

**SIDS  
LIGHTHOUSES  
INITIATIVE 2.0**

**Accelerating the  
energy transformation  
through renewables**

High-Level Roundtable  
28 September 2018  
United Nations | New York



Launched at the 2014 Climate Summit, the Small Island Developing States (SIDS) Lighthouses Initiative provides a global framework for the energy transition on islands. It moves away from developing projects in isolation to a holistic approach that considers all relevant elements, from policy and market frameworks, to technology options and capacity building.

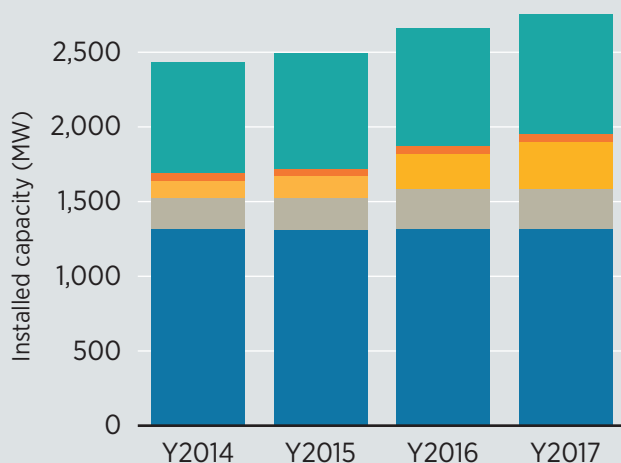
The following targets were set to be achieved by 2020:

- Mobilise USD 500 million for the island energy transformation;
- Deploy 100 megawatts (MW) of new solar photovoltaic (PV) power capacity;
- Deploy 20 MW of new wind power;
- Deploy significant quantities of small hydropower and geothermal energy, along with getting several ocean energy projects underway; and
- Ensure all participating SIDS develop renewable energy roadmaps.

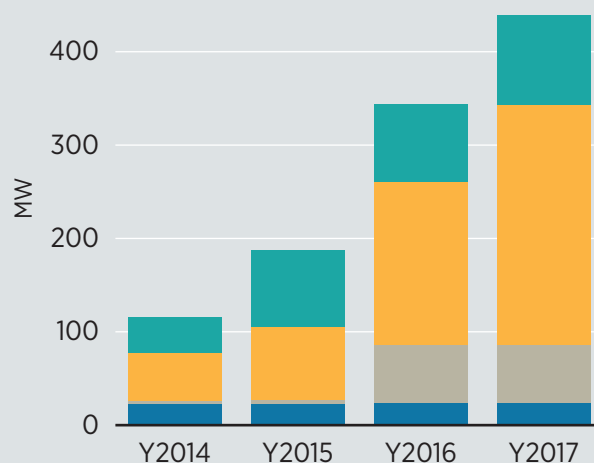
The Initiative facilitates co-ordinated support for islands to transform their predominantly fossil-based power systems to renewable energy. It achieves this through partnerships with public, private, intergovernmental and non-governmental organisations.

For more information: [www.irena.org/islands](http://www.irena.org/islands)

**Total Renewable Energy Installed Capacity in SIDS Partners**



**New Cumulative Renewable Energy Installations (Starting Year 2014)**

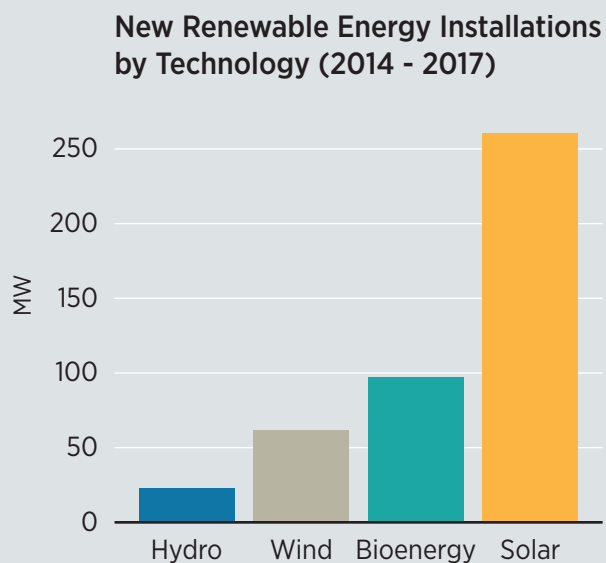


Source: SIDS Installed Capacity - IRENA Resource Database



## ACHIEVEMENTS TO DATE

The Initiative has been instrumental in supporting the uptake of renewable energy in SIDS to date. More than 250 MW of solar PV and over 50 MW of wind capacity were installed between 2014 and 2017, and more than USD 500 million was mobilised, in SIDS partners. Thus, in terms of both installed capacity and funding, targets for 2020 were met and exceeded three years ahead of schedule.



