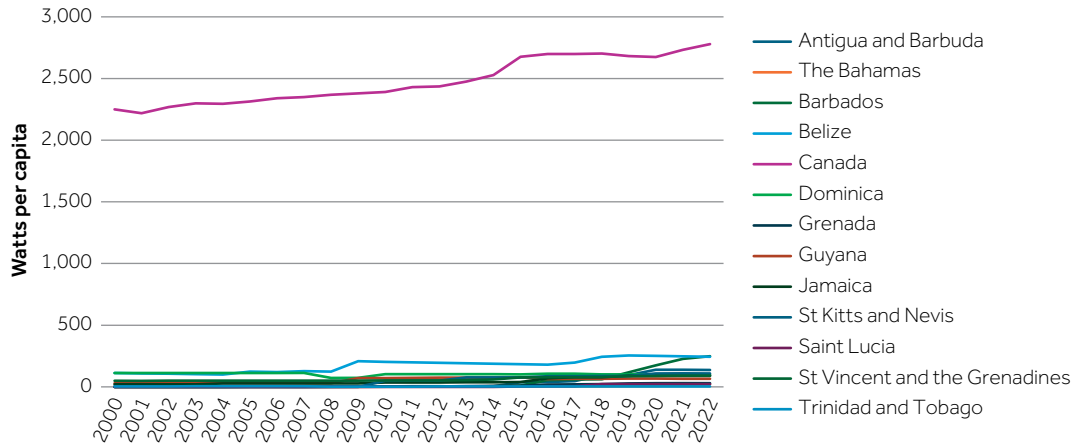
Source: UN Statistics Division SDG Indicators Database.

Figure 4.18 SDG7.a.1 international financial flows, 2000–2022, Caribbean and Americas.



Source: UN Statistics Division SDG Indicators Database.

Figure 4.19 SDG7.b.1 installed renewable electricity-generating capacity, 2000–2022, Caribbean and Americas.



Source: UN Statistics Division SDG Indicators Database.

Bahamas, Barbados, Canada, Guyana, St Kitts and Nevis, and Trinidad and Tobago are all at 100 per cent access to clean cooking.

4.3.3 Caribbean and Americas: renewable energy shares

Some CWCs in Caribbean and Americas have traditionally used biomass as an energy source. This was declining in countries like Guyana, whose share of renewable energy in its TFEC fell to 11.31 per cent in 2019 but has since increased to 13.20 per cent in 2021. Belize, using biomass and hydropower, has a share of 26.56 per cent in 2021. The sudden drop in renewable energy in 2006 in St Kitts and Nevis is believed to be because of the closure of its sugar industry and the loss of bagasse as an energy source. Canada has consistently had approximately 22 per cent renewable energy in its TFEC, mainly hydropower, but this increased to 23.84 per cent in 2021.

4.3.4 Caribbean and Americas: energy intensities

The Caribbean and Americas region's energy intensity is relatively low and remains quite stable. The outlier in this region is Trinidad and Tobago, a major hydrocarbon-producing nation and one of the larger countries in this region, with an energy intensity more than double that of any other country in the region. This likely reflects its ammonia, methanol, fertiliser and melamine plants and its petroleum refineries, which are energy-intensive activities. While many Caribbean SIDS have very low and stable energy intensities, those that are higher are generally seeing their intensities decline.

4.3.5 Caribbean and Americas: international financial flows

International financial flows to support green energy projects in the Caribbean and Americas are low but have been increasing in recent years, as in all Commonwealth regions. These flows are very cyclical, and Jamaica, Guyana and The Bahamas have been the largest recipients to date. In support of SIDS efforts to attract investment and finance in green projects, the Commonwealth and Sustainable Energy for All (SEforALL) have developed a SIDS Clean Energy Toolkit, an analytical financial cost-benefit analysis model, which supported the development of clean energy investment business cases for Barbados, Dominica and Seychelles.[28]

4.3.6 Caribbean and Americas: renewable energy-generating capacities

As shown in Figure 4.16, Belize is the outlier in installed renewable electricity-generating capacity per capita in this region. In recent decades, Belize has seen large increases in electricity generation using hydro and biomass, more than doubling its renewable electricity-generating capacity. Other Caribbean and Americas CWCs have relatively modest renewable electricity-generating capacity and are growing slowly. Saint Lucia, Barbados, and Antigua and Barbuda have seen a recent spike in renewable electricity generation.

4.3.7 Caribbean and Americas: transition indicators summary

Canada has 100 per cent access rates to electricity and clean cooking, and other Caribbean and Americas region CWCs are not far behind on these indicators. The region's renewable energy share is declining and is now the lowest among the Commonwealth regions. Trinidad and Tobago, another country that is a large producer of carbon-based fuels, has the lowest renewable share. Except for Trinidad and Tobago, most CWCs in the region have low energy intensities. The region is seeing very low international support for the energy transition and its installed renewable electricity generation is relatively low except for Belize. Key priorities include greater uptake of renewable energy to further decarbonise and targeted energy efficiency initiatives to reduce energy intensity.

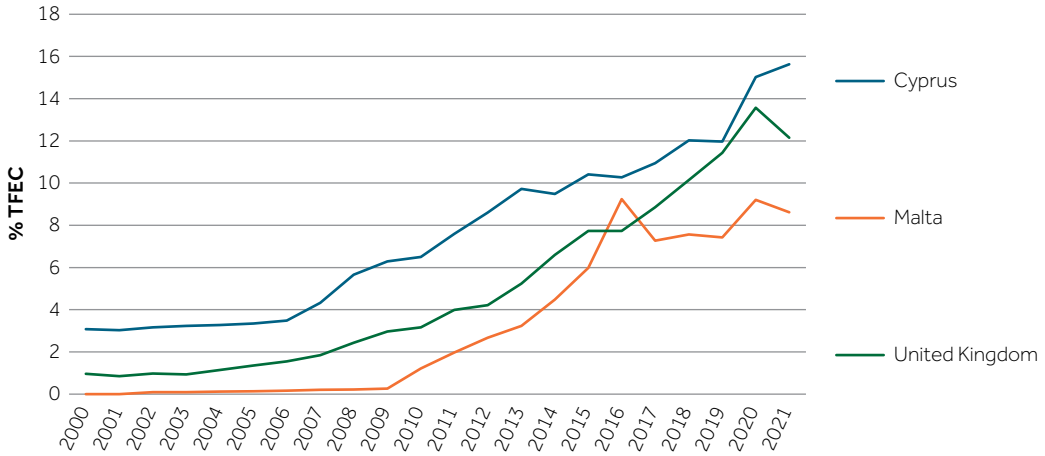
4.4 Europe

The Commonwealth member countries of Europe are higher-income countries, and all have 100 per cent access to electricity and 100 per cent access to clean cooking, so these targets and indicators are not relevant for this region. They also do not receive international financial flows to support them or obtain support to expand their energy infrastructure, so there are no indicators for these countries for SDG targets 7.a.1 or 7.b.1. No figures are shown for Europe for these SDG7 indicators.

4.4.1 Europe: renewable energy shares

The greater challenge facing Cyprus, Malta and the UK is improving their shares of renewable energy, which currently range between 8.62 and 15.63 per cent and have grown annually by 7.77 per cent, 18.17 per cent and 12.31 per cent of TFEC,

Figure 4.20 SDG7.2.1 renewable energy, 2000–2021, Europe.



Source: UN Statistics Division SDG Indicators Database.

respectively, since 2011 (Figure 4.20). Notably, Malta and the UK have had a recent decrease in their shares of renewable energy.

4.4.2 Europe: energy intensities

Energy intensity in Cyprus, Malta and the UK has declined consistently since 1990.

4.4.3 Europe: transition indicators summary

European CWCs are the only region of the Commonwealth with increasing renewable energy shares, but their share remains low and has only recently surpassed that of the Caribbean and Americas region. Their renewable energy shares are increasing (despite a recent decrease in Malta and the UK) but remain a small share of their TFEC, indicating a significantly greater increase is needed to reach a level that will meaningfully reduce their carbon emissions. As the countries are in the only region exclusively comprising high-income countries, energy intensities are the lowest among CWCs and are continuing to decline. The key priority for Europe is to increase the uptake of renewable energy to further decarbonise.

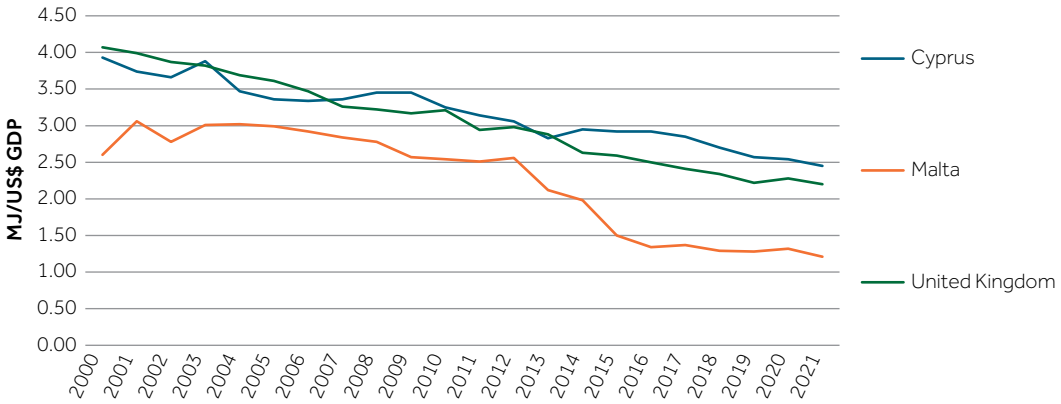
4.5 The Pacific

The Pacific CWCs comprise two OECD member countries, Australia and New Zealand, the modestly large Pacific island country of Papua New Guinea and nine smaller Pacific islands or archipelagos.

4.5.1 Pacific: access to electricity

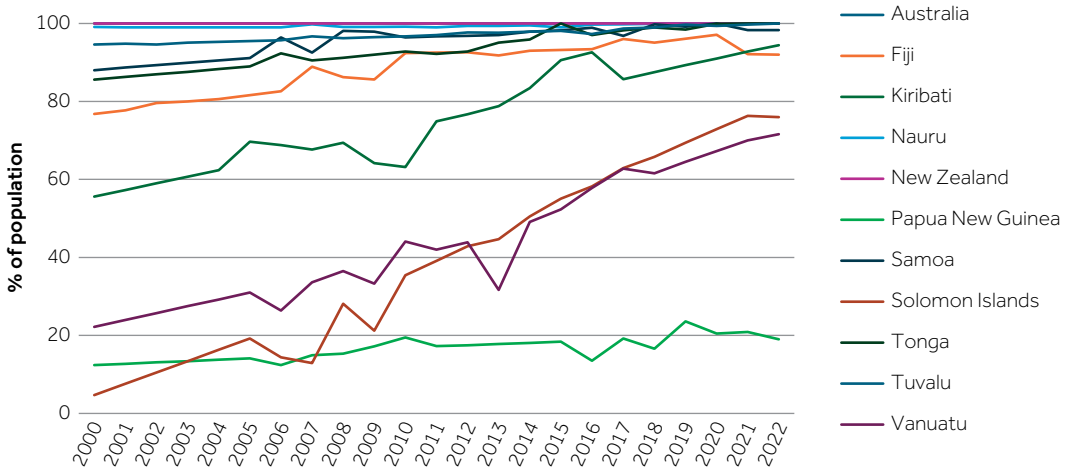
Australia and New Zealand both have 100 per cent access to electricity, and have now been joined by Nauru, Tonga and Tuvalu at this rate of access.

Figure 4.21 SDG7.3.1 energy intensity, 2000–2021, Europe.



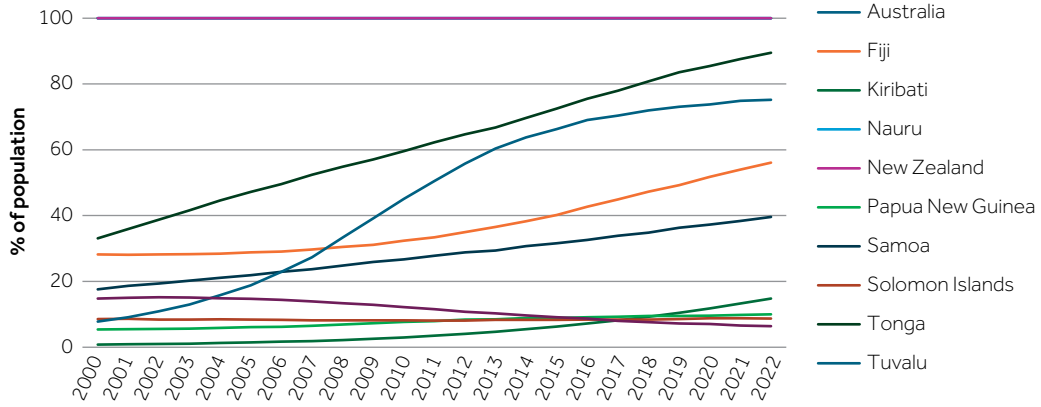
Source: UN Statistics Division SDG Indicators Database.

Figure 4.22 SDG7.1.1 electrification, 2000–2022, Pacific.



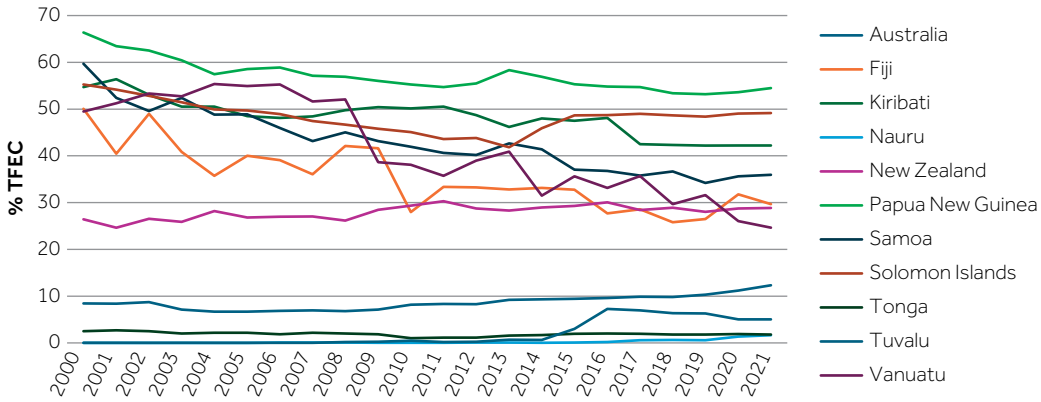
Source: UN Statistics Division SDG Indicators Database.

Figure 4.23 SDG7.1.2 clean cooking access rate, 2000–2022, Pacific.



