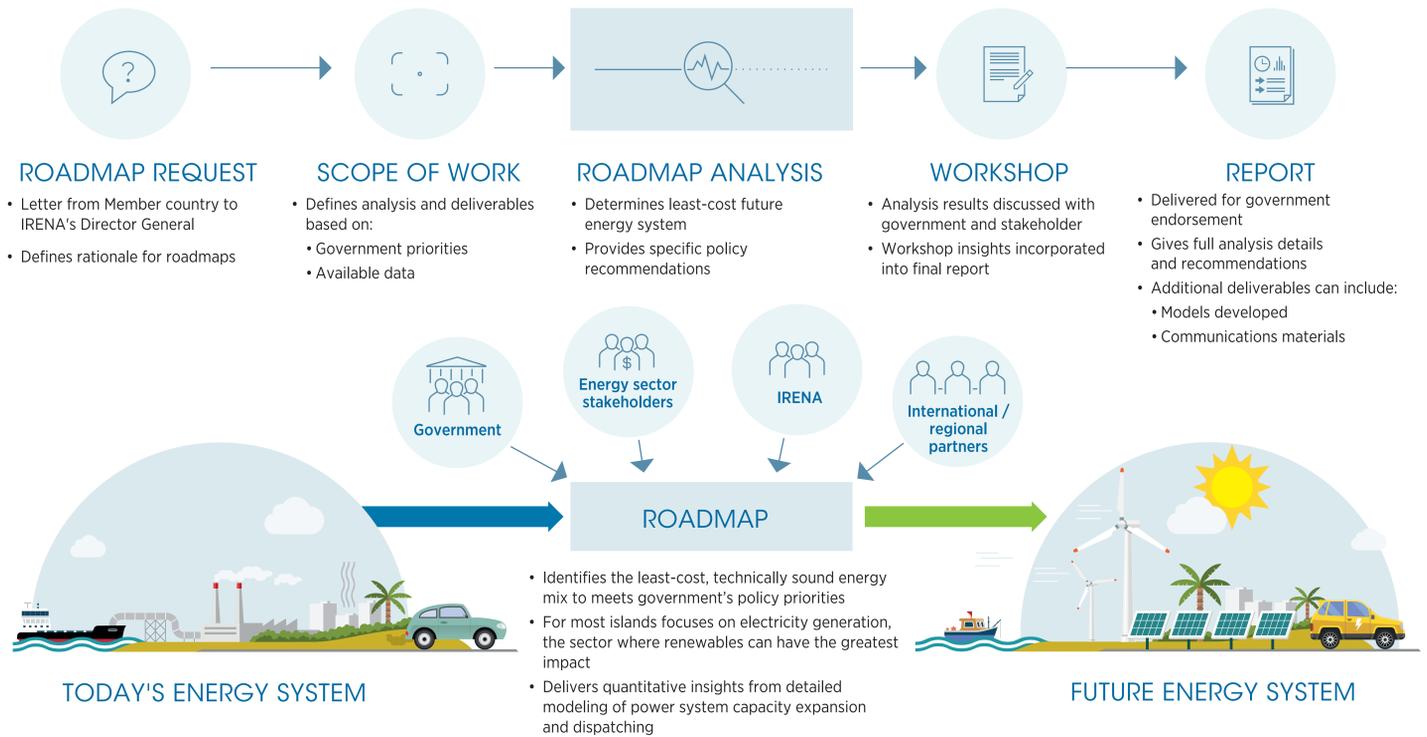


NATIONAL ENERGY ROADMAPS FOR ISLANDS

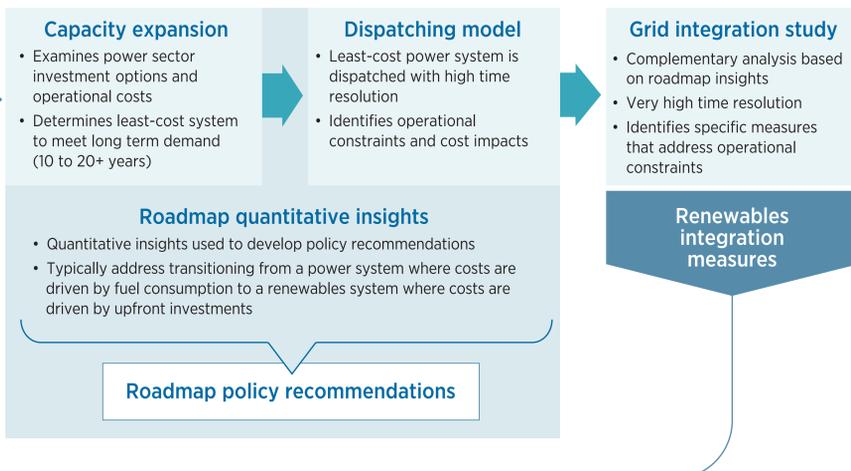


Roadmaps support an Island's transition to renewable energy by providing clear pathways for the deployment of renewables that cover the necessary technical, economic and policy elements. The roadmap analysis is usually centred on identifying the least-cost power system for the future, with additional assessments of how this system would be optimally dispatched. This analysis can be supported by an examination of the potential for renewables in end-uses and other sectors such as: heating, cooling and transportation. The roadmap also contains specific policy recommendations to enable its implementation.