### Technology

-  Bioenergy
-  Geothermal
-  Solar
-  Wind
-  Hydropower

The infographic illustrates progress made by partners of the SIDS Lighthouses initiative based on data compiled by IRENA.

Installed Capacity Data Source

**RESOURCE**  
YOUR SOURCE FOR RENEWABLE ENERGY INFORMATION

# SMALL ISLAND DEVELOPING STATES IN THE LIGHTHOUSES INITIATIVE



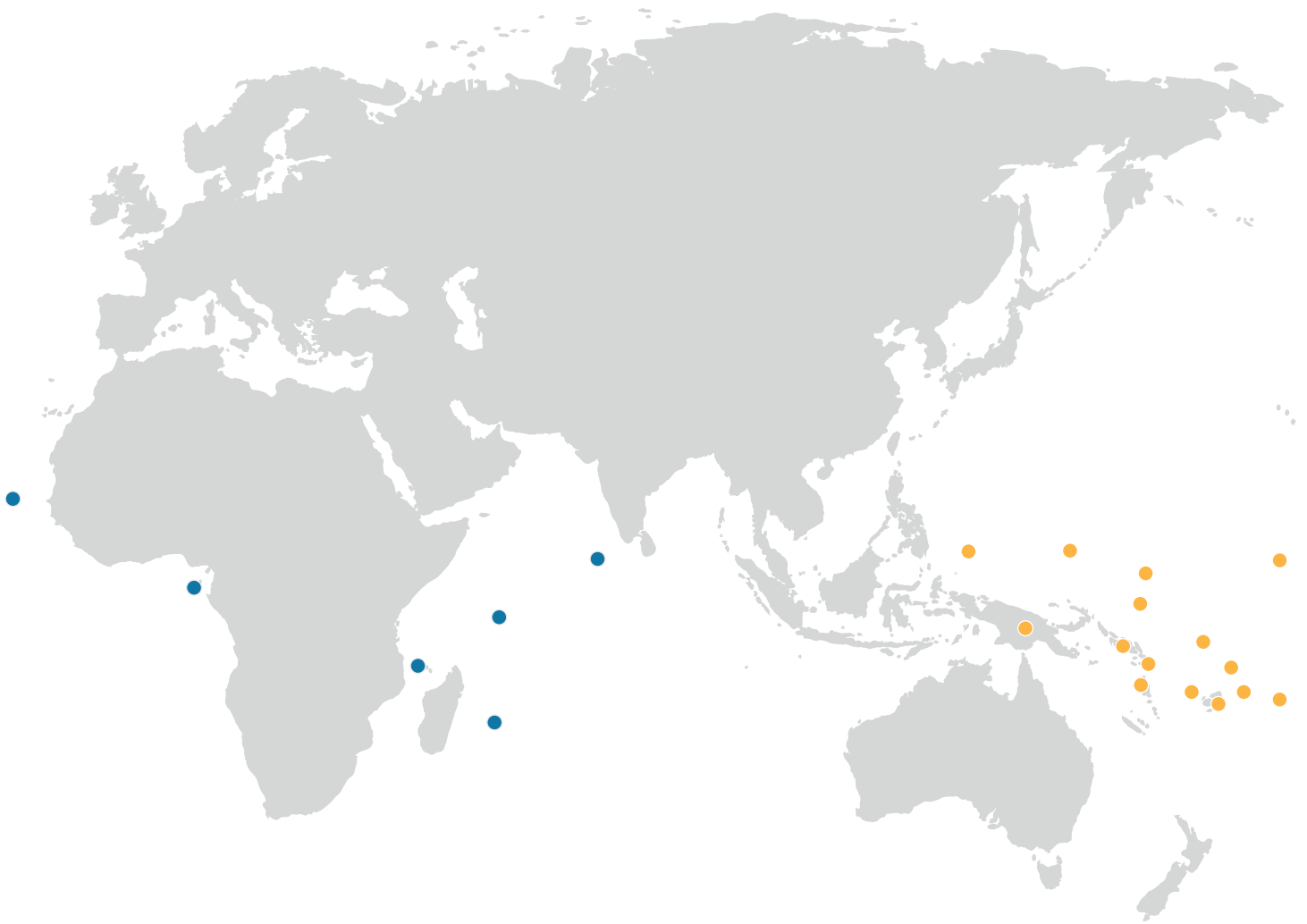
## Groupings

- Atlantic, Indian Ocean, Mediterranean and South China Sea islands
- Caribbean islands
- Pacific islands