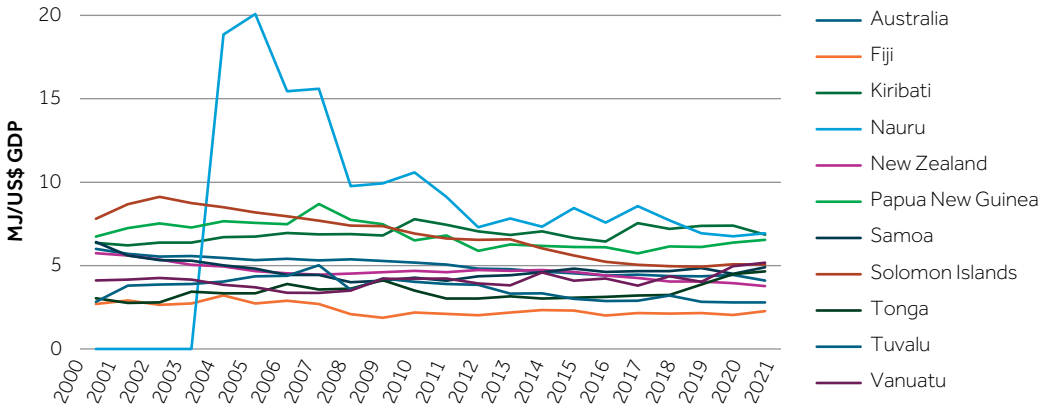
Source: UN Statistics Division SDG Indicators Database.

Figure 4.24 SDG7.2.1 renewable energy, 2000–2021, Pacific.



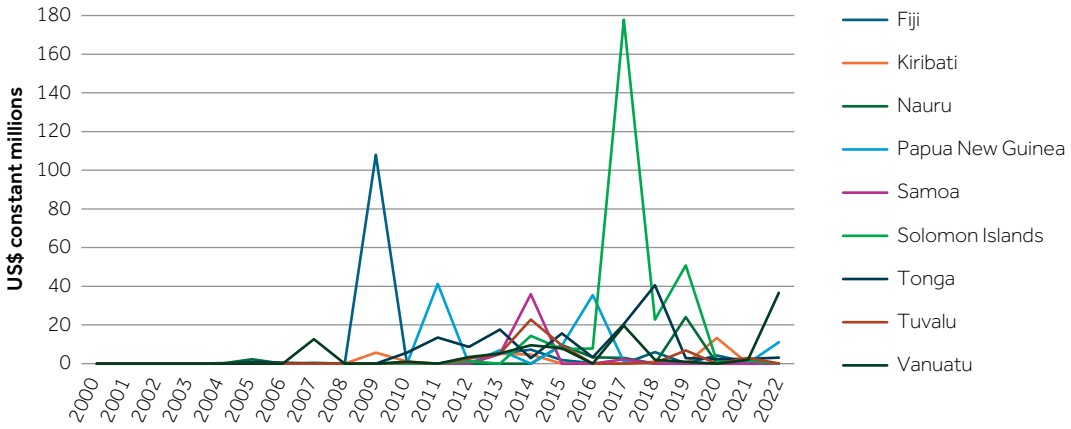
Source: UN Statistics Division SDG Indicators Database.

Figure 4.25 SDG7.3.1 energy intensity, 2000–2021, Pacific.



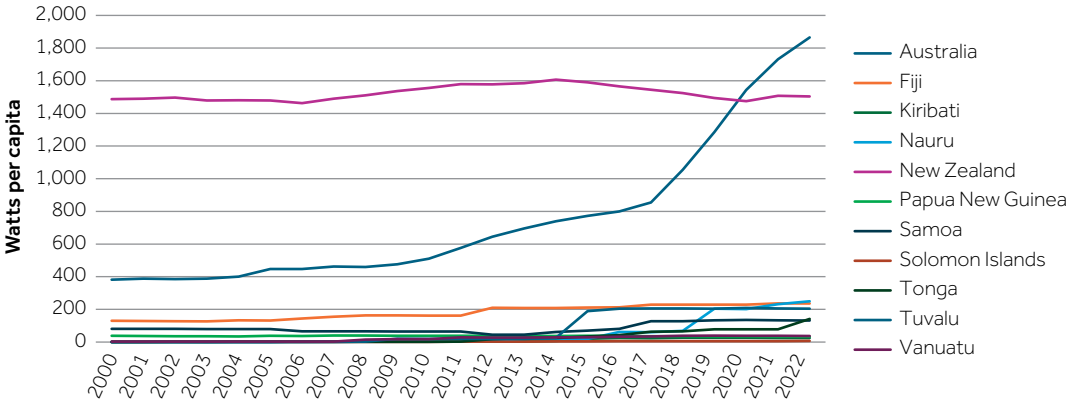
Source: UN Statistics Division SDG Indicators Database.

Figure 4.26 SDG7.a.1 international financial flows, 2000–2022, Pacific.



Source: UN Statistics Division SDG Indicators Database.

Figure 4.27 SDG7.b.1 installed renewable electricity-generating capacity, 2000–2022, Pacific.



Source: UN Statistics Division SDG Indicators Database.

Fiji and Kiribati now have over 92 per cent access. Although Papua New Guinea, Samoa and Solomon Islands still have less than 100 per cent electricity access, access to electricity is increasing rapidly in those countries.

4.5.2 Pacific: access to clean cooking

Australia, New Zealand and Nauru also have 100 per cent access rates to clean cooking. No other Pacific CWCs have reached this level, but Kiribati's access rate is increasing rapidly. Rates in Fiji, Samoa, Tonga and Tuvalu are increasing modestly but remain relatively low. Clean cooking access rates in Vanuatu, Solomon Islands and Papua New Guinea are the lowest, at 10 per cent or lower in 2022, with these rates flat or declining.

4.5.3 Pacific: renewable energy shares

The share of renewable energy in Pacific region CWCs is modest and generally stable or declining. Papua New Guinea has the highest share of renewable energy, at 54.5 per cent in 2021, with that share declining since 2000, and Solomon Islands now has a 49.13 per cent share. Nauru and Tonga have virtually no renewable energy at present, and Australia and Tuvalu have only 12 per cent and 5 per cent shares, respectively.

4.5.4 Pacific: energy intensities

Indicators show that energy intensities in Pacific CWCs are modest and declining slowly. Nauru has seen the most significant decline. By 2021, all Pacific region countries were within the narrow range of 2 per cent to 7 per cent MJ/US$ GDP.

4.5.5 Pacific: international financial flows

International financial flows in support of green energy in developing countries have increased in Pacific region countries. These flows are sporadic and highly cyclical in timing and inadequate for recipient countries to achieve their goals. Solomon Islands appears to be the largest and most recent recipient.

4.5.6 Pacific: renewable electricity generating capacities

Installed renewable electricity-generating capacity per capita has been increasing in most Pacific CWCs, most significantly in Fiji, Nauru and Tuvalu. Solomon Islands is well below other Pacific countries on this indicator, and the international financial inflow it has recently received may help it raise its renewable electricity-generating capacity.

4.5.7 Pacific: transition indicators summary

Pacific region countries have relatively high electricity access rates, with a wide range of rates among them. Australia, New Zealand, Fiji, Nauru, Tonga and Tuvalu populations now have 100 per cent access to electricity. Most countries' clean cooking access rates are growing steadily, with Fiji, Kiribati and Samoa having lower access rates but high growth rates. Most Pacific region countries have fairly stable energy intensities, except Nauru, whose energy intensity has dropped rapidly over the past 20 years but has since plateaued. The region is seeing very low financial inflows to support the energy transition, but its per capita installed renewable electricity generation capacity has shown the highest increase among all regions, and this increase has been led by Kiribati, Nauru, Tonga and Tuvalu. Key priorities for the Pacific are increasing the uptake of renewable energy to further decarbonise and targeted clean cooking.

5. Energy Transition and Changing Geopolitics

The world's energy system is changing rapidly. Thus, countries are seeking to implement energy transition plans towards the development of low-carbon energy systems, which can address the threat of climate change and close energy access gap, towards achieving the 2030 Agenda on Sustainable Development.

The impacts of COVID-19, followed by the conflicts in Ukraine (which drove oil, gas, coal and power prices sharply higher) and the Middle East, reductions in official development assistance, increasing demand for critical energy transition minerals, the USA's withdrawal from the Paris Agreement and other geopolitical events impacting world trade, have created major uncertainties regarding progress towards achieving the Paris Agreement and SDG7 targets over the next several years.

This evolving geopolitical landscape is significantly influencing the quest for just, equitable and inclusive energy transitions, impacting areas such as energy security, economic equality, global technology competition and the well-being of vulnerable communities. Countries must navigate the challenges posed by geopolitical uncertainties and tensions while maintaining their commitment to the collective global objective of addressing the existential threat of climate change.

Achieving an inclusive, equitable and just energy transition will be key to realising both the climate change goals under the Paris Agreement and SDG7. This transition should be grounded in meaningful and effective social dialogue and include participation of all stakeholders, including governments, Indigenous Peoples, local communities, women, youth and children. It also requires countries to address energy poverty by implementing policies and programmes to ensure affordable energy access to guarantee clean energy for all.

5.1 Energy resilience and security

In the midst of the energy transition, prioritising energy security and resilient systems is becoming an increasingly high-priority concern, and critical to economic growth and sustainable development.

As global trends indicate increased dependence on energy-consuming technologies, more frequent extreme weather events and higher levels of distributed energy, there is growing concern regarding interconnected issues of energy security, especially of power grids, and energy resilience.

Inherently, there is a need for CWCs and, in particular, countries with developing and emerging economies and SIDS, to adopt strategies and mechanisms to address energy service disruptions and implement mitigation measures.

5.2 Clean technology and innovative solutions

The world has witnessed substantial progress in the development and deployment of clean energy technologies, alongside innovative solutions designed to expedite the transition to low-carbon energy. These efforts address the urgent challenge of climate change while aligning with SDG7: affordable and clean energy for all.

At the forefront of this energy transition are technologies such as solar panels, wind turbines and hydroelectric power. Furthermore, energy storage solutions like lithium-ion batteries and pumped hydro storage play vital roles in balancing supply and demand. Other notable technologies include hydrogen as a versatile energy carrier, advanced nuclear technologies providing reliable low-carbon energy, electric vehicles (EVs) and their charging infrastructure for sustainable transportation, and geothermal energy for baseload clean power.

Smart grids enhance the reliability and efficiency of energy supply, facilitating better integration of renewable energy sources. Energy-efficient technologies are also contributing significantly to this low-carbon transition. However, the deployment of these technologies is context-specific, with experiences varying across the Commonwealth and globally.

Innovation and digitalisation are key enablers in the acceleration of the energy transition and create more economic opportunities for both consumers

and producers, including EV charging and the e-mobility industry providing storage services to the grid system.

The development and deployment of clean technologies and managed applications of digital technologies, such as Artificial Intelligence (AI) and blockchain, have been argued as possible ways to help increase the efficiency of energy system, enable greater integration of renewable energy in grid systems and improve infrastructure stability and operational reliability. However, the knock-on effect and impact of ever-proliferating AI data centres and equally competing demands for power and water are resulting in increased energy demand that needs to be carefully managed.

Data centres accounted for around 1.5% per cent of the world's electricity consumption in 2024, or 415 terawatt-hours, and data centre electricity consumption has grown by around 12 per cent per year since 2017 – more than four times faster than the rate of total electricity consumption. Data centre electricity consumption is set to more than double to around 945 terawatt-hours by 2030. AI is the most important driver of this growth, alongside growing demand for other digital services.[29]

The e-mobility sector offers substantial economic opportunities through job creation, new business models and technological advancements. By integrating renewable energy sources, e-mobility can reduce dependence on fossil fuels and enhance energy security. Significant reductions in carbon emissions and pollution levels contribute to better public health and environmental sustainability.

Government policy support has been crucial in driving the development and deployment of clean technologies, leading to a period of rapid production and uptake of clean technologies such as solar PV and wind turbine technologies. Implementation of appropriate industrial and trade policy will be crucial, as countries seek to create employment and decent incomes for citizens, through the development of internationally competitive domestic supplies of goods and services essential for the energy transition.

5.3 Distributed renewable energy solutions

Decentralised renewable energy solutions present a viable alternative to electrifying rural areas and are often the least-cost way to increase access to electricity. Such solutions deploy standalone technologies such as household solar installations and mini grids that can generate and distribute electricity without reliance on the country's national grid. However, several risk factors constrain their deployment – for example inadequate policy frameworks, lack of financing, national grid expansion and limited affordability rural communities. With investors generally interested in larger projects, the small-sized investment requirements of off-grid energy projects often do not present an attractive risk/return profile and fail to meet the required economies of scale. Innovative solutions to create viable business models for decentralised renewable energy solutions have emerged, including aggregating demand and stimulating demand through the creation of new economic activities to support large-scale power production.

5.4 Carbon pricing/markets

A carbon price is a government policy that emulates the market in order to correct for a market failure. Because the market does not put a price on carbon emissions to compensate for the negative externality, governments must step in to establish a carbon price that applies to carbon-based fuels.

There are alternative ways of imposing a carbon price. A carbon tax is generally expressed as US$/tonne of the carbon emissions content of a quantity of fuel. The effect of a carbon tax on the fuel price is transparent and predictable, but its effect on reducing emissions is uncertain. An alternative carbon pricing method is an emissions trading scheme (ETS), also called cap-and-trade, which sets a limit on emissions for an economy or sector by granting or selling emissions credits to firms in the economy or a sector. The number of credits caps the total emissions level, and firms can buy or sell credits with other firms depending on their needs and alternatives, thereby setting a price on carbon. Both systems encourage consumers and firms to find alternative energy sources that produce or contain less carbon. To increase the incentive to reduce emissions, the carbon tax needs to increase over time and the emissions credits need to decrease over time.

To make this more politically palatable, carbon price revenues can be used in several different ways. A carbon price is often criticised as regressive, with

a higher burden on low-income populations, for whom energy usually represents a larger share of their budget. But there are ways this can be remedied. A portion of the carbon price revenues can provide income support for low-income populations, either by lowering personal income tax rates for low-income taxpayers or by providing direct cash transfers to these persons. Its revenues can also be used to offset a range of other taxes to make it revenue-neutral. A portion of the revenues can also be used to subsidise renewable energies and enhance a country's energy transition policies. All these ways of recycling carbon tax revenues have been adopted to varying degrees in various jurisdictions.

According to the World Bank's Carbon Pricing Dashboard,[30] 53 nations have carbon pricing initiatives. So far, six CWCs (see Table 5.1) have implemented domestic carbon pricing mechanisms. These mechanisms can include a carbon tax and/or an ETS. At least seven other CWCs (Brunei Darussalam, Gabon, India, Kenya, Malaysia, Nigeria, Pakistan) are considering or actively developing carbon pricing initiatives. Many NDCs include the use of Article 6 of the Paris Agreement to achieve their targets (Table 3.1).

