

Capacity Building on Design of Bankable Power Purchase Agreements in Caribbean Small Island Developing States (SIDS)

- **Roundtable on Concrete Lessons from Project Development**

Beachcombers Hotel, St. Vincent and the Grenadines

Monday 28 November 2022

Time	Item
09:00-09:30	Opening Session
09:30-09:40	Objective of Workshop and scene setting
09:40-10:40	PPA negotiation in Geothermal Development in the Eastern Caribbean
10:40-11:15	Group Photo and Morning Tea
11:15-12:30	Presentation on NDC targets and Renewable Energy country updates
12:30 -14: 30	Lunch

Time	Item
13:30 – 14:30	Presentation on NDC targets and Renewable Energy country updates
14:30 -15:30	Regional Institutions and Development partner presentations
15:30 -16:00	Wrap up and Coffee Break
18:30-20:00	Dinner at Bungalow Restaurant (hosted by IRENA)

Objectives of the Workshop and Overview of the SIDS Lighthouses Initiative

Capacity Building Workshop:
Design of Bankable Power Purchase Agreements in
Caribbean Small Island Developing States (SIDS)

Beachcombers Hotel, St. Vincent and the Grenadines

Monday 28 November 2022

Objective: To strengthen the capacity of key stakeholders (Government Ministries and Departments, regulators, utilities) to design and negotiate bankable renewable energy PPAs that facilitate private sector investment in renewable energy, and secure good value for power consumers.

Expected Learning Outcomes:

- ✓ Enhanced understanding by local authorities- constraints and needs of developers, investors and creditors
- ✓ Enhanced decision-making capabilities of regulators and power utilities regarding PPA design and contractual elements
- ✓ Enhanced negotiating capabilities
- ✓ Exchange of experiences in PPA design and negotiations



Roundtable on Concrete Lessons from Project Development: Monday 28 November 2022

To gain a mutual understanding of the needs of developers, investors, lenders and governments, thus representing an additional step to facilitate investments in the region.

Training on Design and Negotiation of Bankable PPAs for Renewable Energy Projects: 29 November to 2 December 2022

- Conceptual and Practical components
- To gain an understanding on how the decision on key clauses for allocating risks in PPAs affect energy prices and risks borne by each party
- To simulate the impact of PPA design over key financial indicators for investors and lenders with aid of the project cash flow model

39 SIDS and 33 Partners

- Addresses all elements of energy transition for the holistic sustainable development of SIDS
- 11 priority areas
- Target of **total installed RE capacity of 10 GW for all SIDS by 2030** forms the basis of the AOSIS-IRENA energy compact.
- MOUs with AOSIS, Caribbean Centre for Renewable Energy and Energy Efficiency, Caribbean Community Climate Change Centre, SIDS DOCK, CARICOM Development Fund

NDC support,
Technical Assistance, Capacity Building

Implementation
Innovative Solutions

All renewable energy sources

Bankable projects
Access to finance
Private Sector Engagement

Institutional and Human Capacity

Transport
Other end-use sectors

Energy Efficiency

Nexus
Socio-economic development
Gender

Climate Resilience
Disaster recovery

Statistics

Synergies with other SIDS initiatives

Target of a total of RE installed capacity of 10 GW for all SIDS by 2030

Caribbean

1. Antigua & Barbuda
2. Aruba
3. Bahamas
4. Barbados
5. Belize
6. British Virgin Islands
7. Cuba
8. Dominica
9. Dominican Republic
10. Grenada
11. Guyana
12. Montserrat
13. St. Kitts and Nevis
14. St. Lucia
15. St. Vincent and the Grenadines
16. Trinidad and Tobago
17. Turks and Caicos

Pacific

1. Cook Islands
2. Federated States of Micronesia
3. Fiji
4. Kiribati
5. Republic of the Marshall Islands
6. Nauru
7. New Caledonia
8. Niue
9. Palau
10. Papua New Guinea
11. Samoa
12. Solomon Islands
13. Tonga
14. Tuvalu
15. Vanuatu