## SIDS partners:

Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, British Virgin Islands, Cabo Verde, Comoros, Cook Islands, Cuba, Dominican Republic, Micronesia (Federated States of), Fiji, Grenada, Guyana, Kiribati, Maldives, Marshall Islands, Mauritius, Montserrat, Nauru, New Caledonia, Niue, Palau, Papua New Guinea, Saint Lucia, Saint Vincent and the Grenadines, Samoa, Sao Tome and Principe, Seychelles, Solomon Islands, Tonga, Trinidad and Tobago, Turks and Caicos, Tuvalu, Vanuatu.





**Other partners:**

European Union, France, Germany, Italy, Japan, New Zealand, Kingdom of Norway, United Arab Emirates, United States of America, Indian Ocean Commission, International Renewable Energy Agency (IRENA), Association of the Overseas Countries and Territories of the European Union, United Nations Development Programme, World Bank, Enel, Clean Energy Solutions Center, Clinton Climate Initiative, Rocky Mountain Institute—Carbon War Room, Sustainable Energy for All (SEforALL), Organisation of Eastern Caribbean States (OECS), Solar Head of State.





## JOINING SIDS LIGHTHOUSES

The SIDS Lighthouses Initiative is an inclusive and neutral multi-stakeholder platform that brings together public, private, intergovernmental, and non-governmental actors that share a common vision of accelerating the deployment of renewable energy on islands.

For more information, see [www.irena.org/islands](http://www.irena.org/islands) or contact [islands@irena.org](mailto:islands@irena.org).

## NEXT PHASE OF THE INITIATIVE

Despite the remarkable progress to date, more action is needed to harness the full potential of renewable energy. SIDS have shown unwavering commitment in this regard.

Almost all SIDS have set national renewable energy targets. Thirteen SIDS partners in the Initiative have set high targets, aiming for 80-100% renewable energy penetration. Among those, 10 have set a target for 100% renewable energy in electricity generation. Furthermore, more than 20 SIDS partners have developed renewable energy roadmaps or included a clear renewable energy focus in their energy plans.

The SIDS Lighthouses Initiative is optimally positioned to help align climate, economic and social objectives within a new international framework for co-operation. As SIDS consider new development options, aligned with NDCs (Nationally Determined Contributions under the 2015 Paris Agreement) and enabled by the possibility of access to climate finance, the Initiative aims to build on its progress to date. This involves responding with a holistic approach, not only for the transformation of the power sector but also to support the development and climate agenda.







## PROPOSED PRIORITY AREAS

A consultation was undertaken with partners in the Initiative, aiming to identify priority areas and targets for the next phase.

The following key areas have been identified:

- Support SIDS in reviewing and implementing NDCs, extending technical assistance and capacity building where needed;
- Expand from assessment and planning to implementing effective, innovative solutions, with continued technical and regulatory advisory services to help SIDS overcome their unique challenges;
- Promote other renewable sources, such as geothermal and ocean energy, along with stepping up integration of solar and wind power;
- Support development of bankable projects, fostering access to finance and closer co-operation with the private sector;
- Strengthen institutional and human capacity development in all segments of the renewable energy value chain;





- Look beyond power generation, focusing also on transportation and other end-use sectors;
- Leverage synergies between renewables and energy efficiency;
- Reinforce links between renewables and non-energy sectors, including agriculture, food, health and water, to foster broad socio-economic development, as well as raising awareness about job creation, gender equality and women's empowerment through renewable energy development;
- Link renewable energy uptake to climate resilience and more effective disaster recovery;
- Enhance collection and dissemination of data and statistics, supporting informed decision-making and effective monitoring;
- Reinforce and expand engagement of partners, leveraging synergies with existing SIDS initiatives and other IRENA co-ordinated initiatives, such as the Global Geothermal Alliance, the International Off-Grid Renewable Energy Conference, and the Coalition for Action;
- Boost renewable power deployment, aiming for a target of 5 gigawatts (GW) of installed capacity in SIDS by 2023.



## **IRENA TOOLS FOR SIDS LIGHTHOUSES PARTNERS**

### **Renewables Readiness Assessment**

The Renewables Readiness Assessment (RRA) is a country-led, comprehensive tool for holistic evaluations and recommendations for action to accelerate renewable energy deployment.