Operationalising an international carbon market has progressed slowly, and carbon markets generally have suffered allegations of lacking integrity. However, at COP29, significant progress was made towards establishing a global carbon market, particularly under Article 6 of the Paris Agreement. This includes finalising rules for carbon trading between countries (Article 6.2) and the creation of a UN-backed global carbon market (Article 6.4). The focus is on creating high-integrity and transparent markets to help nations meet their climate goals and reduce the cost of implementing national climate plans.

Table 5.1 Carbon pricing in Commonwealth member countries.

CWC	Carbon-pricing mechanisms
Australia	Name: Australia Safeguard Mechanism
	Type: National ETS
	Description: The Safeguard Mechanism assigns mandatory emissions baselines for over 200 large facilities in Australia. Facility-level baselines are calculated using output-based benchmarking based on emissions intensity. Facilities emitting above their baseline must offset excess emissions by surrendering Safeguard Mechanism Credits or Australian Carbon Credit Units.
	Covered sectors: electricity and heat (in principle, industry, mining and extractives, transport, aviation) Covered emissions: 26% of jurisdiction emissions, 0.28% of global emissions Covered gases: CO_2, CH_4, N_2O, HFCs, SF_6, PFCs, other Covered fuels: coal, diesel, gasoline, kerosene, jet fuel, other oil products, LPG, natural gas, non-fuel emissions
	Year of implementation: 2023
	Price: A$33.75 (US$21.90)
Canada	Name: Canada federal Output-Based Pricing System
	Type: National ETS
	Description: Requires all Canadian provinces and territories to have a carbon pricing system in place that aligns with the federal standard. A federal carbon pricing backstop system comes into effect, in whole or in part in any province or territory that requested it or that does not have a price on carbon in place that meets the federal standard. The federal backstop system consists of two components: a regulatory charge on fuels and a baseline-and-credit ETS for emissions-intensive and trade-exposed industrial facilities (the OBPS).

(*Continued*)

Table 5.1 Carbon pricing in Commonwealth member countries.

CWC	Carbon-pricing mechanisms
	Covered sectors: electricity and heat, industry, mining and extractives Covered emissions: 1% of jurisdiction emissions, 0.01% of global emissions Covered gases: all Covered fuels: coal, diesel, gasoline, kerosene, other oil products, LPG, natural gas, non-fuel emissions
	Year of implementation: 2019
	Price: CA$80 (US$58.95)
New Zealand	Name: New Zealand Emissions Trading Scheme
	Type: National ETS
	Description: The New Zealand ETS covers roughly half of the country's emissions. Covered entities must surrender allowances for all their reported emissions. In 2024, the cap was 27.9 $MtCO_2e$.
	Covered sectors: in principle, electricity and heat, industry, mining and extractives, transport, aviation, buildings Covered emissions: 48% of jurisdiction emissions, 0.07% of global emissions Covered gases: all Covered fuels: coal, diesel, gasoline, kerosene, jet fuel, other oil products, LPG, natural gas, non-fuel emissions
	Year of implementation: 2008
	Current price: NZ$59 (US$35.11)
Singapore	Name: Singapore Carbon Tax
	Type: National carbon tax
	Description: The Singaporean Carbon Tax applies to all facilities with annual direct GHG emissions of 25 $KtCO_2e$ or more, with no exemptions. The carbon tax revenue supports initiatives to address climate change. In addition, companies have been able to surrender high-quality international carbon credits to offset up to 5% of their taxable emissions since 1 January 2024.
	Covered sectors: in principle, electricity and heat, industry, waste Covered emissions: 79% of jurisdiction emissions, 0.1% of global emissions Covered gases: all Covered fuels: coal, diesel, gasoline, kerosene, jet fuel, other oil products, LPG, natural gas, waste as fuel, non-fuel emissions
	Year of implementation: 2019
	Price: S$25 (US$18.48)
South Africa	Name: South Africa Carbon Tax
	Type: National carbon tax
	Description: The South Africa Carbon Tax places a price on CO_2 emissions from large businesses in the industry, power and transport sectors.
	Covered sectors: in principle, electricity and heat, industry, mining and extractives, aviation, buildings, agriculture Covered emissions: 82% of jurisdiction emissions, 0.81% of global emissions Covered gases: all Covered fuels: coal, diesel, gasoline, kerosene, jet fuel, other oil products, LPG, natural gas, waste as fuel, non-fuel emissions
	Year of implementation: 2019
	Price: R190 (US$10.09)

(*Continued*)

Table 5.1 Carbon pricing in Commonwealth member countries.

CWC	Carbon-pricing mechanisms
United Kingdom	Name: UK Emissions Trading Scheme
	Type: National ETS
	Description: The UK ETS began following the departure of the UK (excluding power operators located in Northern Ireland) from the EU ETS. Verified emissions from stationary UK ETS operators currently cover around a quarter of the UK's territorial GHG emissions. The first phase of the UK ETS runs until 2030. The system has both a cost containment mechanism and an auction reserve price, to support market stability. The UK government remains open to the possibility of linking the UK ETS to other systems, if such a link would be advantageous for both systems.
	Covered sectors: in principle, electricity and heat, industry, mining and extractives, aviation Covered emissions: 28% of jurisdiction emissions, 0.03% of global emissions Covered gases: CO_2, N_2O, PFCs Covered fuels: coal, diesel, gasoline, kerosene, jet fuel, other oil products, LPG, natural gas, non-fuel emissions
	Year of implementation: 2021
	Price: £35.86 (US$45.06)

Source: Authors' analysis of UNFCCC NDC submissions, World Bank Carbon Pricing Dashboard[31] and individual country websites.

6. Financing Energy Transition in SIDS

6.1 General context

Major investments are needed in new energy system infrastructure, and incremental investment is a welcome stimulus in most economic circumstances and most countries, especially where it supports green, resilient and inclusive economic growth, providing new opportunities for businesses and individuals.

Mobilising the funds to undertake these investments will be especially challenging for many LDCs, LLDCs, SIDS and small states, even though both the Paris Agreement and SDG7 include provisions for financial assistance mechanisms for these countries.

To achieve energy transition plans and facilitate greater pathways towards achieving climate change targets under the Paris Agreement, extraordinary public and private sector financing is required. According to IRENA, achieving these targets translates into a cumulative investment of US$31.5 trillion in renewable power, electrical networks, flexibility measures, energy efficiency and conservation, by 2030.[32]

An NCQG for climate finance of US$300 billion annually, increased from $100 billion, was agreed at COP29 in 2024. However, while a step in the right direction, this pledge falls far short of the $3.8 trillion per year required for the energy transition, and mobilisation of further private and public capital will be needed.

A reduction in official development assistance and climate finance from the USA since its 2024 election and the UK adds to a significant drop in financing available to developing countries, especially SIDS. Thus, again, further mobilisation of both private and public capital will be necessary.

OECD estimates suggest a further drop in foreign aid of 9 to 17 per cent for 2025, with potentially 25 per cent of all OECD donor aid estimated to be cut by 2027. The drop includes the dismantling of the United States Agency for International Development by the Trump administration, with a 92 per cent (US$54 billion) cut to its overseas programme funding, and by the UK cutting its foreign assistance budget by 40 per cent.[33]

All this comes when new NDCs are due to raise the ambition cycle further, but if the conditional financial assistance components of previous NDCs have not been met, this puts in doubt hopes to achieve the financial support required in NDCs 3.0.

The communiqué from SEforALL Global Forum Barbados 2025 noted

> 'that investment flows, public-private partnerships, and technology transfer initiatives from developed countries and private sector corporations could significantly enhance just transitions globally, with concessional financing tools playing an important role in facilitating the raising of ambition and accelerated accomplishment of Nationally Determined Contributions (NDCs),'

and pledged to

> 'continue to mobilize financial resources to support the formulation and implementation of country-level energy transition plans aligned with the Paris Agreement, while strengthening the link between National Investment Plans and Nationally Determined Contributions explicitly tying financing strategies with national targets, investment priorities and net-zero commitments.'[34]

6.2 SIDS context

The Commonwealth includes 33 small states, of which 25 are SIDS, representing about 64 per cent of global SIDS.[35/36] The transition to low-carbon and renewable energy systems in SIDS is a strategic imperative. The abundance of renewable energy resources – including solar, wind, tidal and marine energy sources; geothermal power; and hydropower – means SIDS can potentially benefit,[37] mitigate exposure to global energy price volatility,

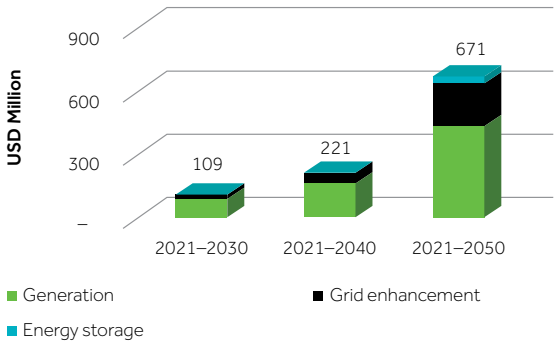
Each year, Maldives spends over 10 per cent of its GDP on importing diesel to meet its energy needs, and its import bill consequently shot up last year. In 2020, Maldives GDP contracted by 34 per cent as the COVID-19 pandemic shut down its tourism industry – the main driver of economic growth. Much of the country lies just 1 metre above sea level and, on current projections, it is likely to be fully submerged by rising sea levels by the end of this century.

conserve foreign exchange reserves and advance progress towards NDCs and net zero targets under the Paris Agreement.

As part of the SIDS package at the UN Secretary-General's Climate Action Summit in 2019, SIDS made a collective commitment to achieve 100 per cent renewable energy targets by 2030 and net zero emissions by 2050. However, this is conditional on receiving the necessary international assistance. Moreover, achieving these targets will require a significant capital outlay of investment in renewable energy production, and a power system upgrade, to include battery energy storage to handle increasing shares of renewables in the energy mix.

A study by the Commonwealth Secretariat under its CSET Agenda on what a SIDS would need to transform its power sector to meet these targets showed capital expenditure requirement for generation plant investments, associated grid enhancement investments and energy storage-related investments, as renewable energy will not

Figure 6.1 Investment requirement in the power sector.



Source: Government of Seychelles (2021)[39].

be able to provide stand-alone support on a 100 per cent basis in the order of US$109 million–$671 million by 2030 and 2050, respectively.[38]

The study developed a business case and strategies for clean energy investment in the power sector, quantifying the level of clean energy investment required to achieve a country's climate target for renewable energy share and associated impact in terms of net financial returns; CO_2 emission reductions; savings on national foreign currency exchange and water use; and job creation, and mapping specific policy and regulatory gaps and measures to address them according to international benchmarks.

6.3 Barriers and solutions

Despite their ambition, SIDS face several barriers in attracting investment and affordable financing for clean energy transitions from private and public funders. Some of the key barriers are reviewed below with possible remedial measures (Table 6.1).

Table 6.1 SIDS key barriers and possible solutions to attracting clean energy financing

Key barriers	Possible solutions
SIDS often operate with **limited fiscal space**, meaning they have restricted capacity to raise and allocate public funds without jeopardising debt sustainability or essential public services. This fiscal constraint is a major obstacle to financing the large-scale investments needed for clean energy infrastructure, which typically require significant upfront capital and long-term financial commitments	To overcome fiscal limitations, SIDS can explore: • blended finance models, where concessional public finance is used to de-risk private investment; • green and blue bonds, potentially supported by regional development banks or credit guarantees; • debt-for-climate swaps, where portions of external debt are forgiven in exchange for domestic investments in renewable energy or climate resilience; • climate finance access support, including project preparation facilities to help design bankable proposals for funds like the Green Climate Fund (GCF).

(*Continued*)

Key barriers	Possible solutions
The high upfront costs associated with developing renewable energy projects present a major financing challenge for SIDS, whose smaller economies, limited fiscal capacity and underdeveloped financial sectors make it difficult to mobilise the capital needed for such investments. While renewable energy can offer long-term savings and energy security, the initial capital-intensive nature of these projects creates a formidable barrier in the SIDS context.	Potential solutions to the high upfront costs include: a. Blended finance • Use of concessional finance (e.g., grants, low-interest loans) can leverage private investment and lower the overall risk profile of projects. • Institutions like the GCF, the Climate Investment Funds and regional development banks often support this approach. b. Aggregation and Regional co-operation • Bundling smaller projects across multiple islands or countries can help achieve scale and attract larger investors. • Regional energy procurement platforms or pooled financing mechanisms are emerging in the Caribbean and the Pacific. c. Public-private partnerships • Governments can co-invest with private developers, offering land, infrastructure or guarantees in exchange for private capital and expertise. d. Innovative financial instruments • Green bonds, climate resilience bonds and energy service company models can be tailored for SIDS contexts with donor and multilateral support. • Debt-for-climate swaps can free up fiscal space for upfront investments in clean energy.
Perceived investment risk is one of the most critical obstacles preventing SIDS from attracting the substantial financing needed for clean energy transitions. While many SIDS have abundant renewable energy resources, such as solar, wind and geothermal, investor hesitation – driven by concerns over political instability, natural disaster vulnerability and economic volatility – creates a climate of uncertainty that makes clean energy projects riskier and less attractive.	To improve their investment climate, SIDS can pursue: a. Strengthening regulatory and legal frameworks • establishing clear, transparent and enforceable energy policies with long-term commitments to renewable energy; • introducing standardised contracts and predictable tariff structures to reduce uncertainty. b. Improving institutional and utility capacity • enhancing the creditworthiness of utilities through reforms and financial restructuring; • building stronger project management and technical capacities within public institutions. c. Deploying risk mitigation instruments • utilising political risk insurance, guarantees and currency hedging tools offered by multilateral development banks and institutions like the Multilateral Investment Guarantee Agency or the GCF; • engaging in blended finance to crowd in private capital by combining public and concessional funding. d. Investing in climate-resilient infrastructure • designing renewable energy systems that are resilient to extreme weather, thereby reducing the risk of operational disruption; • diversifying the energy mix and using decentralised systems (e.g., microgrids) to improve resilience and reliability.