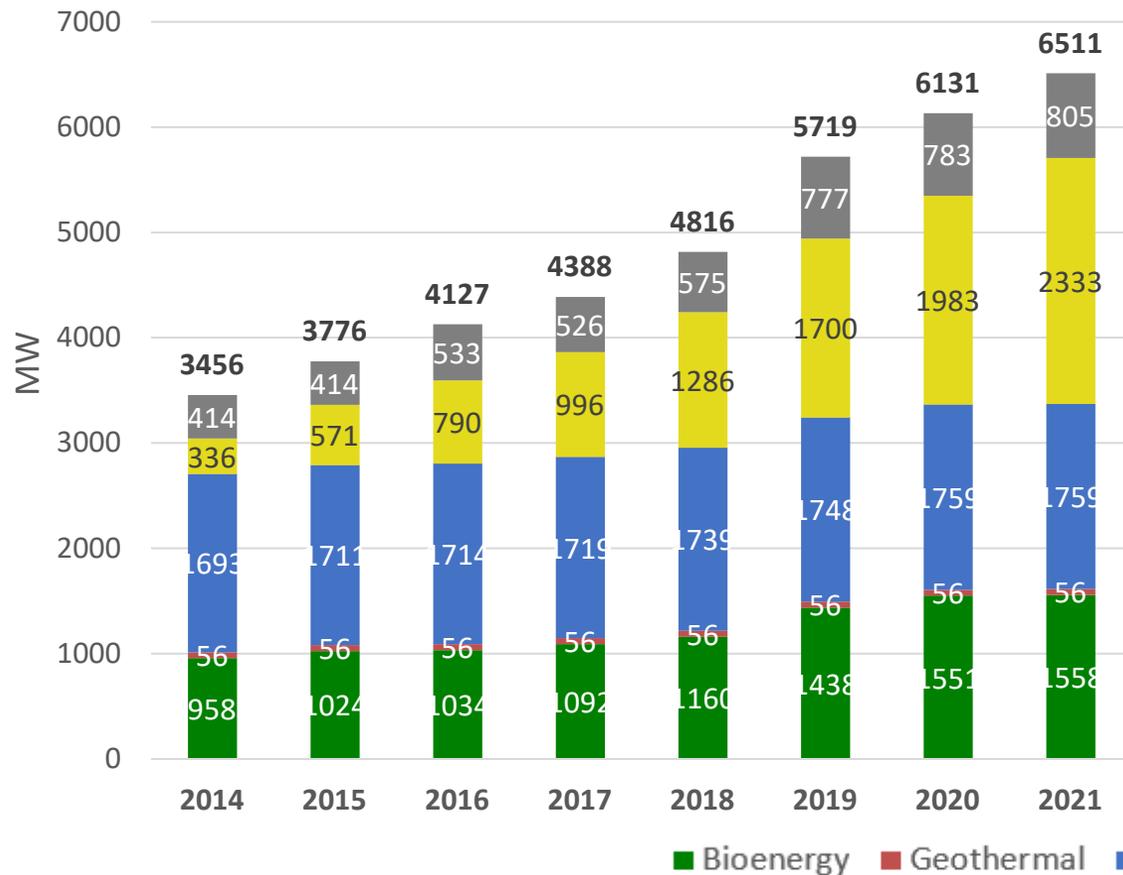
Atlantic, Indian Ocean and South China Sea