ROADMAP PROCESS



ROADMAP ANALYSIS



ROADMAP INSIGHTS

SMALL ISLANDS

- Capacity expansion and dispatching analysis can be combined to deliver an optimal system
- Limited total investment: Optimal system can be installed as a single project replacing the existing electricity system

BIG ISLANDS

- Optimal generation mix too costly for one project
- Analysis provides project time-line of investments to meet demand over period of roadmap
- Dispatching investigates the impact of each project to ensure optimal evolution of power system

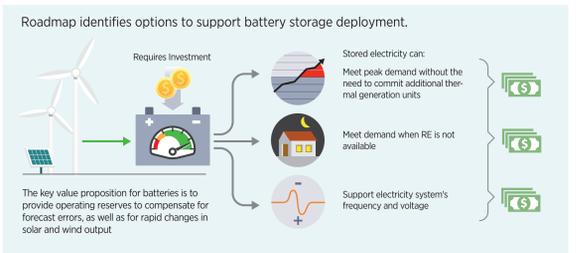
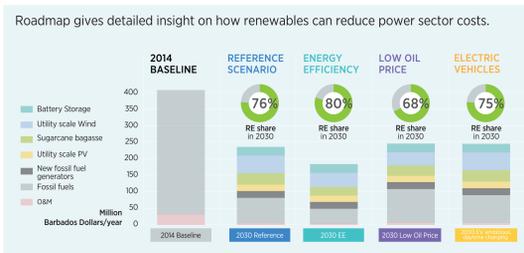
BARBADOS

Capacity expansion

Least-cost capacity expansion plan 2015-2030

Dispatching

Production cost modelling of 2014 and 2030 scenarios



CYPRUS

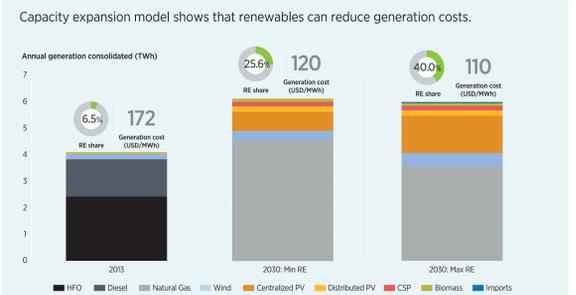
Capacity expansion

Least-cost capacity expansion plan 2015-2030

Dispatching

EU JRC performed production cost modelling of 2030 scenarios

- The roadmap included six scenarios to provide insight on the impact of key energy sector decisions including:
 - Deploying an undersea electrical cable
 - The potential for natural gas generation
- Renewables played a key role in all scenarios covering 26 to 40 percent of 2030 demand
- The roadmap included analysis on integration of variable renewable energy (VRE) covering:
 - Recommendations on VRE forecasting
 - Options for VRE to provide grid support services



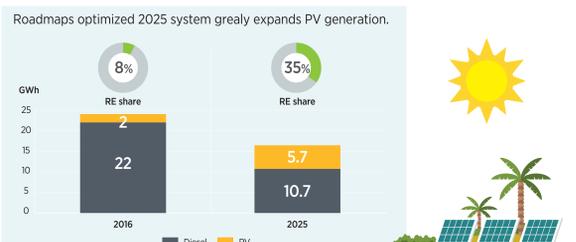
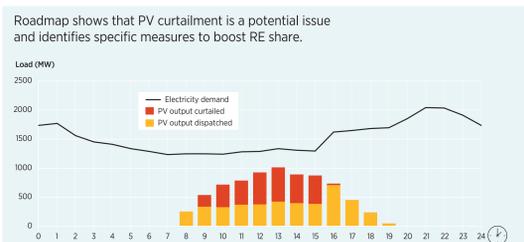
KIRIBATI

Capacity expansion

Least-cost system design and modular deployment 2015-2025 for two main islands

Dispatching

Optimized dispatch of 2014 and 2025 least-cost system for two main islands



DOMINICAN REPUBLIC

Capacity expansion

REmap analysis identified the potential for RE in the energy mix by 2030

Dispatching

VRE penetration and transmission bottlenecks estimated based on projected VRE generation and duration curves