(*Continued*)

Key barriers	Possible solutions
The lack of economies of scale is a fundamental challenge for SIDS in their pursuit of clean energy development. Small geographic size, the dispersed nature of island territories and limited population size constrain the ability of SIDS to develop energy projects that are large enough to benefit from the cost efficiencies typically achieved through economies of scale. This structural limitation contributes to higher per-unit costs, reduced investment attractiveness and difficulties in deploying affordable and sustainable energy solutions.	Despite the limitations, SIDS are finding ways to mitigate the challenges posed by lack of scale. a. Regional co-operation and project aggregation • Pooling procurement across countries or bundling small projects into a single financing package (e.g., via the Caribbean Community (CARICOM), the Pacific Community or SEforALL) can attract more competitive bids and financing. • Joint negotiations for equipment, financing and technical assistance lower costs and improve terms. b. Decentralised and modular systems • Deploying distributed renewable energy systems (e.g., rooftop solar, solar mini-grids) allows SIDS to adapt to small scales without needing large, centralised projects. • Modular technologies allow gradual expansion as demand grows. c. Standardised project templates • Using standardised contracts, technical designs and permitting procedures reduces transaction costs and facilitates replication across islands or communities. d. Leveraging climate finance • International support through grants, concessional loans or guarantees can offset the high unit costs and make small projects viable despite limited scale.
Weak institutional capacity is a core challenge that undermines the ability of SIDS to implement and manage clean energy projects. This issue is closely tied to limited technical expertise, inadequate regulatory frameworks and fragmented governance systems, all of which reduce the effectiveness of planning, financing and operating renewable energy infrastructure. These constraints form a systemic barrier that slows the energy transition and discourages private and public investment	Strategies to strengthen institutional and technical capacity. a. Institutional strengthening programmes • Capacity-building initiatives led by international organisations (e.g., the Commonwealth Secretariat, the World Green Economy Organization (WGEO), IRENA, the United Nations Development Programme (UNDP), the Pacific Community) focus on policy development, project management and regulatory reform. • Establishing dedicated energy agencies or regulatory authorities can streamline governance and improve implementation. b. Technical training and workforce development • Investing in technical education, vocational training and knowledge exchange programmes builds a domestic workforce capable of designing and maintaining renewable energy systems. • Partnerships with regional institutions or foreign universities can fill skill gaps and encourage local innovation. c. Policy and regulatory reform • Developing comprehensive national energy policies, renewable energy roadmaps and transparent regulatory systems helps build investor confidence and guide sector development. • Introducing standardised project documentation, such as model power purchase agreements or procurement guidelines, increases efficiency and lowers transaction costs.

(*Continued*)

Key barriers	Possible solutions
	d. Use of digital tools and data systems • Investing in energy planning tools, geographic information system mapping and performance monitoring systems enhances decision-making and accountability. • Digitalisation can also reduce reliance on external consultants and help manage dispersed energy systems more effectively.
Many SIDS have historically **depended on imported fossil fuels**, particularly diesel and heavy fuel oil, to meet their energy needs. This dependency was initially driven by the ease of deploying small, diesel-based power systems on remote islands. However, over time, this reliance has created a series of economic, logistical and structural challenges that now hinder the shift to renewable energy. Moreover, existing energy systems and aging infrastructure built to support fossil fuel–based centralised generation may not be compatible with decentralised renewable systems.	To shift from fossil fuel dependency, many SIDS need to pursue integrated strategies, including: • renewable energy targets and policy reforms to guide the transition (e.g., 100% renewables by 2030 in some cases); • hybrid systems that combine renewables with diesel generation as a transitional measure; • battery storage and grid modernisation to enable high penetration of solar and wind; • investment in solar, wind, geothermal and ocean energy, which are abundant in many SIDS; • public-private partnerships to finance infrastructure upgrades; • regional collaboration (e.g., through CARICOM or the Pacific Islands Forum) to share resources, knowledge and access to international climate finance; • international climate finance and concessional loans to fund capital-intensive renewable infrastructure; • technical assistance and regional collaboration to build capacity and share solutions.
The **susceptibility of SIDS** to extreme weather events and rising sea levels poses a major barrier to attracting and sustaining clean energy investment. Despite the urgent need for a renewable energy transition – for both sustainability and resilience – these climate vulnerabilities that make the shift necessary also create significant project risks that deter investors and raise the cost of development.	To overcome these challenges, SIDS need to adopt climate-resilient strategies for energy development: a. Climate-resilient infrastructure standards • designing renewable energy systems to withstand local environmental conditions (e.g., hurricane-resistant solar racking, elevated battery banks). b. Decentralised and modular systems • distributed energy systems (e.g., microgrids and rooftop solar), which are less vulnerable to complete failure during disasters and allow for faster recovery. c. Accessing climate finance and risk instruments • leveraging climate adaptation funds, disaster risk financing and insurance mechanisms (like the Caribbean Catastrophe Risk Insurance Facility) to de-risk projects. d. Integrating energy planning with climate adaptation • aligning energy policy with national adaptation plans to ensure clean energy projects contribute to both mitigation and resilience goals.

(*Continued*)

Key barriers	Possible solutions
Navigating the complex bureaucratic processes associated with accessing international climate funds and grants poses a significant barrier for SIDS. While numerous global funding mechanisms exist – such as the GCF, the Global Environment Facility and the Adaptation Fund – SIDS often struggle to benefit from them owing to capacity limitations, procedural complexity and systemic inefficiencies. These challenges significantly slow or limit progress in financing clean energy and climate resilience projects.	To improve access to international climate finance, SIDS can adopt several approaches. a. Regional platforms and technical support • Collaborative platforms like the Caribbean Climate-Smart Accelerator, the Pacific Islands Forum and the Secretariat of the Pacific Regional Environment Programme provide shared technical expertise and support proposal development. b. Project preparation facilities • Leveraging international tools such as the GCF Project Preparation Facility or the NDC Partnership's Climate Action Enhancement Package can help SIDS develop high-quality, fundable proposals. c. Capacity-building and institutional strengthening • Investing in national climate finance units or designated authorities can streamline co-ordination, manage portfolios and build internal capacity over time. d. Simplification of donor processes • Advocating for simplified access procedures, small island-specific funding windows and programmatic funding tailored to SIDS' contexts is essential for improving equity and speed.
The **absence of a robust private sector in many SIDS** is a critical and often under-recognised barrier to advancing clean energy and climate resilience initiatives. While governments and international donors play important roles, the private sector is essential for driving innovation, mobilising capital, managing risk and scaling up renewable energy technologies. However, in many SIDS, the private sector is small, fragmented, risk-averse and under-capitalised, making it difficult to build the kinds of public-private partnerships that are critical for long-term climate and energy development.	Strategies to strengthen private sector engagement, include: a. Fostering local enterprises • support small and medium enterprises in entering the energy space through capacity-building, seed funding and technical assistance. b. Improving access to finance • establish green credit lines, guarantee schemes or blended finance models to de-risk investment and lower borrowing costs for businesses. c. Streamlining regulations and incentives • Create clear, predictable regulatory frameworks that promote private sector participation – such as feed-in tariffs, tax incentives, and open grid access rules. d. Promoting public-private partnership models • structure bankable public-private partnerships that leverage donor and public resources to attract private investment into clean energy projects. e. Encouraging regional investment platforms • regional collaboration (e.g., Caribbean Climate-Smart Accelerator, Pacific Green Entrepreneurs Network) to pool resources, share risks and connect SIDS-based firms to global markets.

7. Policy Recommendations

Ambitious policy actions are needed to meet the targets of SDG7 and the Paris Agreement. Generally, all countries of the world, including CWCs, have a long way to go to get on the pathways necessary to achieve these goals.

The resources to support and accelerate progress in the achievement of SDG7 and commitments under the NDCs exist within the Commonwealth. Greater utilisation and adoption of these resources is needed if CWCs are to achieve their targets.

In managing the energy transition and addressing climate change, while recognising that CWCs have varying circumstances and that the following actions may not be practicable in all environments and countries, the following broad recommendations are provided.

7.1 Government engagement and leadership

- Engender strong political will to drive ambitious and long-term thinking and strategy on energy and climate.
- Encourage ongoing government leadership, initiative and policy support because in the past this has led to the resources and technologies needed for the sustainable energy transition becoming increasingly economically viable and attractive.
- Encourage greater international co-operation, such as the Commonwealth Sustainable Energy Forum and the NDC Partnership, so CWCs can collaborate in various technical co-operation initiatives to source finance, transfer technology and build capacity to overcome barriers.
- Co-operate bilaterally and multilaterally to share experiences, identify best practices on country and regional progress in attaining the target indicators for SDG7 and its interlinkage with other SDGs, transfer technology and capacity, and improve partnerships (e.g. South–South cooperation, the Commonwealth's CCFAH).
- Take advantage of capacity-building initiatives led by international organisations (e.g., the Commonwealth Secretariat, WGEO, IRENA, UNDP, the Pacific Community) that focus on policy development, project management and regulatory reform.
- Establish strong, stable and just energy and climate policy, legal and regulatory frameworks, which set standards for energy efficiency – such as building codes and standards on appliances, fuel efficiency and GHG emissions reductions from fossil fuel production and consumption, including internal combustion engines – and are accompanied by appropriate monitoring, enforcement and accountability systems.
- Set strong renewable energy targets consistent with long-term national energy strategies to send a strong signal to investors and help attract additional capital.
- Develop NDC investment pipelines of costed actions (and estimates of net employment creation) so development partners, financial institutions and investors can more easily assess the opportunities and provide finance, technology transfer and capacity assistance.
- Ensure greater alignment in planning, managing, monitoring, reporting and verification of the SDGs and NDCs with the 1.5°C climate change target and sustainable development agendas in CWCs, so as to ensure integration of the NDCs and SDGs into a single national budgeting and planning process; to align national climate policy frameworks with budget processes; to integrate climate finance into existing public economic and financial management systems; and to ensure more efficient use of resources, avoid overlap and duplication, and achieve greater progress.
- Increase investment in the research and development of clean energy technologies and supporting infrastructure

7.2 Financing the energy transition

- Advocate for, and increase access to, large sources of public and private sector finance and investment, technology transfer and

capacity, and technical assistance for cleaner energy investment, while being cognisant of the state of debt distress affecting some CWCs.

- Draw on public funding, which can play a critical role in de-risking investments in clean energy projects, making them more attractive to private investors:
    - Governments can provide grants, subsidies, low-interest loans and guarantees to support early-stage technologies and infrastructure projects.
    - Additionally, public financing can be used to create favourable regulatory environments, establish strong policy frameworks and encourage private sector participation.
- Access private investment, including institutional investors, venture capitalists and corporate players, which can bring innovation, efficiency and new business models to the energy sector.
- Use private finance to support the development of green and blue bonds, debt-for-climate swaps and other innovative financial and risk mitigation instruments that tap into the growing market of environmentally conscious investors. International financial institutions such as the World Bank and the International Monetary Fund (IMF) can provide loans, guarantees and technical assistance.
- Give special consideration to SIDS-specific barriers and the crafting of suitable solutions to facilitate access to available, accessible and affordable finance for energy transition in SIDS.

7.3 Fiscal incentives

- Consider offering investment tax credits or accelerated write-offs as energy transition incentives.
- Consider government grants and subsidies to encourage the installation of solar-PV systems and insulation in homes and buildings, and the purchasing of EVs.
- Consider greater government investment in infrastructure to facilitate the energy transition, such as improved public transit, EV recharging stations and converting vehicle fleets to EVs.
- Use the revenues from carbon pricing and eliminating carbon fuel subsidies to provide funds for energy transition infrastructure investment.
- Phase out fossil fuel subsidies that do not address energy poverty or just transitions.

7.4 Energy security

- Reduce fossil fuel demand to increase energy security.
- Focus on greater energy efficiency and energy conservation.
- Design renewable energy systems to withstand local environmental conditions (e.g., hurricane-resistant solar racking, elevated battery banks).
- Design renewable energy systems that are resilient to extreme weather, thereby reducing the risk of operational disruption.
- Ensure the sustainability and equity of any critical energy transition mineral supply, balancing social and economic benefits and ensuring environmental and social safeguards are in place.
- Diversify energy sources by expanding renewable energy capacity, including wind, solar and hydrogen, to reduce reliance on the volatile fossil fuel market.
- Implement grid modernisation and storage by investing in smart grids and battery storage to improve reliability and accommodate variable renewable energy.
- Implement energy efficiency standards through strengthening efficiency measures for industries and households to lower overall demand and enhance security.
- Promote domestic energy production to increase local energy generation and hence reduce dependence on imports.
- Establish strategic reserves and supply chain resilience by developing emergency reserves and securing critical minerals for clean energy technologies, to ensure stability.

- Strengthen international energy trading including regional power trading to diversify energy sources and enhance energy security.
- Undertake market reforms and provide investment incentives to encourage private sector investment through subsidies and regulatory frameworks to accelerate the transition.

7.5 Distributed renewable energy solutions

- Increase electrification with renewables, to increase the share of renewables in the energy mix and reduce GHG emissions.
- Increase finance for off-grid renewables to accelerate energy access, noting that distributed energy systems (e.g., microgrids and rooftop solar) are less vulnerable to complete failure during disasters and allow for faster recovery.
- Prioritise solar and wind to expand electricity-generating capacity to facilitate progress towards achieving the targets of SDG7 and the Paris Agreement.
- Promote battery energy storage systems to support variable renewable energy sources like solar and wind, serve as a peak energy source and make off-grid electricity generation more reliable.
- Ensure the transfer of low emission technologies to other CWCs.
- Improve access to affordable energy and modern cooking solutions.
- Provide project preparation support to help design bankable proposals for funds like the GCF.
- Bundle smaller projects across multiple countries to help achieve scale and attract larger investors.
- Introduce standardised contracts and project documentation, such as model power purchase agreements or procurement guidelines, and predictable tariff structures to increase efficiency, lower transaction costs and reduce uncertainty.
- Negotiate jointly for equipment, financing and technical assistance to lower costs and improve terms.
- Use regional energy procurement platforms or pooled financing mechanisms

7.6 Carbon pricing/markets

- Consider using carbon pricing as part of climate change policy to provide investment certainty and manage long-horizon risks that may not be priced efficiently by the markets. Not only do few CWCs have carbon prices, but also many subsidise the production and/or consumption of carbon fuels.
- Establish a carbon price and eliminate subsidies on carbon fuels, to provide significant revenues for governments to initiate sustainable energy transition actions.
- Draw on the Commonwealth's Carbon Tax Model Law, which can be considered a useful resource for CWCs planning to introduce a carbon tax.[40]
- Consider integrity concerns surrounding carbon trading and its actual efficacy in reducing GHG emissions before engaging in Article 6, noting that greater climate finance is what is really needed to deliver the energy transition and Paris Agreement goals.

Appendix A: The CSET Agenda

The CSET Agenda is an important and valuable initiative of the Commonwealth to support energy transition progress. The CSET Agenda is a platform for collaborative action among member countries and development partners to accelerate the transition to low-carbon energy systems in a manner that contributes to the achievement of the Paris Agreement on climate change and SDG7 on access to affordable, reliable, sustainable and modern energy for all by 2030.

The CSET Agenda emerged as a key outcome of a pan-Commonwealth Sustainable Energy Forum held in 2019. The CSET Forum is now a biennial convention of senior officials from the ministries, departments and agencies with responsibility for the energy sector across the Commonwealth. The second Forum under the CSET Agenda was held in early May 2021 as a series of virtual roundtables, owing to COVID-19. The third biennial Forum was held in person in London in May 2023. The fourth biennial Forum was held in person at the Commonwealth Secretariat's headquarters in London on 20–23 May 2025 under the theme 'A Resilient and Inclusive Energy Transition to Foster Sustainable Development.'