1. Cabo Verde
2. Comoros
3. Maldives
4. Mauritius
5. Sao Tome and Principe
6. Seychelles
7. Singapore

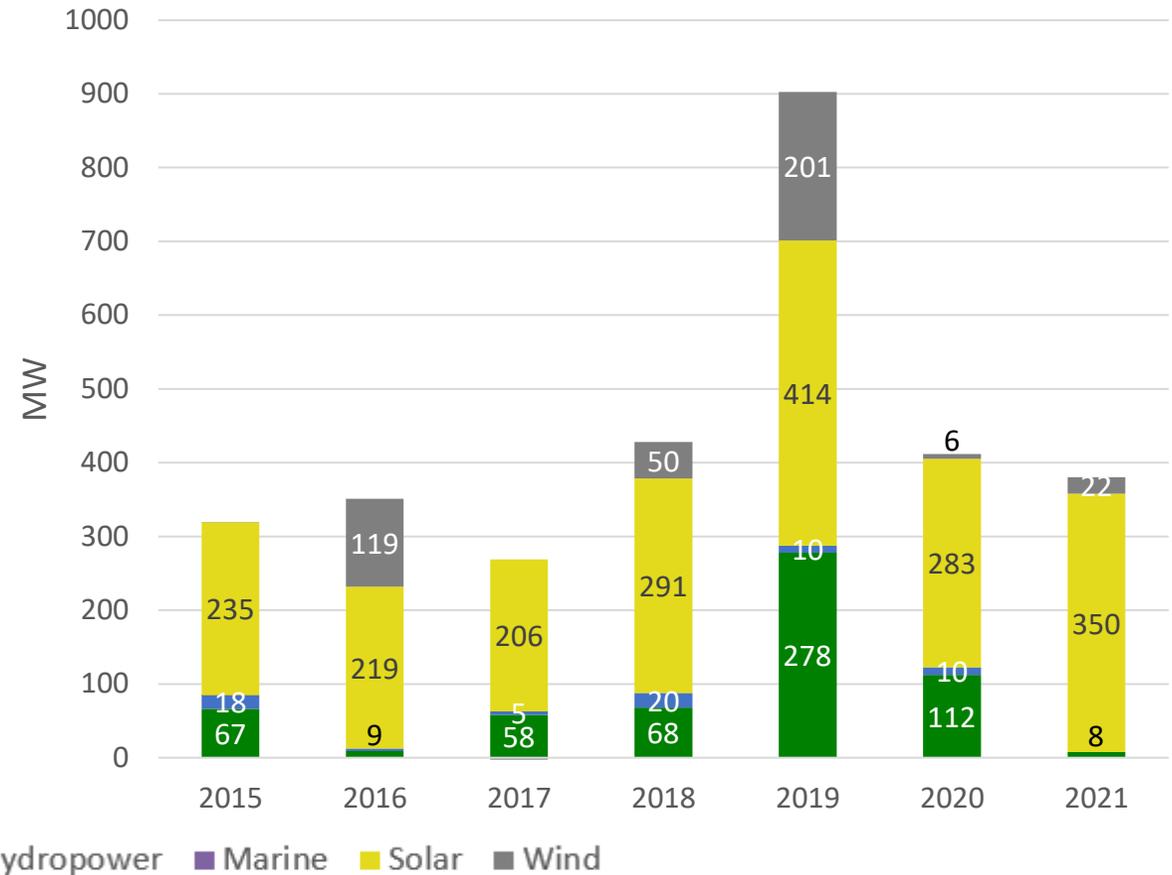
Non-SIDS countries and Partner Organisations

- | | | | |
|------------------------------|---|--|--|
| 1. Denmark | 11. Association of the Overseas Countries and Territories of the European Union | 19. Indian Ocean Commission | 29. Sustainable Energy for All |
| 2. France | 12. Caribbean Climate Smart Accelerator | 20. International Renewable Energy Agency | 30. Sur Futuro Foundation |
| 3. Japan | 13. Caribbean Electric Utility Services Corporation | 21. Islands and Small States Institute | 31. United Nations Development Programme |
| 4. Italy | 14. Clean Energy Solutions Center | 22. Island Innovation | 32. United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and SIDS |
| 5. Germany | 15. Clinton Climate Initiative | 23. Organisation of Eastern Caribbean States | 33. University of Delaware, Island Policy Lab |
| 6. Italy | 16. ENEL | 24. Pacific Community | 34. The World Bank |
| 7. New Zealand | 17. European Union | 25. Pacific Islands Development Forum | |
| 8. Norway | 18. Greening the Islands | 26. Pacific Power Association | |
| 9. United Arab Emirates | | 27. Rocky Mountain Institute - Carbon War Room | |
| 10. United States of America | | 28. Solar Head of State | |