### **Sustainable Energy Marketplace**

The Sustainable Energy Marketplace is a virtual platform that gathers project developers, financiers, service and technology suppliers to work together to realise projects related to renewable energy. The Marketplace provides visibility to projects and facilitates investment opportunities.

### **IRENA Project Navigator**

The IRENA Project Navigator is an online platform providing comprehensive, easily accessible, and practical information, tools and guidance to assist in the development of bankable renewable energy projects. The Project Navigator has introduced a component to assist project developers in Small Island Developing States (SIDS). Within this islands module, the Project Navigator will help islands assess and address project development issues, in order to enable stronger, economically sustainable development and smart integration of renewables.

### **IRENA/ADFD Project Facility**

IRENA and the Abu Dhabi Fund for Development (ADFD) have collaborated to create a joint Project Facility to finance transformative and replicable renewable energy projects in developing countries. The facility involves IRENA selecting and recommending promising renewable energy projects in developing countries. ADFD offers concessional loan to projects ranging between USD 5 million and USD 15 million, with the loan amount for each project not exceeding half of the estimated project cost. ADFD is providing USD 350 million over seven annual cycles. Applications for each new cycle commence in November.

### **Global Atlas**

The Global Atlas for Renewable Energy is a free online resource-assessment tool with maps on solar, wind, ocean and bioenergy resources. It also facilitates a first screening of sites and areas for renewable energy investment opportunities.

## **RENEWABLES READINESS ASSESSMENT**

## **SUSTAINABLE ENERGY MARKETPLACE**





# IRENA ACTIVITIES WITH ISLANDS

## National energy roadmaps

IRENA actively supports islands in their transition to a renewable energy future through the development of national energy roadmaps. These roadmaps provide clear pathways covering the technical, economic and policy elements that enable the large-scale, sustainable deployment of renewables.

Roadmaps are a result of co-operation between IRENA, national governments and key stakeholders. They feature analysis detailing transformation of current energy usage to least-cost energy systems with a significant contribution from renewables.

Roadmap analysis is centred on identifying renewable energy options for power generation. The analysis can also examine the potential for renewables in heating, cooling and transportation sectors.

## Grid integration studies

IRENA's grid integration work supports policymakers and public utilities from Small Island Developing States address and overcome technical constraints associated with the operation of electricity grids with high shares of variable renewables, such as solar and wind energy.

The work focuses on:

- Analysis of grid stability and grid operation for the integration of higher shares of renewable energy, particularly upon request from IRENA Member States;
- Development of grid integration assessment methodologies as the basis for IRENA country support;
- Provision of access to software tools, models and guides for grid integration studies, with a focus on small isolated systems;
- Training and technical workshops on grid operation and expansion planning for small isolated systems hosting high shares of renewable energy resources.

## Site appraisal programme

IRENA's site appraisals simulate the financial viability of wind or solar projects at specific sites. The wind or solar resource potential and the possible costs, financing and revenue associated with the specific site are assessed. The appraisal generates scenarios of financial performance based on the confidence determined in the resource data or the power purchase agreement model. It uses hourly high-resolution wind and solar time series datasets within an IRENA custom-built model and can be applied to any location worldwide.

SIDS Lighthouses Initiative partners can apply for site appraisals.

## Quickscans

The quickscan process allows islands to quickly assess their readiness to deploy renewable energy in the power sector. The quickscan is a government-led process, supported by analysis from IRENA or other partners of the Initiative. At the core of quickscan is a targeted questionnaire on seven elements that are critical to a successful transition to renewables.

For more information, see [www.irena.org/islands](http://www.irena.org/islands)  
or contact [islands@irena.org](mailto:islands@irena.org)

The SIDS Lighthouses Initiative has been made possible with the generous support of France, Germany, Japan, the Kingdom of the Netherlands, the Kingdom of Norway, New Zealand and the United Arab Emirates.

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### **About IRENA**

The International Renewable Energy Agency (IRENA) is an intergovernmental organisation that supports countries in their transition to a sustainable energy future, and serves as the principal platform for international cooperation, a centre of excellence and a repository of policy, technology, resource and financial knowledge on renewable energy. IRENA promotes the widespread adoption and sustainable use of all forms of renewable energy, including bioenergy, geothermal, hydropower, ocean, solar and wind energy in the pursuit of sustainable development, energy access, energy security and low-carbon economic growth and prosperity.