This forum was anchored on the three key pillars of the CSET Agenda:

1. Inclusive Transitions
2. Technology and Innovation
3. Enabling Frameworks

At the 2025 CSET Forum, delegates from member countries, Commonwealth youth delegates, participants from partner organisations, private sector actors and leading experts in sustainable energy development will deliberate on approaches and strategies available to Commonwealth member countries, for translating ambitious energy transition goals to action on the ground. They will explore solutions to the challenges and barriers Commonwealth countries face in accelerating the energy transition and achieving SDG7. Several topical issues will be addressed, including global geopolitics of energy transition and their implications for member countries; energy resilience, security and access; an inclusive and just transition; clean technological and innovative solutions; and energy transition financing.

Appendix B: CHOGM 2024 Communiqué

The CHOGM 2024 Samoa Communiqué, 'One Resilient Common Future: Transforming Our Commonwealth' relating to energy (and climate change) included the following:

'11. ... the existential nature of the climate crisis and the goal of limiting global warming in accordance with the Paris Agreement and its target of 1.5°C and a commitment to achieving energy security.'

'24. ... Heads also recommitted to phasing out inefficient fossil fuel subsidies that do not address energy poverty or just transitions as soon as possible, taking into account the Paris Agreement and their different national circumstances, pathways and approaches, and to transitioning to global net-zero emissions by 2050.'

'25. ... Heads welcomed the outcomes of the first Global Stocktake under the Paris Agreement. They recalled the commitment by Parties to submit their next round of nationally determined contributions at least 9–12 months ahead of UNFCCC COP30 and encouraged member countries to submit ambitious, economy-wide emission reduction targets covering all greenhouse gases, sectors, and categories, aligned with limiting global warming to 1.5°C, as informed by the latest science and the outcomes of the first Global Stocktake, in light of different national circumstances. Heads recommitted to contributing to global efforts agreed under the first Global Stocktake, including tripling global renewable energy capacity and doubling the global average annual rate of energy efficiency improvements by 2030. They also emphasised the importance of transitioning away from fossil fuels in energy systems in a just, orderly, and equitable manner, accelerating action during this critical decade to achieve global net-zero emissions by 2050, in keeping with the science. Heads further recognised the need to accelerate industrial decarbonisation including in hard-to-abate sectors in line with national circumstances and acknowledged that there remains a significant gap between current global emissions trajectories and the temperature goal of the Paris Agreement.'

'27. ... the importance of the UNFCCC COP 29 for scaling up climate action, ambition and financing, and of the agreement on the New Collective Quantified Goal (NCQG) on climate finance, prior to 2025, from a floor of USD 100 billion per year taking into account the needs and priorities of developing countries in the context of meaningful mitigation actions and transparency on implementation.'
'Heads commended the Commonwealth Climate Finance Access Hub, which has helped members access over $363M in climate financing and committed to its sustainable growth and financing.'

'28. ... Heads reiterated the need to triple global renewable energy capacity by 2030 and are committed, where possible, to making efforts towards collaborating in the development, and voluntary and mutually agreed transfer of affordable low-emission technologies. Heads recommitted to a just and equitable transition to resilient, clean and renewable energy systems, including the fulfilment of 2030 Agenda commitments, and to renewables deployment that must be accompanied in this decade by a rapid increase of energy efficiency improvements, and recognised the need for deep, rapid and sustained reductions in greenhouse gas emissions in line with 1.5°Celsius pathways, making efforts in a nationally determined manner, taking into account the Paris Agreement and their different national circumstances, pathways and approaches. This includes improving access to affordable energy and modern cooking solutions, enhancing cross-border power trade, creating green jobs, and enabling an inclusive, technology-driven transition, to be achieved through collaboration with development finance institutions and private sector investments, and fostering regulatory and policy environments that facilitate financial flows that are inclusive of marginalised groups, women and girls, youth, and Indigenous Peoples and local communities. Heads reaffirmed their commitment to collaborate on these issues through the Commonwealth Sustainable Energy Transition Agenda. Heads also welcomed the leveraging of geospatial technologies and AI for climate adaptation, mitigation, resilience, and disaster management.'

'31. ... Heads stressed the importance for some of the concept of "climate justice" as envisaged in the Paris Agreement, when taking action to address climate change. Heads further stressed the importance of taking climate action in a manner that is equitable, inclusive and respects, promotes and considers their respective obligations on human rights. Heads acknowledged and noted the ongoing process at the International Court of Justice (ICJ) with respect to the United Nations General Assembly Resolution A/RES/77/276, adopted by consensus requesting the ICJ to render an advisory opinion on the obligations of states in respect of climate change.'

'32. ... Heads noted that one-third of small states and half of LDCs are resource dependent which contributes to economic vulnerability and potential debt distress. Noting the importance of critical minerals for the clean energy transition, Heads renewed their commitment to support members in the sustainable use and equitable development of natural resources while balancing social and economic benefits, ensuring environmental protections and safeguarding for workers, Indigenous Peoples, all women, and affected communities, ensuring the transition is just, equitable and inclusive, leaving no one behind.'

Appendix C: SDG7 Comparison Table

CWC	7.1.1 electricity access (%)			7.1.2 clean cooking (%)			7.2.1 renewable energy (% TFEC)			7.3.1 energy intensity (MJ/US$)			7.a.1 international financial flows (10^6 US$)			7.b.1 renewable energy (capacity/capita)		
	2016	2020	2022	2016	2020	2022	2015	2019	2021	2015	2019	2021	2015	2019	2022	2016	2020	2022
Antigua and Barbuda	100.0	100.0	100.0	100.0	100.0	100.0	0.4	0.7	0.9	4.7	4.3	4.8	7.6	0.0	0.0	38.8	138.8	137.2
Australia	100	100	100	100	100	100	9.42	10.3	12.32	4.53	4.36	4.1	N/A	N/A	N/A	799.3	1544	1865
The Bahamas	100.0	100.0	100.0	100.0	100.0	100.0	1.4	1.1	1.1	2.4	2.6	2.9	0.0	0.6	0.0	6.2	8.0	22.1
Bangladesh	75.9	96.2	99.4	19.4	24.9	28	33.1	26.1	25.04	2.17	1.95	1.93	8.54	150.39	112.12	2.524	3.473	4.68
Barbados	100.0	100.0	100.0	100.0	100.0	100.0	3.0	3.4	5.5	4.1	4.2	4.0	0.1	37.3	0.0	53.8	175.3	248.7
Belize	93.3	96.8	98.6	83.2	82.9	82.5	30.3	30.4	26.6	4.6	4.9	4.8	0.0	0.3	0.0	179.6	250.7	244.3
Botswana	64.2	71.8	75.9	62.5	64.8	66	26.1	26.3	27.36	3.55	2.92	2.68	0	0	4.78	1.394	2.324	2.383
Brunei Darussalam	100	100	100	100	100	100	0.01	0.01	0.03	4.34	6.35	6.33	N/A	N/A	N/A	2.85	3.283	10.91
Cameroon	59.8	64.3	71	23.6	27.4	29.4	78.1	78.9	79.24	4.61	4.27	4.23	104.49	8.14	7.19	31.27	31.2	29.61
Canada	100.0	100.0	100.0	100.0	100.0	100.0	22.3	22.4	23.8	6.8	6.9	6.6	0.0	0.0	0.0	2699.4	2674.7	2779.2
Cyprus	100	100	100	100	100	100	10.4	12	15.63	2.92	2.57	2.45	N/A	N/A	N/A	210.1	322.9	480.8
Dominica	97.8	100.0	100.0	89.1	87.6	86.7	8.7	7.6	8.8	3.1	2.9	3.0	0.0	9.8	0.0	107.2	99.9	98.9
Eswatini	63.4	80	82.3	46.7	48.6	48.9	68.9	64.5	65.4	4.45	4.53	3.91	1.14	14.53	0.06	148	143.3	149.1
Fiji	93.4	97.1	92	42.7	51.8	56.1	32.7	26.5	29.7	2.3	2.15	2.27	1.8	0.13	0.03	212.8	229.2	236
Gabon	88.1	91.1	93.5	87.2	90	90.9	81.9	90.2	91.27	7.22	6.35	6.47	14.33	0	0	158.9	144.8	139

(*Continued*)

CWC	7.1.1 electricity access (%)			7.1.2 clean cooking (%)			7.2.1 renewable energy (% TFEC)			7.3.1 energy intensity (MJ/US$)			7.a.1 international financial flows (10^6 US$)			7.b.1 renewable energy (capacity/capita)		
	2016	2020	2022	2016	2020	2022	2015	2019	2021	2015	2019	2021	2015	2019	2022	2016	2020	2022
The Gambia	56.4	62.2	65.4	1.9	1.8	1.7	49	47.4	48.58	3.48	3.24	3.11	0	27.64	27.46	1.463	1.512	1.483
Ghana	79.3	85.4	85.1	22.9	28.3	31	44	42.6	39.05	2.95	2.78	2.88	66.37	2.53	129.81	55.17	52.79	50.85
Grenada	91.8	93.4	94.2	89.5	86.7	84.8	10.5	10.4	10.2	2.4	2.7	2.8	1.9	0.2	0.0	18.9	29.8	29.8
Guyana	89.0	92.3	93.0	100.0	100.0	100.0	25.0	11.3	13.2	4.0	4.0	2.8	1.6	16.0	86.3	64.1	66.8	65.9
India	89.6	96.5	99.2	50.9	66.8	74.5	33.4	33.5	34.92	4.82	4.25	4.21	991.44	861.75	627.34	67.54	96.32	115
Jamaica	96.6	99.7	100.0	82.7	76.4	72.8	12.1	9.2	10.5	3.9	4.4	3.9	93.1	0.2	0.3	68.4	91.0	90.8
Kenya	53.1	71.5	76	13.8	23.6	30	69.3	68.1	67.67	5.34	4.93	4.76	310.62	218.77	124.01	34.16	44.14	49.04
Kiribati	92.6	91	94.4	7.2	11.8	14.8	47.5	42.2	42.23	6.65	7.38	6.85	0	0	0.06	24.33	25.41	24.48
Lesotho	35.1	47.5	50	37.8	40.2	41.5	46.1	41.6	33.63	8.14	8.37	10.4	0.04	14.78	31.38	34.81	33.11	32.45
Malawi	11	11.5	14	2.2	1.7	1.4	81	70.9	71.08	3.31	3.16	3.04	64.06	114	80	23.17	24.33	26.98
Malaysia	99.9	100	100	91.6	86.9	84.1	3.41	5.65	7.48	4.72	4.44	4.49	0	0.02	0.04	253.5	258.2	266.5
Maldives	100	100	100	98.8	99.6	99.7	1.47	1.27	1.38	2.34	2.75	2.87	6.8	4.4	0.69	19.58	55.13	71.52
Malta	100	100	100	100	100	100	5.98	7.43	8.62	1.5	1.28	1.21	N/A	N/A	N/A	210.1	373.6	423.2
Mauritius	99.7	99.5	100	98.7	98.9	99	11.5	8.94	8.61	2.32	2.06	2.15	10.38	34.65	0	145.3	208.2	209.4
Mozambique	26.2	30.6	33.2	4.2	5.2	6	80.1	77.5	76.86	12.5	11.6	12	5.86	205.54	121.14	80.07	72.69	70.15
Namibia	49.7	52.3	56.2	44.8	46.9	47.4	29.3	30.2	29.99	3.28	3.48	3.45	0	0.02	9	165	204.1	207.6
Nauru	99.7	100	100	100	100	100	0.1	0.59	1.65	8.45	6.93	6.94	8.6	11	0	62.08	201.5	249.7
New Zealand	100	100	100	100	100	100	29.3	28	28.85	4.62	4.05	3.77	N/A	N/A	N/A	1566	1475	1504
Nigeria	59.3	55.4	60.5	7.3	19.8	25.6	81.3	80.1	80.31	6.14	6.5	6.57	51.35	192.74	11.65	11.32	10.44	10.09
Pakistan	91.8	94.5	95	43.3	49.4	52.6	45.9	45.9	41.56	4.13	3.83	4.21	1,600.1	296.01	103.09	41.25	55.3	59.13

(*Continued*)

CWC	7.1.1 electricity access (%)			7.1.2 clean cooking (%)			7.2.1 renewable energy (% TFEC)			7.3.1 energy intensity (MJ/US$)			7.a.1 international financial flows (10^6 US$)			7.b.1 renewable energy (capacity/capita)		
	2016	2020	2022	2016	2020	2022	2015	2019	2021	2015	2019	2021	2015	2019	2022	2016	2020	2022
Papua New Guinea	13.5	20.5	19	9.1	9.6	10	55.3	53.2	54.5	6.11	6.12	6.54	8.4	0.1	11.03	36.81	33.79	32.86
Rwanda	29.4	45.2	50.6	1.2	4.6	8.3	86.3	81.8	79.37	4.57	3.72	3.59	0	1.73	29.03	9.307	11.02	10.9
St Kitts and Nevis	100	100	100	100	100	100	1.63	1.31	1.64	2.49	2.4	2.63	0	0	0	86.47	109.4	109.4
Saint Lucia	99.8	100	100	95.1	93.6	92.5	11.5	10	9.67	3.01	2.82	3.35	0.01	0	0.63	5.731	22.38	22.3
St Vincent and the Grenadines	99.7	100	100	93.8	91.8	90	4.3	5.38	4.98	2.62	2.26	2.46	0	0	0	78.54	88.66	90.57
Samoa	98.9	100	98.3	32.7	37.3	39.6	37.1	34.2	35.95	4.81	4.85	4.9	0	0	0.03	81.02	135.5	131
Seychelles	100	100	100	100	100	100	1.36	1.21	1.72	2.9	2.58	2.85	0.04	0	0	79.06	122.3	227.8
Sierra Leone	20.3	26.3	29.4	0.6	0.8	1	74	75.4	71.14	6.25	5.26	5.49	0	0.19	31.33	12.08	12.03	12.1
Singapore	100	100	100	100	100	100	0.65	0.89	1.1	2.74	2.61	2.51	N/A	N/A	N/A	53.75	89.85	141.6
Solomon Islands	58.2	72.9	76	8.4	8.8	8.7	48.6	48.4	49.13	5.6	4.93	5.07	6.8	46.4	0.02	5.178	5.084	7.213
South Africa	83.9	90	86.5	84.9	88.1	89.4	7.58	8.72	9.7	6.93	6.72	6.57	851	180.18	1,210.1	82.53	162.7	175.1
Sri Lanka	97.5	100	100	27.3	32.6	35.5	51.3	46.1	48.8	1.69	1.61	1.67	0.49	0.18	18.46	91.62	113	130.9
Tanzania	32.8	39.9	45.8	3.9	7.2	9.2	82.8	80.4	78.31	7.77	6.69	6.38	40.21	6.42	89.21	12.29	11.06	10.43
Togo	46.8	54.1	57.2	7.6	10.4	11.9	81	78.6	75.13	9.17	8.3	8.6	5.32	1.26	3.92	8.706	8.742	13.99
Tonga	97	99.9	100	75.5	85.5	89.5	1.94	1.77	1.77	3.07	3.86	4.65	14.1	2.5	3.12	42.29	78.07	141.5
Trinidad and Tobago	100	100	100	100	100	100	0.37	0.43	0.46	18.3	18.8	18.7	0	0	0.36	2.729	2.641	2.684