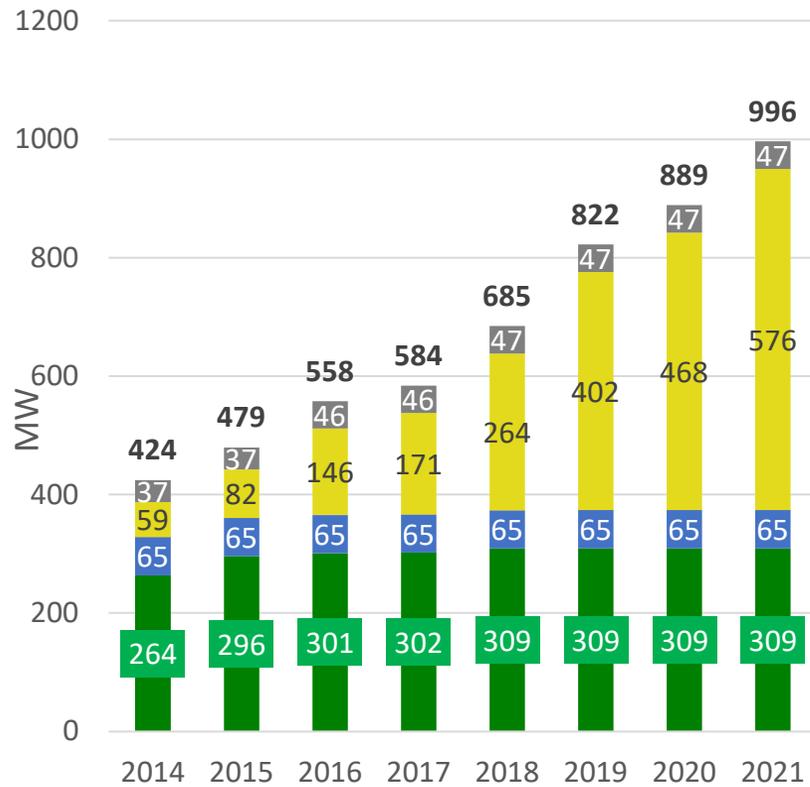
Total installed renewable energy capacity by technology (MW, 2014 - 2021)



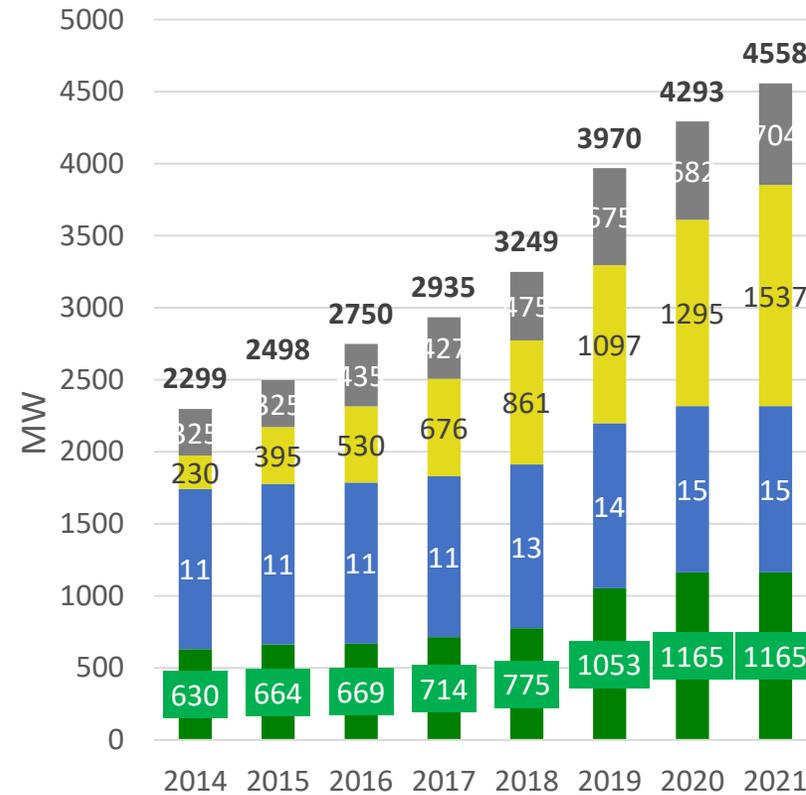
Yearly new renewable energy capacity additions (MW, 2015-2021)



