

# Solar Power for Rural Villages in Mali

## Key Project Information

The aim of the project named “*Solar Power for Rural Villages in Mali*” is to facilitate access to clean and affordable energy in rural communities in Mali with the installation and operation of Solar-PV power plants in combination with battery energy storage systems and a smart meter network. With the introduction of clean Solar-PV electricity for households in rural villages without national/ regional grid connection, the project replaces the use of conventional energy sources that rely on non-renewable biomass. Therefore, the project reduces greenhouse gas emissions and helps to combat climate change.

These activities shall be supported by carbon funding for the reduction of greenhouse gases for which registration under the Gold Standard is addressed. This project description has the purpose to inform stakeholders in the context of design consultation and the local stakeholder consultation. These consultations are part of the certification procedure according to the criteria of the Gold Standard, a foundation in Switzerland that certifies projects saving greenhouse gas emissions, according to high environmental and social standards.

### 1. Project Description

The project will take off with a pilot project in the village Bananso, Sikasso region. It will cover the implementation of a 153 kWp Solar-PV power plant with a 230 kWh battery energy storage system and a smart meter network (“Solar-PV-Extension”) followed by another Solar-PV-Extension in the village association Séro-Mèlo-Diadjoumbéra, Kayes region.

The project includes other solar-PV solutions and aims to electrify the selected off-grid villages entirely while reducing the levelized cost of energy (LCOE).

Hence, the project will provide electricity to all residents at affordable tariffs with either pre-payment or post-payment options.

The target of the project is the rollout of those Solar-PV-Extensions to further selected off-grid villages.

#### a. Methodology

The Project applies the UNFCCC small scale methodology AMS-I.L “Electrification of rural communities using renewable energy” --- Version 3.0.

#### b. Renewable Energy Activity

As a Renewable Energy Activity, the Project generates and delivers energy services from non-fossil and renewable energy sources.

## Eligibility Criteria

- (a) Types of project: Implementation of Solar-PV power plants and battery energy storage systems on the ground.
- (b) Location of project: Republic of Mali
- (c) Project area and boundary: The spatial extent of the project boundary includes the project's renewable electricity generation systems, any project distribution (grid) systems, and the physical sites of the consumers served by the project activity in the Republic of Mali.
- (d) Project scale: Microscale Project; Renewable energy project issuing emission reductions less than or equal to 10,000 tCO<sub>2</sub>eq.
- (e) Legal ownership: atmosfair gGmbH has the legal ownership on the verified emission reduction based on the founding contract between atmosfair gGmbH and the project partner.

### c. Project participants

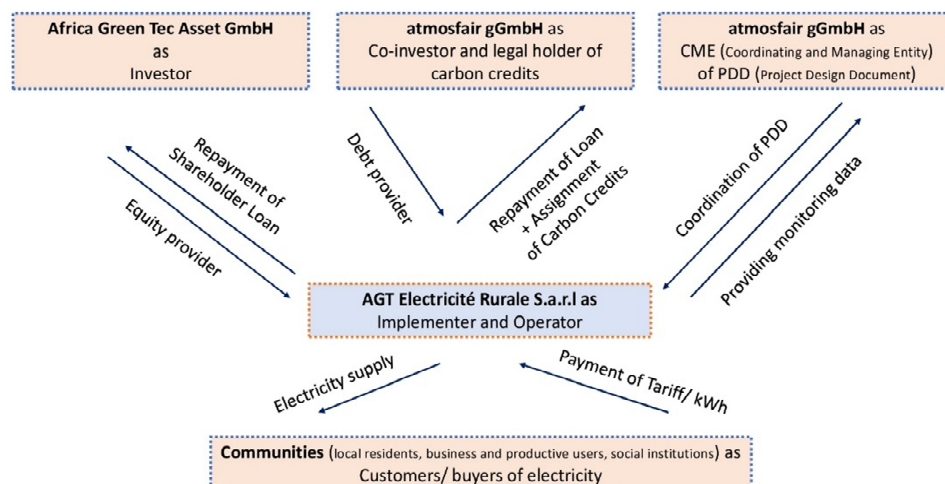
Africa GreenTec Asset GmbH: Heinz-Werner Binzel [hw.binzel@agt-asset.com]