(*Continued*)

CWC	7.1.1 electricity access (%)			7.1.2 clean cooking (%)			7.2.1 renewable energy (% TFEC)			7.3.1 energy intensity (MJ/US$)			7.a.1 international financial flows (10^6 US$)			7.b.1 renewable energy (capacity/capita)		
	2016	2020	2022	2016	2020	2022	2015	2019	2021	2015	2019	2021	2015	2019	2022	2016	2020	2022
Tuvalu	97.3	99.4	100	69.1	73.8	75.2	2.98	6.32	5.04	3.01	2.83	2.79	8.6	6.2	0.09	204.8	208.9	204.4
Uganda	26.7	42.1	47.1	0.8	0.7	0.6	91.7	90.5	90.95	9.71	9.52	10.2	1,666.9	74.89	566.03	20.23	26.92	25.87
United Kingdom	100	100	100	100	100	100	7.73	11.4	12.15	2.59	2.22	2.2	N/A	N/A	N/A	539.7	708.3	785.4
Vanuatu	57.8	67.3	71.6	8.7	7.1	6.4	35.6	31.6	24.64	4.1	4.03	5.17	7.3	0.2	36.61	32.85	38.85	37.13
Zambia	35.4	44.6	47.8	13.4	10.4	9	84	86.1	83.04	7.83	7.5	7.82	85.98	87.96	23.82	145	134.2	165
Average (total 7.a.1)	81.19	87.06	89.36	43.86	54.25	59.25	41.07	40.92	41.51	4.91	4.53	4.56	6,050.96	26,48.64	3,500.68	117.49	146.63	163.48

Source: UN Statistics Division SDG Indicators Database.

Appendix D: NDC Targets and Selected Actions

Table D1 Updated NDCs, African Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Botswana	Reduce emissions by 15% by 2030, against 2010 base year	Projected GHG emissions under mitigation scenario represent avoided GHG emissions of approximately 15% by the year 2030	–	The updated NDCs have identified 26 quantifiable mitigation actions from three key sectors: energy (stationary and mobile), IPPU and AFOLU.	US$18.4 billion
Cameroon	32% reduction compared with 2010 by 2035 (conditional)	12% unconditional GHG emissions reduction target and additional 23% conditional reduction of BAU by 2030	–	Increase non-hydro renewable electricity to 25%; landfills of all major cities with at least 70% methane capture; establish regional composting units with capacity 50–100 tons/day; protect 3,299,000 ha of forest; establish 600 MW hydroelectric power plants; install 400 MW solar power plants; install 50,000 solar street lights in localities with limited or no grid access; substitute 5% of fossil fuel vehicles by EVs by 2030; install 20 million compact fluorescent bulbs and 20 million LED bulbs; reduce industrial energy consumption by 15%; substitute 10% of wood by biogas in large farms, rural farms and households; distribute 500,000 improved cookstoves.	US$ 8 billion

(*Continued*)

Table D1 Updated NDCs, African Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Eswatini	0.97 $MtCO_2e$ reduction from 2010 level, conditional on appropriate financial, technical assistance and capacity-building support	GHG emissions reduction of 5% by 2030 compared with baseline scenario; 14% reduction with external financing (1.04 $MtCO_2e$) reduction in 2030 compared with baseline scenario	–	Increasing renewable energy share of electricity mix to 50% by 2030 relative to 2010 levels through adoption of solar, wind, biomass, hydro and solar water heater technologies; 100% access to clean modern energy for cooking at household level by 2030; 50% uptake of energy efficient biomass stoves for cooking by 2030; introducing 10% ethanol blend in petrol by 2030; increasing composting, capturing 30% of organic waste generated by 2030; introducing landfill gas recovery in solid waste disposal sites; freeze HFC production and use in 2024; reducing land degradation through restoration including planting 10 million trees and improving livelihoods through better livestock management.	Estimated total cost of implementing NDC US$950 million–US$1.5 billion
Gabon		Unconditional carbon neutral commitment until and beyond 2050. Strive to maintain its net absorption of carbon at a minimum of 100 million tonnes of CO_2e per year beyond 2050	–	Conditional on access to a carbon market for its net sequestration carbon credits in the form of ITMOs at a competitive carbon price and/or appropriate international support through non-market mechanisms. Transitioning from hydrocarbon sources of energy to hydro and solar energy, by improving energy efficiency in households, services, industries and transport, by replacing fuel oil plants with natural gas, implementing a 'zero flaring' policy in oil industry and improving interconnectivity of electricity grid.	Not provided

(*Continued*)

Table D1 Updated NDCs, African Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
The Gambia	Targets did not include all emission sources	Unconditional GHG emissions reduction from 2030 BAU of 2.6%, conditional reduction of 47.2%; aspires to reach net zero emissions by 2050	–	NDC1 identified 10 mitigation options; NDC2 revises and strengthens those and 13 additional mitigation measures; replacing diesel mini-grids with solar and wind mini-grids and solar-powered streetlights; developing energy efficiency measures; incentivising energy-saving LEDs; expanding off-grid solar home systems; capturing biogas from waste and landfills; implementing climate-smart agriculture and improving livestock productivity; expanding deployment of fuel-efficient biomass stoves.	US$316 million
Ghana	Unconditionally reduce GHG emissions by 15% (11.1 $MtCO_2e$) relative to 2030 BAU; additional 30% reduction conditional on external support	Emissions reductions of 64 $MtCO_2e$ from 2030 BAU; unconditional measures reduce 24.6 $MtCO_2e$ emissions; conditional measures reduce 39.4 $MtCO_2e$ emissions	–	Actions include 34 mitigation policy measures; expansion of intercity and intracity transportation modes; promotion of energy efficiency in homes, industry and commerce; low-carbon electricity generation; expanded adoption of cleaner cooking solutions; promote sustainable charcoal production; promote clean rural households' lighting.	US$9.3 billion–US$15.5 billion for mitigation and adaptation to 2030; US$3.9 billion for unconditional, US$5.4 billion for conditional
Kenya	30% reduction from 2030 BAU, fully conditional on international support	32% reduction of 2030 BAU emissions (143 $MtCO_2e$)	–	Increase renewables in electricity generation mix of the national grid; enhance energy and resource efficiency; progress towards tree cover of at least 10% of land area of Kenya; enhance REDD+ activities; clean, efficient and sustainable energy technologies to reduce overreliance on fossil and non-sustainable biomass fuels; low-carbon and efficient transportation systems; climate-smart agriculture with emphasis on efficient livestock management systems; sustainable waste management systems.	US$62 billion

(*Continued*)

Table D1 Updated NDCs, African Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Lesotho	Reduce GHG emissions by 10% of 2030 BAU; by 35% with international support	Unconditional GHG emissions reduction from BAU of 6% (419 $ktCO_2e$) by 2030. Additional conditional reduction of 18% (1,270 $ktCO_2e$) from 2021 baseline by 2030=total emission reduction of 24% or 1,689 $ktCO_2e$	–	Efficient wood stoves; biogas plants; deployment of solar LED lamps; replacing wood stoves with LPG stoves as it is considered to be a cleaner energy source although it is not renewable; solar cookers; supporting and promoting deployment of solar home systems; solar water heaters; extension of the electricity grid to rural areas to increase electrification of end-uses in households to reduce GHG emissions produced by excessive reliance on kerosene, charcoal and traditional biomass.	US$1 billion for mitigation
Malawi		Emissions reduction of 51% (17.7 $MtCO_2e$) from 2040 BAU; 6% unconditional, additional 45% conditional on international support and funding	–	Displacement of GHG emissions from coal-fired, diesel and heavy fuel oil generation; installation of small solar systems for domestic heating and lanterns; grid-connected large-scale solar PV and wind power; efficient charcoal production; installing high-efficiency super-ultracritical coal plant; deployment of carbon capture to subcritical coal power stations; modal shifts – private to passenger transport and road to rail; increasing ethanol blending with gasoline and biodiesel with diesel as transportation fuels; improved charcoal cookstoves; use of efficient barns for tobacco curing; conservation tillage within commercial crop farming; increased use of rice husk ash in blended cement; landfill gas utilisation; installation of waste-to-energy incinerators; wastewater treatment and reuse; improved rice management practices and livestock husbandry; afforestation.	US$11.55 billion from 2020 to 2030, 31.3% from domestic and 68.7% from international sources

(*Continued*)

Table D1 Updated NDCs, African Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Mauritius	Reduce emissions by 30% relative to 2030 BAU	Reduce emissions by 40% relative to 2030 BAU	–	60% of energy needs from green sources by 2030; phasing out use of coal by 2030; increasing energy efficiency by 10% based on 2019; extension of light rail network to modernise and upscale public transport system by 2022; phasing out of subsidies and incentives for diesel buses and increased subsidy for EVs; diverting 70% of waste from landfill by 2030 through composting plants, sorting units, biogas plants and waste-to-energy plants; employing anaerobic digestion; banning of non-inverter air conditioners in 2024; 10% emissions reduction of HFCs by 2030 compared with BAU; setting up of biogas pilot units; adopting smart agricultural practices including natural farming systems and agroforestry; promotion of efficient irrigation techniques; massive planting of trees.	US$2 billion
Mozambique		Reduce emissions by about 40 $MtCO_2e$ between 2020 and 2025 from BAU	–	Installing 50,000 PV or wind turbine lighting systems and 5,000 solar PV systems for pumping water for domestic, community or public use; replacing 2.5 million incandescent lamps with efficient lamps; importing 150 CNG buses, converting 1,000 cars to CNG; applying and expanding agricultural production techniques to conserve and protect soil, such as direct planting; installing solid waste recycling industries.	US$7.586 billion

(*Continued*)

Table D1 Updated NDCs, African Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Namibia	Reduce 89% of BAU emissions by 2029	Reduce 91% of BAU emissions by 2030, 14% under limited domestic and international support and 77% with substantial international support	–	Renewable energy feed-in tariff will allow 170 MW of PV; 45 MW solar rooftop systems; 40 MW wind power generation; 40 MW biomass energy plant; 600 MW hydropower generation; 40,000 solar water heaters; passenger vehicle fuel efficiency standards in 80% of total vehicles; 10,000 EVs; replace 23% clinker in cement production; switch air conditioning and refrigeration to propane; reduce deforestation rate by 75% and reforest 20,000 ha per year; transform 70% municipal solid waste to electricity and compost; methane net zero emissions by 2050 (achieve 75% of target by 2030).	US$3.61 billion by 2030; US$0.36 billion for unconditional and US$3.25 for conditional measures
Nigeria	Unconditionally reduce emissions by 20% below 2030 BAU levels, 45% reduction conditional on international support	Unconditionally reduce emissions by 20% below 2030 BAU levels, 47% reduction conditional on international support	–	Eliminate kerosene lighting by 2030; 10,000 additional buses by 2030 and expansion of bus rapid transit in Lagos; 50% reduction in burning of crop residues by 2030; 25% of trucks and buses using CNG by 2030; eliminate diesel and gasoline electricity generation by 2030; eliminate gas flaring by 2030 and 60% reduction in fugitive methane emissions by 2031; 25+ million households convert to LPG for cooking and 7+ million improved cookstoves; reduced fuelwood harvest and extensive forest restoration; air conditioning minimum standards and labelling.	US$177 billion

(*Continued*)

Table D1 Updated NDCs, African Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Rwanda	Quantitative targets established for different sectors, but no aggregate target provided	Unconditional reduction in GHG emissions of 16% relative to 2030 BAU (1.9 million tonnes of CO_2e); additional conditional reduction in GHG emissions of 22% relative to 2030 BAU (2.7 million tCO_2e) based on international support and funding	–	Agriculture accounts for 49% of mitigation potential; soil conservation measures – terracing, conservation tillage, multi-cropping and crop rotation – account for half of sector's mitigation potential, and remainder from reduced enteric fermentation emissions from livestock, including new species to replace local herds and improved husbandry, use of windrow composting; within energy use, large- and small-scale new generation hydropower represents largest share of GHG potential, followed by use of solar energy for water heating, pumping for agricultural irrigation and off-grid electricity; EVs and vehicle fuel economy standards also significant; within waste, measures include landfill gas recovery and direct waste-to-energy plants.	Estimated cost of US$2.10 billion for conditional mitigation measures and additional US$3.67 billion for unconditional mitigation measures
Seychelles	Reduce GHG emissions by 21.4% (122.5 $ktCO_2e$) in 2025 and 29.0% (188 $ktCO_2e$) in 2030 relative to baseline emissions	Reduce GHG emissions by 26.4% (293.8 $ktCO_2e$) compared to 2030 BAU; commitment to achieve a net zero emissions economy by 2050	–	Electricity target 15% renewables in 2030; implement early action to reduce HFCs and introduce climate-friendly alternatives; introduce minimum energy performance standards and labels to increase energy efficiency of appliances; adopt building codes for low-carbon, low-tech, passive, bioclimatic, self-reliant construction techniques; electrify vehicles fleet with priority for public transportation, collective, high-passenger load, duty and commercial vehicles; methane collection from landfills.	US$331.5 million for mitigation

(*Continued*)

Table D1 Updated NDCs, African Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Sierra Leone	Maintain emission levels relatively low (close to world average of 7.58 $MtCO_2e$) by 2035 or neutral by 2050	Reduce GHG emissions by 10% by 2030 compared with BAU, with intermediary target of 5% by 2025; reduce GHG emissions by 25% in 2050 with inclusion of additional sectors and gases; committed to enhance its mitigation efforts with financial support	–	Unconditional measures include planting 5 million trees over next five years, promoting transition to off-grid renewable energy systems, setting quality standards for energy efficiency, increasing access to environmentally sound waste management infrastructure, testing vehicle emissions, improving road infrastructure; conditional measures include feed-in tariff for renewable energy technologies, phasing out fossil fuel subsidies, converting to no-tillage agricultural practices, reducing methane emissions from wastewater and providing a nutrient-rich digestate that can be used as a fertiliser, incineration facilities to reduce methane emissions from landfill sites, investment in reuse and recycling technology, e-mobility and mass transport initiatives, new REDD+ and blue carbon initiatives.	US$2.76 billion

(*Continued*)