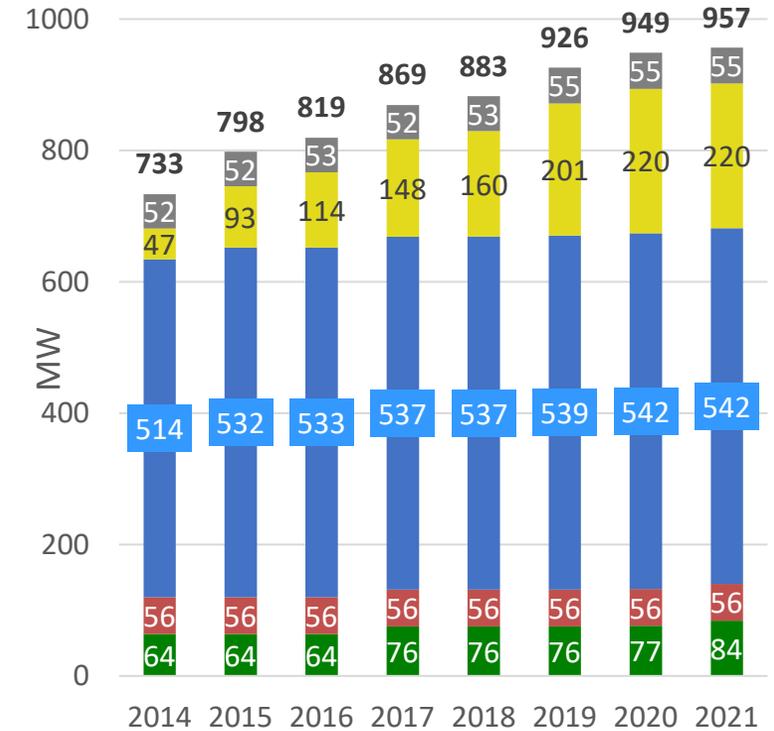
Atlantic, Indian Ocean and South China Sea (AIS)



