

# JCM in Maldives

8 December 2015

# Outline

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- Introduction
- JCM in Maldives
- School Building Rooftop Solar Power Plant Project
- Preparing Outer Islands for Sustainable Energy Development (POISED) Project
- Subcomponent of the project approved for JFJCM

# Maldives

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## Background

- The Maldives - 26 atolls with ~1200 islands
- land area of about ~300 km<sup>2</sup>
- population of ~340 thousands.
- Spent over \$470 million on oil imports in 2012
  - Over 50% utilized for electricity generation
- 100% access to electricity by using almost entirely of diesel powered system
- 30–70 cents per kilowatt-hour for diesel power
- Government goal – Low Carbon Economy

# JCM in Maldives

- Maldives signed the bilateral agreement with the Government of Japan for the introduction of the Joint Crediting Mechanism (JCM) on 29 June 2013.



- Held the first Joint Committee meeting on 20 March 2014
- Approved methodologies for JCM project

## Methodology title

## Approval date

Displacement of Grid and Captive Genset Electricity by Solar PV System

25 Mar 15

# POISED Project in Maldives

## Background of the Project

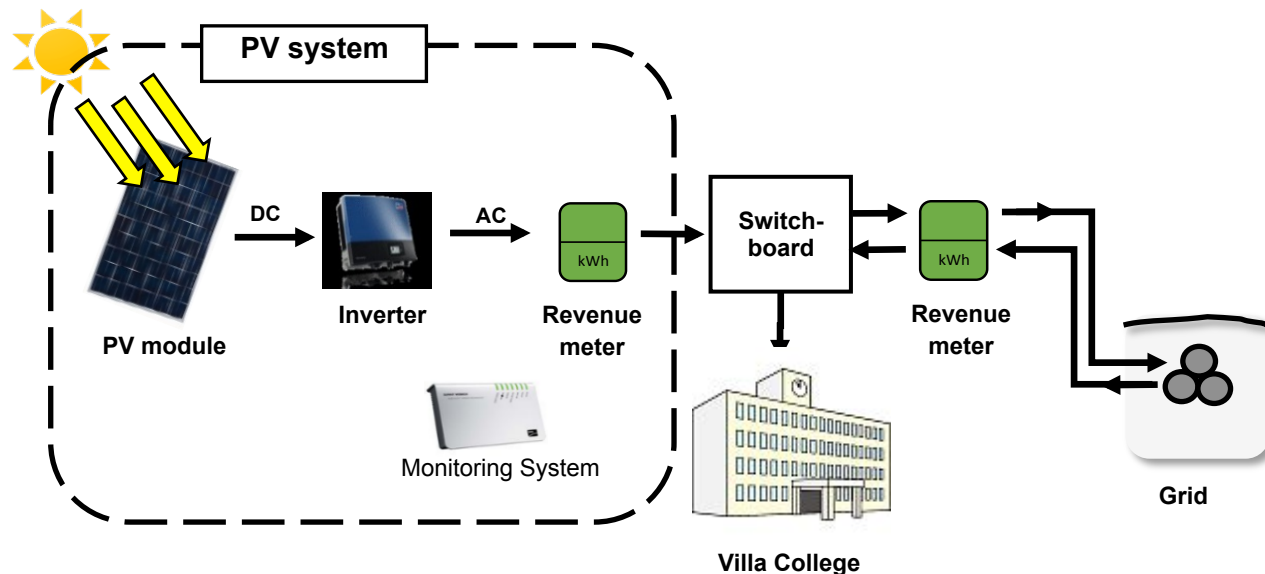
- The Maldives - 26 atolls and land area of about ~300 km<sup>2</sup> with a population of ~340 thousands.
- 100% access to electricity by using almost entirely of diesel powered system
- 30–70 cents per kilowatt-hour for diesel power
- Spent over \$470 million on oil imports in 2012, mainly for electricity generation.
- Government goal – Low Carbon Economy