Table D1 Updated NDCs, African Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
South Africa	2030 annual emissions will range between 398 and 614 $MtCO_2e$	2025 annual GHG emissions will range from 398 to 510 $MtCO_2e$ and 2030 annual GHG emissions will range from 350 to 420 $MtCO_2e$ (19-32%)	–	Key to increased level of mitigation is electricity sector and shift from coal; invest in energy efficiency, a range of green transport measures including EVs and hybrid vehicles, mode shifting and the enhanced provision of safe and affordable public transport; long and deep transformations (e.g., producing green steel) require international co-operation and support.	US$80 billion
Tanzania	GHG emissions reduction between 10% and 20% by 2030 relative to BAU	GHG emissions reduction between 30% and 35% by 2030 relative to BAU	–	Promoting clean technologies for power generation using renewable sources such as geothermal, wind, hydro, solar and bioenergy; promoting climate-smart rural electrification, including development of micro and mini-grid renewable generation; reducing consumption of charcoal by affordable alternative energy sources; promoting low-emission transport systems through deployment of mass rapid transport system and investments in rail, maritime and road infrastructures; promoting forest landscape restoration; promoting waste management practices that reuse, reduce and recycle.	Total budget of US$19.2 billion for mitigation and adaptation

(*Continued*)

Table D1 Updated NDCs, African Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Togo	An 11.14% unconditional reduction of GHG emissions from baseline by 2030; a 31.14% conditional reduction of GHG emissions relative to baseline scenario; a renewable energies target of 4% of energy mix; INDC also includes a section on adaptation	Reduce GHG emissions unconditionally by 20.51% by 2030, or 6,236.02 $GgCO_2e$; achieve a further 30.06% reduction in GHG emissions compared with the reference scenario by 2030 – i.e., 9,305.59 $GgCO_2e$	–	Increase share of renewable energy in energy production to 50% by 2025; increase share of EVs in acquisition of new vehicles to 3% by 2025; increase electrification rate to 100% by 2030; deploy more than 300 mini-grids by 2030, or approximately 9 MW of installed capacity; electrify 555,000 households with solar kits by 2030 – i.e., up to 85 MW of installed solar generation capacity in 2030; expand and densify grid to approximately 670,000 connections by 2030, or approximately 108 MW of additional capacity; install additional capacity of 88.2 MW by 2023 for hydropower; install 99 MW of grid-connected solar capacity by 2025; install capacity of 4 MW of solar mini-grid in 2023; install capacity of 11.71 MW of solar kits in 2023; increase utilisation rate of improved fireplaces by 40% in 2020 to 80% in 2030; increase share of charcoal produced with improved techniques from less than 1% in 2020 to 45% in 2030; increase share of population using biogas for cooking to 4% in 2025 and 12% in 2030 in urban areas, to 6% in 2025 and to 15% in 2030 in rural areas; increase share of population using briquettes to 15% in urban areas and 10% in rural areas by 2030; increase share of population using LPG to 35% in urban areas and 8% in rural areas by 2030.	US$2.7 billion (US$0.698 unconditional, US$2.002 conditional)

(*Continued*)

Table D1 Updated NDCs, African Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Uganda	Estimated potential of policies and measures could result in 22% reduction of GHG emissions in 2030 compared with BAU	Economy-wide emissions reduction of 24.7% in 2030 below BAU conditions, of which Uganda's unconditional efforts will result in a reduction of 5.9% in 2030 below BAU conditions	–	25% of energy met by biomass from sustainable sources in 2030, rising to 40% by 2040. 50% of schools/institutions to be using improved charcoal cookstoves in 2030. 15% LPG stoves and 35% electric stoves in 2030. Increased electricity access: 100% in 2030. Electricity to reach 50% of cooking fuel share by 2025. 75% reduction from BAU in energy use for lighting in 2030. Global Fuel Economy Initiative 50 by 50 targets, improvement of fuel economy with 10-year time lag: 2030: 20% 2040: –35% 2060: –50%.	US$28.1 billion
Zambia	Reducing GHG emissions by 25% (20,000 $GgCO_2e$) under BAU 2030 against 2010; or by 47% (38,000 $GgCO_2e$) with substantial international support	Reducing GHG emissions by 25% (20,000 $GgCO_2e$) under BAU 2030 against 2015; or by 47% (38,000 $GgCO_2e$) with substantial international support	Provisional NDC 3.0.: Reduce GHG emissions by 25% at BAU level of international support prevailing in 2015 and towards 47% (with substantial international support) by 2030	Mitigation actions focused on three programmes: sustainable forest management; sustainable agriculture; and renewable energy and energy efficiency.	US$15 billion–US$35 billion

Source: Previous edition of CSET Report, updated by author.

Table D2 Updated NDCs, Asian Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Bangladesh	Unconditional 5% (12 $MtCO_2e$) reduction from BAU by 2030 in power, transport and industry sectors plus 10% (24 $MtCO_2e$) conditional on international support	Unconditional 6.7% (27.56 $MtCO_2e$) reduction from BAU by 2030 in power, transport and industry sectors plus 15.12% (61.9 $MtCO_2e$) conditional on international support	–	Unconditional mitigation actions by 2030; renewable energy projects of 911.8 MW; new 3,208 MW combined cycle gas power plant; installation of prepaid meters; reduce road congestion (5% improvement in fuel efficiency) by widening roads, add non-motorised transit and bicycle lanes, congestion charging; modal shift from road to rail, modern rolling stock and signalling systems, electrification of rail system, dual track construction; enhanced use of solar energy; ban fixed-chimney kilns, encourage advanced technology and non-fired brick use; enhanced use of energy efficient appliances; waste-to-energy plant.	US$32.26 billion for unconditional mitigation measures; US$143.73 billion for conditional mitigation measures
Brunei Darussalam	Reduce GHG emissions by 20% relative to 2030 BAU	Not provided	–		Not provided
India	Reduce emissions intensity of GDP by 33–35%, over 2005 levels by 2030	Reduce emissions intensity of GDP by 45% by 2030, from 2005 level	–	50% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030; achieve a target of 60 GW of wind power installed capacity by 2022; seek to enhance solar capacity to 100 GW by 2022; a scheme for development of 25 solar parks, ultra mega solar power projects, canal top solar projects and 100,000 solar pumps for farmers; promoting solarisation of all the 55,000 petrol pumps across the country; increase biomass installed capacity to 10 GW by 2022; plans to implement 'accelerated-driven systems in advanced nuclear fuel cycles' and 'renewable energy'.	Not provided

(*Continued*)

Table D2 Updated NDCs, Asian Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Malaysia	35% reduction in carbon intensity by 2030 compared with 2005 level	Unconditionally reduce economy-wide carbon intensity by 45% in 2030 compared with 2005 level	–	Will apply to following sectors: energy, industrial processes and product use, waste, agriculture LULUCF, including forest land, cropland, grassland, wetland, settlement.	Not provided
Maldives	Unconditional 10% reduction of 2030 BAU emissions; up to 24% reduction conditional on availability of financial resources, technology transfer and capacity-building	Conditional 26% reduction of 2030 BAU emissions; will strive to achieve net zero by 2030, with adequate international support and assistance	A reduction of 1.52 $MtCO_2e$ in 2035 from BAU scenario of 6.03 $MtCO_2e$, conditional on receiving adequate support and financial resources, technology, capacity-building and other means of implementation	Meet 33% of electricity needs from renewable energy sources; expand standard labelling programme and gradually implement mandatory phase; enhance and upgrade electricity grids to reduce energy loss in power generation facilities nationwide; introduce national vehicle emissions standards; expand public transport networks throughout entire country; introduce incentives to promote EVs and hybrid vehicles.	Not provided
Pakistan	Reduce up to 20% of 2030 projected GHG emissions, subject to availability of international grants	50% reduction of projected emissions by 2030; 15% from own resources and 35% subject to provision of international grant finance	–	Shift to 60% renewable energy and 30% EVs of new vehicle sales by 2030; moratorium on new coal power plants and ban on imported coal; afforestation with 10 Billion Tree Tsunami Programme; ban burning of rice stubble, solid waste and other hazardous materials; encourage animal waste to methane for fuel for rural household and urban transportation projects; national guidelines for green bonds to encourage innovative financing mechanisms; explore options for domestic carbon pricing instruments to manage large-scale emitting installations and transport sector.	US$101 billion

(*Continued*)

Table D2 Updated NDCs, Asian Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Singapore	Reduce emissions intensity by 36% from 2005 levels by 2030, and stabilise emissions with aim of peaking around 2030	Reduce emissions intensity by 36% from 2005 levels by 2030, and stabilise emissions with peak emissions of 65 $MtCO_2e$ around 2030	Reduce emissions to between 45 and 50 $MtCO_2e$ in 2035, contingent on technological maturity and effective international co-operation and continued international commitment by parties to Paris Agreement and climate pledges	Switching energy system from fuel oil to natural gas; maximising solar deployment; improving energy efficiency; importing low-carbon electricity to Singapore, with much of the supply from newly commissioned renewable energy projects; phasing out unabated coal in electricity mix by 2040; exploring CCS and its potential to decarbonise hard-to-abate sectors, and continue to invest in research and development to improve technoeconomic viability of hydrogen and CCUS technologies through initiatives like the Low-Carbon Energy Research programme; studying and piloting other emerging low-carbon solutions, such as ammonia and advanced geothermal systems for power generation.	Not provided
Sri Lanka	Reduce GHG emissions against 2030 BAU by 20% in energy sector (4% unconditional and 16% conditional) and by 10% in other sectors (transport, industry, forests and waste) by 3% unconditional and 7% conditional; achieve carbon neutrality by 2060	Unconditionally reduce GHG emissions by 4% of BAU from 2021 to 2030; conditionally reduce GHG emissions by 10.5% of BAU from 2021 to 2030; achieve 70% renewable energy in electricity generation by 2030; achieve carbon neutrality by 2050	–	Investment in renewable energy by supportive policy instruments such as feed-in tariffs, net metering and net accounting; energy efficiency incentivised by high energy rates and time-of-use billing and supported through financial incentives to replace incandescent lighting with LEDs; substantially increase waste-to-energy investments and waste composting measures; switch from road to rail transport with inland container depots, expand and electrify rail lines, promote transporting petroleum products by pipeline.	Not provided

Source: Previous edition of CSET Report, updated by author.

Table D3 Updated NDCs, Pacific Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Australia	Reduce 2005 GHG emissions by 26–28% by 2030	Reduce 2005 GHG emissions by 43% by 2030; net zero emissions target by 2050	–	Technology Investment Roadmap priority is to reduce costs of range of technologies to bring them to commercial parity, driving emissions reductions and supporting economic growth; seven low-emissions economic stretch goals – clean hydrogen production under $2/kg; ultra low-cost solar electricity generation at $15/MWh; electricity from storage for under $100/MWh; low-emissions steel production under $700/ton; low-emissions aluminium production under $2,200/ton; CCS under $20/ton of CO_2; soil carbon measurement under $3/ha/year.	Invest at least US$14 billion in low-emissions technologies by 2030; over US$57 billion of total public and private investment
Fiji	Reduce BAU energy sector emissions by 30% by 2030; 10% unconditionally and 20% conditionally	Reaffirm 2030 target; commitment to achieve net zero GHG emissions by 2050	–	Introduced single-use plastic ban; 100% renewable energy power generation for grid by 2030; adopt sustainable agricultural practices in crop management, livestock and sugar cane farming; upgrade, repair and relocate existing critical public infrastructure; plant 30 million trees by 2035.	US$2.97 billion between 2017 and 2030
Kiribati	Reduce emissions by 13.7% by 2025 and 12.8% by 2030 compared with BAU; with international assistance, reduce a further 48.8% by 2025 and 49% by 2030 compared with BAU	Target 1: Reduce unconditionally 9.5% (11.3 $ktCO_2e$) of BAU GHG emissions and reduce conditionally 16.7% (20 $ktCO_2e$) of BAU GHG emissions by 2025; unconditional carbon sequestration of 0.16 $ktCO_2$ in 2025; target 2: Unconditionally reduce 8.0% (11.0 $ktCO_2e$) of BAU GHG emissions and conditionally reduce 23.8% (32.9 $ktCO_2e$) of BAU GHG emissions by 2030; unconditional carbon sequestration of 0.15 $ktCO_2$ in 2030	–	Kiribati's Revised NDC targets include mitigation actions in the energy, waste and IPPU (only substitutes for ozone-depleting substances) sectors.	Not provided

(*Continued*)

Table D3 Updated NDCs, Pacific Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Nauru	No target provided	No target provided. Nauru intends to pursue a range of sustainable development actions within policy areas of productive land, healthy and productive people, water security, food security, energy security, healthy environment and good governance, all of which bring significant climate change adaptation and mitigation co-benefits	–	2030 targets: Renewable energy comprises 50% of Nauru's power generation; achieve 30% energy savings; install 6 MW solar photovoltaic farm with 5 MW/2.5 MW battery capacity; conduct technical assessment of non-solar sources of renewable energy such as ocean thermal energy conversion and waste-to-energy; conduct technical assessment of low-carbon transport options; promote energy efficient air conditioners and other appliances through an expansion of the Low Carbon Fund; conduct technical assessments to identify effective energy efficiency options; undertake energy audits of government facilities, high-energy usage properties, residential sector to establish baseline data; rewire government buildings to maximise energy savings and encourage changes in usage behaviour among government staff; adopt an appliance labelling and energy standard programme to encourage the import and uptake of low energy usage products; induce behavioural change to encourage energy efficient behaviour via education campaigns for the general public and within government.	US$5 million unconditional and US$50 million conditional (from first NDC)

(*Continued*)

Table D3 Updated NDCs, Pacific Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
New Zealand	Reduce GHG emissions by 30% below 2005 levels by 2030	Reduce GHG emissions by 50% below gross 2005 levels by 2030; a domestic emissions reduction target for GHGs other than biogenic methane to reach net zero by 2050	Reduce net GHG emissions to 51–55% below gross 2005 levels by 2035 – based on New Zealand's Greenhouse Gas Inventory (1990–2022), this target provisionally equates to reducing emissions to between 38.98 and 42.44 $MtCO_2e$ by 2035	Emissions trading system, improved energy efficiency, fostering renewable energy, reducing reliance on fossil fuels, accelerating emissions reductions from industry.	Not provided
Papua New Guinea	100% renewable electricity by 2030, contingent on funding being available	Energy sector is largest emitting sector; owing to data uncertainties, does not include GHG energy sector targets; increasing grid capacity of renewable energy from 30% in 2015 to 78% in 2030, conditional on international support	–	Reducing annual emissions from deforestation and forest degradation by 10,000 $GgCO_2e$ by 2030 compared with 2015; 25% reduction in area of annual deforestation and degradation and increases in areas of forest planted; energy efficiencies via improved performance of air conditioning and refrigeration systems and industrial energy efficiency audits and retrofits.	Not provided

(*Continued*)