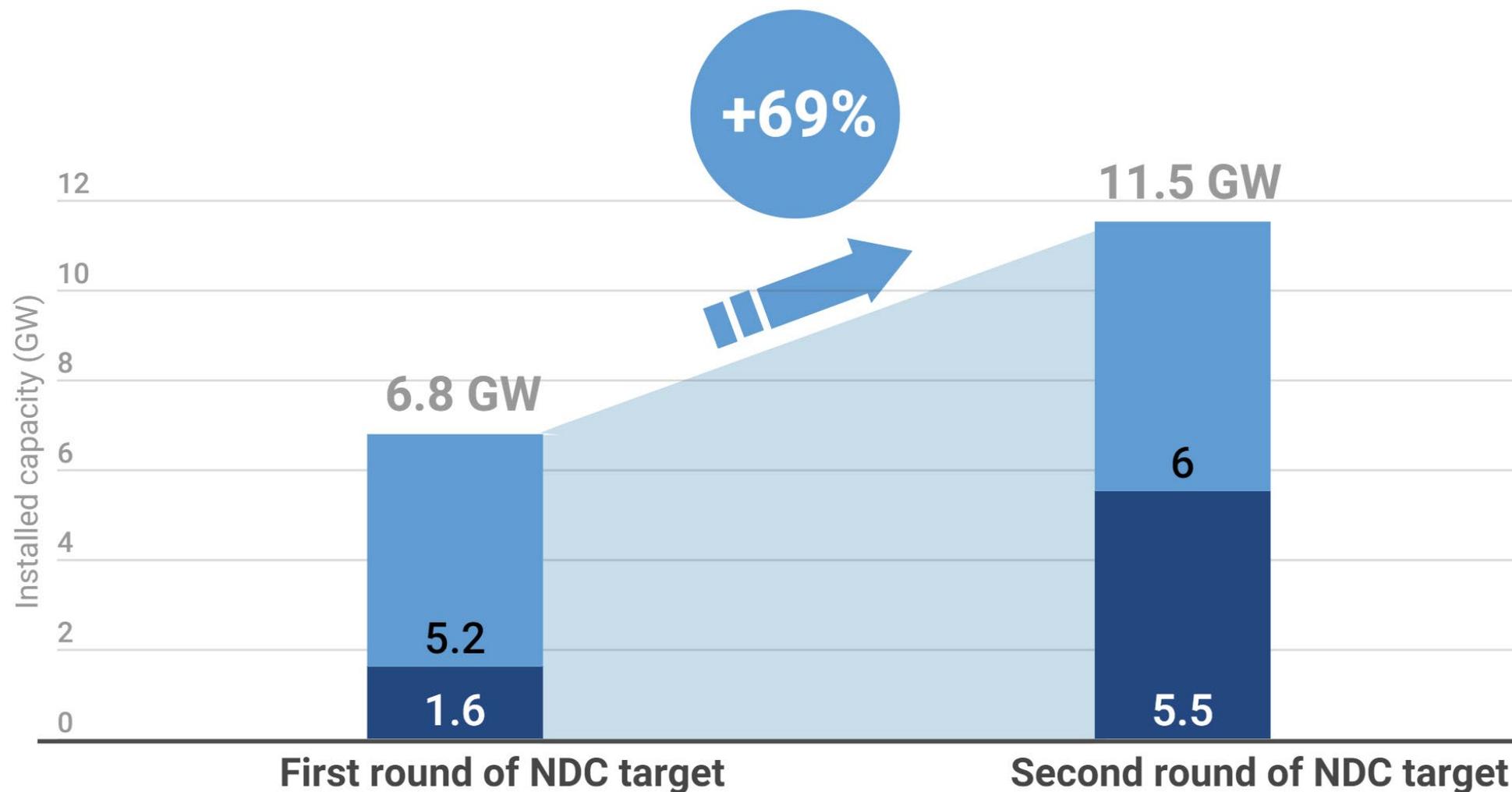
Caribbean



Pacific



■ Bioenergy
 ■ Geothermal
 ■ Hydropower
 ■ Marine
 ■ Solar
 ■ Wind





Knowledge Hub and Dissemination

<https://islands.irena.org/>

Renewable Readiness Assessment / Quicksans

Grid Integration Analysis

Renewable Energy Roadmaps

Solar City Simulator

Energy Transition and Climate Action Support

Capacity building

Project Facilitation and Access to Finance

Climate finance tracking of the energy sector

Technical Webinars – Ocean Energy, Offshore renewables

Power Purchase Agreements in AIS, Caribbean and Pacific regions

Pacific Regional Training on the Assessment of GHG Mitigation Policies and Projects

Development of bankable concept notes for climate finance in SIDS with MoEJ



Energy management and Energy Audits



Technical Webinars on grid Integration of VRE; socioeconomics benefits of RE

SIDS LHI Website

- **Data and statistics** on RE capacity at total and regional levels
- **Country-wise energy profiles**
- **Sharing of SIDS LHI annual progress report**, regional publications, IRENA publications relevant to SIDS, partner publications
- **Event summaries**, recordings and materials

GRENADA CAPACITY BUILDING PROGRAMME
for Energy Management and Energy Audits

Grenada Capacity Building Programme

PUBLICATIONS

SIDS LHI ANNUAL PROGRESS REPORT | SIDS REGIONAL REPORTS | IRENA PUBLICATIONS

SIDS Lighthouses Initiative Progress and way forward 2021
This SIDS LHI progress report provides an overview of SIDS energy transformation since the initiative's launch in 2014. It highlights key developments in the energy transformation undertaken jointly by SIDS and development partners, as shared with IRENA and featured on the associated knowledge-sharing platform.

SIDS Lighthouses Initiative Progress and way forward 2020
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PROGRESS DATA

In spite of the Covid-19 pandemic and recurring and intensifying natural disasters, SIDS continue to reflect consistent increase of renewable energy uptake. IRENA statistics show that an increase in installed renewable capacity by 7% in 2020 and 6% in 2021 over the previous year.

According to IRENA data, solar energy accounts for 36% of total installed renewable capacity in the SIDS followed by 27% of hydropower, 24% of bioenergy, 12% of wind energy and 1% of geothermal energy. Between 2019 and 2021, 633 MW of solar energy capacity has been installed in the SIDS followed by 120 MW of bioenergy and 29 MW of wind energy.