## Preparing Outer Islands for Sustainable Energy Development (POISED) Project

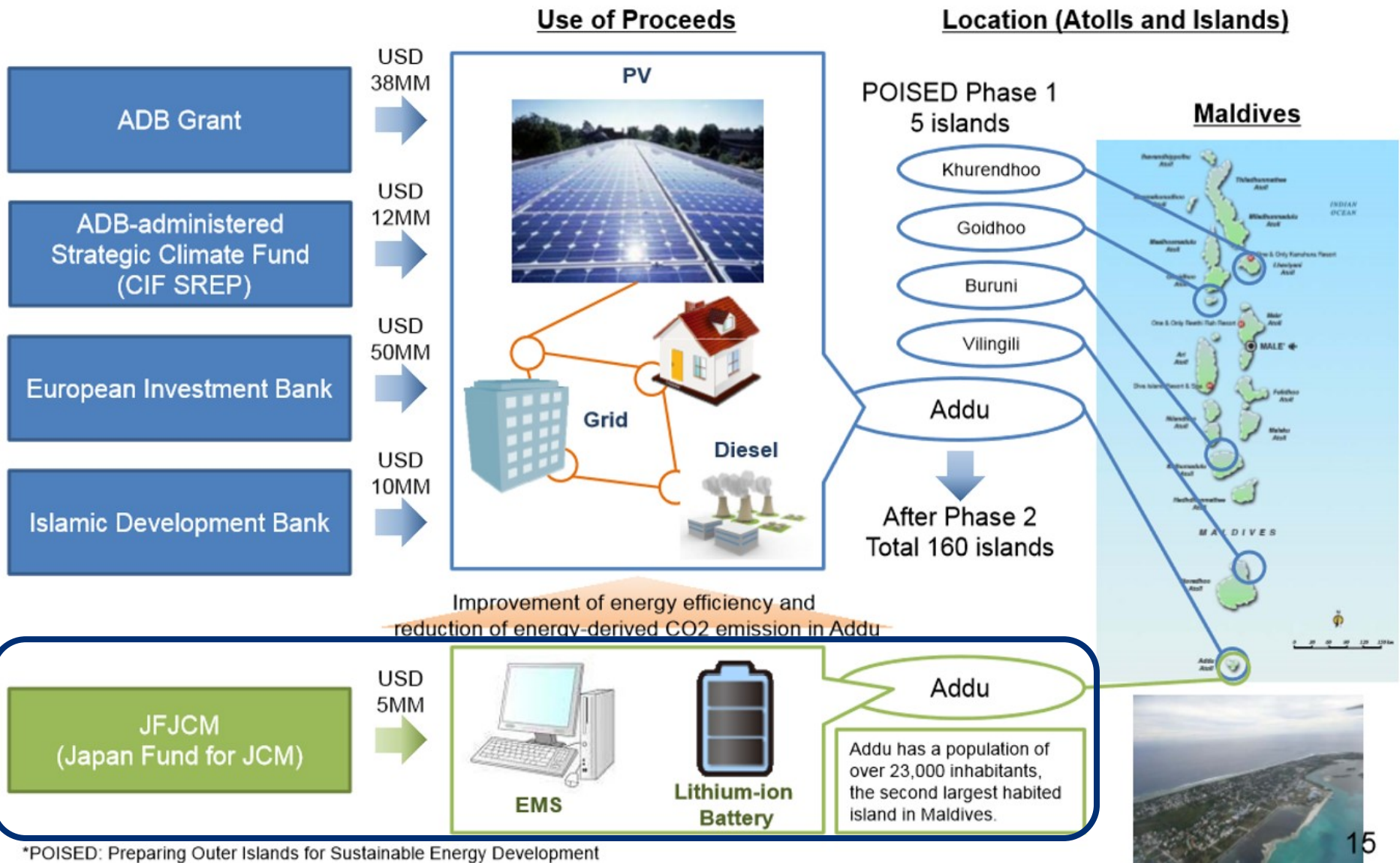
- Total \$110 M project (including co-finance)
- Install Solar PV with smart grid systems in 160 islands (phased implementation).

# School Building Rooftop Solar Power Plant Project

- \$0.5 M Grant to the project
- Install **185kW** grid-connected roof top solar PV system
- Private sector partners (Pacific Consultants CO., LTD. / Villa Educational Services Private Limited,)
- Estimated emission reduction is 216 tCO<sub>2</sub>/year



# Preparing Outer Islands for Sustainable Energy Development (POISED) Project



\*POISED: Preparing Outer Islands for Sustainable Energy Development

# Subcomponent Approved for JFJCM

- \$5 M Grant to Addu atoll subproject
- Install **smart micro-grid technology** with advanced battery system and energy management system (EMS)



- Increase Solar PV penetration level in the island (33% - 54%)
- ✓ Suppression of PV and load fluctuations
- ✓ Large amounts of renewables integrated to the grid
- ✓ DG operation point optimization
- ✓ Expected emission reduction 3,958 tCO<sub>2</sub>/yr





Thank you!