Table D3 Updated NDCs, Pacific Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Samoa	Focused solely on electricity, with 100% renewable energy target for electricity generation by 2025	Reduce GHG emissions by 26% in 2030 compared with 2007 levels (91 $GgCO_2e$)	–	100% renewable electricity generation by 2025; shore-side electricity supply for maritime vessels; electrification of vehicles, shared bicycles, e-bikes and e-scooters; implement a programme to support energy-efficient appliances; implement landfill gas capturing technologies; improved manure management and fertiliser use; reforestation, forest restoration and promoting agroforestry.	NDC targets will require large proportions of fiscal budget and public service capacity, and external financial support, capacity-building and technology investment
Solomon Islands	Reduce emissions by 12% below 2015 level by 2025 and 30% below 2015 level by 2030 compared with BAU	Reduce emissions by 14% below 2015 by 2025 and 33% below 2015 by 2030; with international assistance, a further 27% reduction by 2025 and 45% by 2030 compared with BAU; with appropriate international assistance, can achieve net zero emissions by 2050	–	Increase renewable electricity to 100% by 2050 through use of solar PV and hydropower generation; improve energy efficiency and conservation by regulating imports of electrical appliances by 2035; reduce emissions from deforestation and degradation (REDD+); implement sustainable logging policy.	Not provided
Tonga	No aggregate target specified	13% reductions in GHG emissions by 2030 compared with 2006	–	Generate 50% of electricity from renewable sources by 2020, 70% by 2030, 100% by 2035; reduce line losses to 9% by 2020; mandatory vehicle standards and/or incentives through tax, fees and import tariffs; adopt minimum energy performance standards; plant 1 million trees by 2023.	Not provided

(*Continued*)

Table D3 Updated NDCs, Pacific Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Tuvalu	Reduce GHG emissions from electricity generation by 100% by 2025; reduce GHG emissions from entire energy sector by 60% below 2010 levels by 2025	Reduce GHG emissions from electricity (power) sector by 100% – i.e., almost zero emissions by 2030; increase energy efficiency in Funafuti by 30%; reduce total GHG emissions from entire energy sector to 60% below 2010 levels by 2030; zero carbon development pathway by 2050	–	E-bike initiative; electrification of Tuvalu's light vehicle fleet; outboard motor transition from 2-stroke petrol outboards to 4-stroke; shore-side electrical supply for at berth vessels; retrofitting of major hotels and commercial and governmental buildings; cold storage energy efficiency.	US$0.019 billion by 2030[41]
Vanuatu	30% reduction in GHG emissions by 2030 relative to BAU, conditional	Activity-based targets, sectoral and policy targets across multiple sectors, including emissions reduction in some sub-sectors; GHG emission reduction targets are all conditional on international support (financial and technical support) being made available	–	By 2030, replace fossil fuels with coconut oil, transitioning close to 100% renewable energy in electricity generation, 10% improvement in transport (land and marine) energy efficiency, e-buses for public transportation (10% of total); EVs (10% of government fleet); 1,000 e-bikes/e-rickshaws; 20% biodiesel blending in diesel; mileage and emission standards for vehicles; 14% improvement in biomass cook stoves and drying efficiency; install 1,000 biogas plants for commercial and residential use; waste-to-energy plants, 13% electricity sector end-use efficiency, 65% renewable electricity use by rural tourism bungalows, 5% increase in energy efficiency in commercial and residential sector, 10 energy efficient buildings, 100% electricity access by households in off-grid areas, 100% electricity access by public institutions (on- and off-grid).	Conditional mitigation targets are estimated to cost US$0.315 billion

Source: Previous edition of CSET Report, updated by author.

Table D4 Updated NDCs, Caribbean and Americas Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Antigua and Barbuda	Policies and actions (states consistency with 1.5°C)	Mitigation targets – 86% renewable electricity generation by 2030; 100% new vehicle sales EVs by 2030; potential emissions reductions in waste sector by 2025 and AFOLU sector by 2030	–	NDC Implementation Plan, to be finalised in 2021, will be a roadmap for country to achieve its NDC targets.	Cost of US$1 billion–US$1.7 billion to 2030, subject to international support for technology transfer, capacity-building and financial resources
The Bahamas	Reduce GHG emissions by 30% compared with 2030 BAU	By 2030, 30% GHG emissions reduction compared with BAU; at least 30% of renewables in country's energy mix; electric and hybrid vehicles represent 35% and 15% of total vehicle sales, respectively	–	Various measures related to energy efficiency building codes, energy audits, lighting retrofits, public awareness campaigns, energy labelling programs, renewable energy and energy efficiency low-interest loans, air conditioning standards, solar hot water, solar PV, wind power, distributed generation, waste-to-energy, vehicle fuel efficiency standards, EV incentives.	Indicative costs of in excess of US$4 billion for mitigation and adaptation actions
Barbados	44% reduction compared with BAU by 2030 or absolute reduction of 23% compared with 2008; interim 37% reduction compared with BAU by 2025 or absolute reduction of 21% compared with 2008	Fossil fuel-free economy and GHG emissions as close to zero as possible by 2030; 20% reduction relative to BAU emissions in 2025 without international support; 35% reduction in 2025 with international support; 35% reduction relative to BAU emissions in 2030 without international support; 70% reduction in 2030 with international support	–	Updated conditional mitigation contribution for 2030 – 95% renewable energy in electricity mix; 100% EV or alternative-fuelled vehicles in passenger fleet; 20% increase in energy efficiency across all sectors compared with BAU; 29% decrease in industrial, commercial and residential fuel consumption as compared with BAU; 20% decrease in waste emissions.	Not provided

(*Continued*)

Table D4 Updated NDCs, Caribbean and Americas Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Belize	Policies and actions (states consistency with 1.5°C)	Reduce GHG emissions by 5,647 $ktCO_2e$ by 2030	–	Reduce GHG LUC emissions; enhance carbon sink capacity of mangrove and seagrass ecosystems through increased protection and restoration; reduce power sector emissions through system efficiency and increased renewable energy sources; reduce conventional transportation fuel use and increase efficiency per passenger/km and tonne/km; reduce livestock methane emissions and emissions due to agricultural LUC; improve waste management processes.	Estimated to cost US$1.39 billion to 2030, with estimated funding gap of US$1.24 billion
Canada	30% reduction compared with 2005 by 2030 (mentions 1.5°C and 2°C)	Reduce emissions by 40–55% below 2005 levels by 2030 and to net zero by 2050	Reduce emissions by 45–50% below 2005 levels by 2035, building on 2030 target of 40-45% below 2005 levels	Create C$2.6 billion initiative with grants up to C$5,000, and invest C$4.4 billion in deep home retrofits through interest-free loans up to C$40,000; all new light-duty vehicle and passenger trucks sold to be zero emissions by 2035; annually increase benchmark carbon price by $15/t starting in 2023, rising to $170/t in 2030; invest over $3 billion over 10 years to plant 2 billion trees.	Achieving net zero by 2050 will require investments between $125 billion and $140 billion in Canada each year
Dominica	Reduce GHG emissions below 2014 levels (164.5 Ggs est.) 17.9% by 2020; 39.2% by 2025; and 44.7% by 2030	Reduce GHG emissions below 2014 levels and progressive reduction of total GHGs by 39% by 2025, 45% by 2030	–	100% renewable energy usage by 2030, mainly from geothermal sources, also from synthetic fuels, from 2027; 200Gg+ geothermal energy export to French Territories: Martinique, Guadeloupe; energy-efficient buildings, energy-efficient lighting.	Priority mitigation climate actions US$0.096 billion

(*Continued*)

Table D4 Updated NDCs, Caribbean and Americas Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Grenada	Reduction by 30% of 2010 emissions by 2025, with indicative reduction of 40% of 2010 by 2030	40% reduction in GHG emissions below 2010 level by 2030, focusing on energy, agriculture, water and industry		Geothermal is main strategy for reducing emissions, still in exploratory phase; transportation sector strategies include introduction of gasoline taxes, biofuel blends and fuel efficiency standards; NDC Partnership Plan made to support NDC targets.	Cost of NDC mitigation measures through 2030 is between US$984.9 and US$1,054.5 million
Guyana	No aggregate target provided; increase renewable energy share by 100% by 2025	Not provided	–		Not provided
Jamaica	Unconditional reduction by 7.8% (1.1 $MtCO_2e$) from BAU 2030, additional 10% conditional	25.4% unconditional reduction (1.9 $MtCO_2e$) and 28.5% conditional reduction (1.3 $MtCO_2e$) against 2030 BAU	–	Use water-efficient agricultural methods, improve food storage systems and diversify food production techniques; introduced single-use plastic ban in 2019; pilot projects for biodiesel from cooking oil; production of biogas using animal waste and increased use of biodigesters.	Not provided
Saint Lucia	GHG reduction of 2% by 2030 against 2010 base year	GHG reduction of 7% by 2030 against 2010 base year	GHG reduction of 14.7% against 2010 base year	Enhanced deployment of wind and solar energy with battery storage, upgrades to grid infrastructure, continued efforts to improve energy efficiency; enhanced uptake of EVs.	US$509 million for mitigation

(*Continued*)

Table D4 Updated NDCs, Caribbean and Americas Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
St Kitts and Nevis	Emissions reduction of 22% by 2025 and 35% by 2030 against BAU	Emissions reduction of 61% by 2030 against 2010 base year, conditional on adequate resources including climate finance and capacity-building support	–	Switch to 100% renewable electricity (solar, wind and geothermal); increase share of EVs in vehicle fleet to at least 2%; improve transmission and distribution lines to reduce losses; introduce solar water heaters.	US$637 million
St Vincent and Grenadines	Reduce GHG emissions by 22% compared with BAU by 2025	Not provided	–		Not provided
Trinidad and Tobago	Reduce emissions from power generation, transportation and industrial sectors by 15% by 2030 against BAU	Not provided	–		Not provided

Source: Previous edition of CSET Report, updated by author.

Table D5 Updated NDCs, European Commonwealth countries.

Country	First NDC targets	Second/updated NDC targets	NDC 3.0	Selected actions and measures	Mitigation costs
Cyprus and Malta	Reduce 1990 emissions by minimum 40% by 2030 (combined as part of EU's NDC)	Net domestic reduction of at least 55% in GHG emissions by 2030 compared with 1990 levels	–	EU ETS to reduce emissions allowance per sector; set binding GHG targets not covered in EU ETS to member states; binding commitment for each member state to ensure land use emissions are compensated by equivalent removal of CO_2 from atmosphere; reduce vehicle CO_2 emissions ~35%/km by 2030; more stringent binding targets regarding waste and recycling; reduction in fossil fuel power plants. In October 2023, the EU submitted an updated NDC to the UNFCCC to provide more clarity, transparency and understanding on policies put in place to achieve its target of reducing emissions by at least 55% compared with 1990 levels by 2030, as submitted in December 2020.	Partial costs mentioned
United Kingdom	Reduce 1990 emissions by minimum 40% by 2030 (combined as part of EU's NDC)	Reduce GHG emissions by at least 68% by 2030, compared with 1990 levels	Reduce emissions to 81% below 1990 levels by 2035	Intention to make Britain a Clean Energy Superpower as one of five national missions – delivering clean power by 2030 and accelerating to net zero across the economy; Clean Power 2030 Action Plan setting out a pathway to a clean power system by 2030; Great British Energy publicly owned energy company with mission to drive clean energy deployment; Warm Homes Plan to improve energy efficiency and support the conversion to low-carbon heating; delivering greener transport, the UK's Zero Emission Vehicle mandate, phasing out new cars relying solely on internal combustion engines by 2030.	Not provided

Source: Previous edition of CSET Report, updated by author.

Endnotes

1 Except for Belize (Table 4.3).

2 Botswana, Gabon, Lesotho, Togo, Uganda, Zambia, India, Maldives, Singapore, Kiribati, Nauru, New Zealand, Tuvalu, Vanuatu, The Bahamas, Canada, Dominica, Saint Lucia, Cyprus, Malta and the UK.

3 IEA World Energy Outlook 2024.

4 Charter of the Commonwealth.

5 UN Population Division Data Portal.

6 IMF World Economic Outlook Database, October 2024.

7 https://thecommonwealth.org/our-work/small-states

8 www.un.org/ohrlls/content/list-ldcs

9 https://unctad.org/topic/landlocked-developing-countries/list-of-LLDCs

10 www.un.org/ohrlls/content/list-sids

11 CHOGM 2024: Samoa Communiqué, Leaders' Statement and Declarations on 'One Resilient Common Future'.

12 Paris Agreement 2015.

13 Theme Report on Enabling SDGs through Inclusive, Just Energy Transitions Towards the Achievement of SDG 7 and Net Zero Emissions: Executive Summary.

14 Article 4, Commitments, under the Paris Agreement.

15 IEA Global Energy Review 2025.

16 Ibid.

17 https://thecommonwealth.org/climatefinance-access-hub

18 https://thecommonwealth.org/our-work/commonwealth-climate-finance-access-hub

19 https://unfccc.int/NDCREG

20 See INFORMAL document template (unfccc. int).

21 IRENA World Energy Transitions Outlook 2024: 1.5°C Pathway.

22 Ibid.

23 Carbon Pulse NDC Portal.

24 https://unstats.un.org/sdgs/indicators/database

25 https://data.worldbank.org/indicator/EG.CFT.ACCS.ZS

26 IEA, The Clean Energy Transitions Newsletter, 25 April 2025.

27 'Malaysia – Renewable Energy Is Key', Hydro News.

28 https://thecommonwealth.org/press-release/new-toolkit-boost-clean-energy-investments-small-island-nations

29 IEA Energy and AI: World Energy Outlook Special Report, 2025.

30 https://carbonpricingdashboard.worldbank.org

31 Ibid.

32 IRENA World Energy Transitions Outlook 2024: 1.5°C Pathway.

33 AFP, 'OECD Raises Concerns As Countries Slash Foreign Aid', 16 April 2025.

34 https://www.seforall.org/system/files/2025-03/SEforALL-Global-Communique_0.pdf

35 www.un.org/ohrlls/content/list-sids

36 Bharadwaj, R. et al., 'Sinking Islands, Rising Debts: Urgent Need for New Financial Compact for Small Island Developing States', IIED, 2023.

37 A case example is Maldives: Raiser, M. et al. 'Small Island Developing States on a Path to Renewable Energy and Resilience: A Story from Maldives', World Bank Blog, 17 April 2023.

38 Government of Seychelles: "Business case and vision for clean energy", October 2021.

39 Government of Seychelles: "Business case and vision for clean energy", October 2021.

40 https://thecommonwealth.org/publications/carbon-tax-model-law

41 Tuvalu's NDC Implementation Roadmap and Investment Plan.

Commonwealth Secretariat
Marlborough House, Pall Mall
London SW1Y 5HX
United Kingdom

thecommonwealth.org

The Commonwealth

D20201