AGT Electrification Rurale Sarl: Alou KEITA [a.keita@agt-er.ml]

atmosfair gGmbH: Kevin MÖLLER [moeller@atmosfair.de]

### d. Tentative organisational structure

AGT Electrification Rurale Sarl will be the implementer managing the engineering, procurement and construction, as well as the owner and operator of the project. The company Africa GreenTec Asset GmbH will act as financial sponsor of the project. atmosfair gGmbH, a non-profit company from Germany, will provide co-funding and coordinate the activities relevant for the Gold Standard certification process. The following diagram represents the currently planned management structure of the Project “Solar Power for Rural Villages in Mali” under Gold Standard. This structure may still be amended.



## 2. Project's social, economic and environmental benefits and impacts

Generally, the access to clean and affordable energy services in many parts of the world is limited. This Project will support Mali to increase access to clean, affordable and reliable energy services in rural areas. Households that were not connected to a regional/ national grid before, will gain access to clean solar power. By replacing the use of diesel generators for electricity generation, the Project reduces greenhouse gas emissions and helps to combat climate change.

This Project will contribute to the following Sustainable Development Goals:

- **SDG 7: Affordable and clean energy**  
 Target 7.1 By 2030, ensure universal access to affordable, reliable and modern energy services.
  
- **SDG 8: Decent work and economic growth**  
 Target 8.5. By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.  
 → There will be permanent jobs created in the operation & maintenance of the Solar-PV plant(s).
  
- **SDG 13: Climate Action**  
 Target 13.2. Integrate climate change measures into national policies, strategies and planning.  
 → By displacing diesel generators for electricity generation, the VPA reduces GHG emissions and contributes to combat climate change.

Ex-ante estimate for annual average of emission reductions for the first 5 years of the Project: 3,130 tCO<sub>2e</sub>.

## 3. Safeguarding Principles Assessment

A Safeguarding Principles Assessment to evaluate the impacts of the project will be carried out according to the Gold Standard requirements.

The Safeguarding Principles Assessment covers three sections, namely Social and Economic Safeguarding Principles, Economic Safeguarding Guidelines and Environmental/Ecological Safeguarding Guidelines, which will be discussed in detail during the Local Stakeholder Consultation.

### a. Social and Economic Safeguarding Principles

*Example:*

#### **Principle 1. Human Rights**

**Justification:** The proposed project activity does not violate any human rights or discriminates against people based on their race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including indigenous person or member of a minority. The project participants respect and follow

internationally proclaimed human right declarations like the Universal Declaration of human rights and will act against any form of violence or human rights abuse. The Project is a voluntary action of the project developer and the partners. Users can freely decide if they want to buy hygiene drinking water and thus be part of the project activity. Thus, no risks or issues are expected from our Project concerning this Principal.

#### b. Economic Safeguarding Guidelines

*Example:*

##### **Principle 6. Economic Impacts**

6.1. Labour Rights: Does the Project involve forced labour? Or does the Project violate against national labour and occupational health and safety laws?

**Justification:** The Project does not involve and is not complicit in any form of forced or compulsory labour. The Project is in compliance with national labour and occupational health safety laws. Thus, no risks or issues are expected from our project concerning this Principal.

#### c. Environmental/Ecological Safeguarding Guidelines

*Examples:*

##### **Principle 7. Climate and Energy**

7.1. **Emissions:** Will the Project increase greenhouse gas emissions over the Baseline Scenario?

**Justification:** The project does not lead to an increase in greenhouse gas emissions above the baseline scenario. By introducing the access to clean energy by Solar-PV power plants, the project reduces GHG emissions in comparison to the baseline scenario, where people would rely on fossil fuel based electricity generation. Thus, no risks or issues are expected from our Project concerning this Principal.

##### **Principle 9. Environment, Ecology and Land Use**

9.2. Vulnerability to Natural Disaster: Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions?

**Justification:** The project will not be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions.

## 4. The project's tentative timetable

February 2021 : Local Stakeholder Consultation Meeting

Q3 2021 : Stakeholder Feedback Round

Q4 2021 : Commissioning of the Project