In terms of the regional trends, IRENA data in the Atlantic, Indian Ocean and South China Sea (AIS) region indicates that solar energy technologies are the most widely adopted accounting for 58% shares of the total installed renewable energy capacity, whereas, in the Caribbean region, solar energy, bioenergy and hydropower technologies show similar uptake trends accounting for 34%, 26% and 25% respectively of the total installed renewable energy capacity. For the Pacific region, hydropower technologies account for 57% of the total installed renewable energy capacity.

Total Installed Renewable Energy Capacity in SIDS

Annual Renewable Energy Additions in SIDS

Renewable Energy Additions in MW

REGIONAL PROFILES

RENEWABLE ENERGY PROFILE Pacific

TRENDS IN POWER CAPACITY

Total Power Capacity in 2021: 3,976 MW

Installed Capacity by Technology in 2021

Installed Renewable Energy Capacity Last 5 Years

Top 10 Countries/areas Cumulative Renewable Capacity in 2021

ELECTRICITY GENERATION TRENDS

Renewable Electricity Generation in 2000-2019

Renewable Electricity Generation in 2019: 1,942 GWh

Renewable Electricity Generation in 2020: 400 GWh

Renewable Electricity Generation in 2021: 317 GWh

EVENTS

Energy Management and Energy Audits in SIDS
22 June 2022 | 23 June 2022

Several SIDS has prioritised energy efficiency and conservation in various sectors including strengthening the capacity of its citizens to undertake energy assessments of their homes and businesses, to identify cost saving measures and to reduce their energy consumption. In particular, emphasis is also being placed on the active engagement of young people in the energy transition as they are key actors in raising awareness as well as driving social change, innovation and environmental protection.

International Renewable Energy Agency (IRENA) through the SIDS Lighthouses Initiative (LHI) organised this two day webinar targeting homeowners, students, youth and other participants, with the aim aims to provide an introduction to energy conservation and management with a focus on the conduct of home energy assessments.

Grenada Capacity Building Programme for Energy Management and Energy Audits
20 April 2022 | Virtual

Through the SIDS Lighthouses Initiative, IRENA, in collaboration with the Energy Division, Ministry of Finance, Planning, Economic Development and Physical Development, Grenada, have developed a Capacity Building Programme for Energy Management and Energy Audits targeting different audiences such as homeowners, youth, hotels and financial institutions as well as government ministries and statutory organisations.

You may view the recording of of the various webinars as below:



- Upcoming IRENA and SIDS LHI events
- Partner events
- Vacancy posts
- Publications announcements



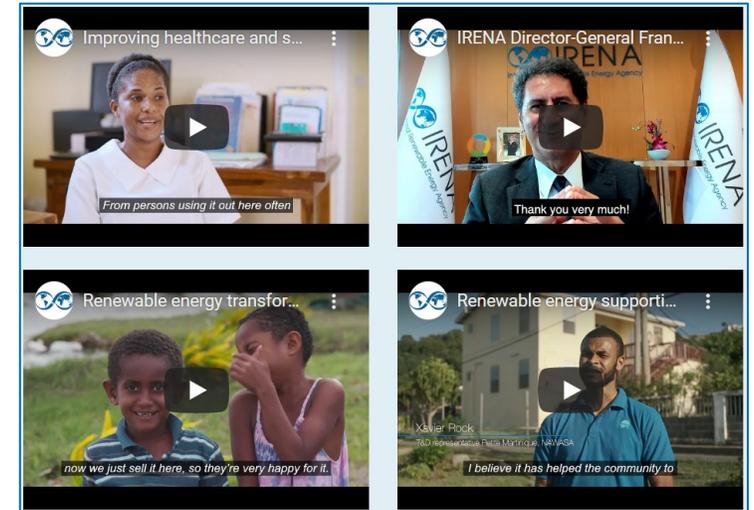
- Event invitations to SIDS LHI and partner events
- Information dissemination
- Call for interest for various IRENA and SIDS LHI services and tools



- Human impact of energy transition videos
- Impacts of RE in food, water and health nexus
- Call for accelerating RE uptake in SIDS



Video production on socio-economics benefits and human impacts of the uptake of renewables in SIDS : **job creation, entrepreneurship, gender equality; education; to address food and water security, as well as other disaster resilience measures in SIDS.**



Thank You

SIDS Lighthouses Initiative



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[SIDS Lighthouses Initiative](#)

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