

## SolarTech Power Solutions

# Maldives Energy Storage Power Supply Factory



## Overview

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What is the primary energy supply of the Maldives?

The primary energy supply of the Maldives in 2017, which is the latest year with comprehensive energy system data , , and which is used as the reference system in this study, was dominated by fossil fuels, as it is shown in Fig. 1. The majority, or 39% of the diesel consumption is due to the diesel-based electricity production.

How much electricity does PV produce in the Maldives?

Already in 2030, PV becomes the major electricity generation source for the Maldives. In case of no local transport e-fuels production, a total of 1.42 TWh and 3.23 TWh of electricity is supplied by PV in 2030 and 2050, in which, floating PV contributes with 1.08 TWh and 2.88 TWh.

Are the Maldives achieving a net-zero energy system?

The Maldives are an example of island countries having one of the most ambitious emissions targets of all island nations , as they aim to reach a net-zero energy system already by 2030 .

What are the constraints for the energy system design in Maldives?

In both years, the constraints for the system design are the same, which is that all of the electricity and fuel demand has to be satisfied for every hour of the year. No connection for electricity import or export from or to outside of the Maldives shall be available.

How was the Maldivian energy system optimisation performed?

The Maldivian energy system optimisation was performed using the EnergyPLAN model , version 16.0. New approaches for renewable energy (RE) generation via floating technologies and a new wave power design are modelled to supply the energy demands of the system.

Can I import or export electricity from the Maldives?

No connection for electricity import or export from or to outside of the Maldives shall be available. The status of the system in 2017 is modelled as a reference scenario (2017 Reference). 3.3. Demand estimations Power demand is based on electricity consumption data from Toktarova et al.

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