

Keywords: decarbonization; energy transition pathways; Mayotte; energy system planning tools; RES penetration; non-interconnected islands

1. Introduction

The goal of the Paris Agreement ...

Islands face unique challenges on their journey towards achieving carbon neutrality by the mid-century, due to the lack of energy interconnections, limited domestic energy resources, extensive fossil fuel dependence, and high load variance requiring new technologies to balance demand and supply. At the same time, these challenges can be turned into a great ...

About the Center The Future Energy Systems Center examines the accelerating energy transition as emerging technology and policy, demographic trends, and economics reshape the landscape of energy supply and demand. The Center conducts integrated analysis of the energy system, providing insights into the complex multisectoral transformations that will alter the power and ...

MAESHA will deploy the necessary flexibility, storage and energy management solutions for a large penetration of Renewable Energies (RE). Cutting-edge technical systems will be ...

With the objective of decarbonising the energy systems of the geographical islands, MAESHA will deploy the necessary energy flexibility, storage and management solutions for a high penetration of renewable energies.

The project delves into cutting-edge technologies encompassing renewable energy sources (RES), integrating EV charging points, Vehicle-to-Grid (V2G) systems, and advanced energy storage and ...

The New Energy Outlook presents BloombergNEF's long-term energy and climate scenarios for the transition to a low-carbon economy. Anchored in real-world sector and country transitions, ...

Digital technologies play crucial roles in integrating different aspects of the new energy system. Sectors that have hitherto operated largely independently (such as electricity and transport) become connected in new ways with the rise of electric mobility, and grids need to cope with a much greater diversity and complexity of flows as many new ...

The EU-funded MAESHA project will develop smart and flexible methods of storage and energy management as well as modelling tools and technical systems with the aim of promoting the ...

Energy Systems is a peer-reviewed journal focusing on mathematical, control, and economic approaches to energy systems.. Emphasizes on topics ranging from power systems optimization to electricity risk management and bidding strategies. Presents mathematical theory and algorithms for stochastic optimization methods applied to energy problems.

Recently, Ref. proposed a new energy-economy modeling tool (IntE3-ISL model) that goes beyond the approaches, at present, ... This scenario achieves the decarbonization of Mayotte's energy system in 2050, assuming an active role of the citizens and local communities towards carbon neutrality. The citizen-driven energy actions contribute to ...

Downloadable! Citizen-driven approaches are promising to overcome the challenges in the energy transition of geographical islands. However, the economic profitability of related activities must be ensured to achieve the intrinsic and sustainable uptake of related solutions in an island's communities. Here, we investigate the long-term (2020-2054) economic profitability of solar ...

2 ???· Berkeley, CA (December 12, 2024) -- Form Energy, a leader in multi-day energy storage solutions, proudly announces that its breakthrough iron-air battery system has ...

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a decarbonised energy future in Mayotte and other European islands" o A Horizon 2020 project which started in November 2020 -End in October 2024 o 11.8 million EUR budget o 22 partners ...

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