



**Gold Standard**<sup>®</sup>  
for the Global Goals

TEMPLATE

# DEVIATION REQUEST FORM

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PUBLICATION DATE **11.04.2021**

Version **5.0**

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## A. To be completed by Gold Standard

### 1 | Decision

**Date** – 19/03/2024

#### 1.1 | Decision

The Deviation request is approved with the following conditions:

- The energy sources utilized for the operation of the project's street light lamps must exclusively originate from renewable energy sources.
- The Validation and Verification Body (VVB) is mandated to validate and verify the installation of the street light lamps to ensure the functionality of the energy sources. This includes assessing the battery system and ensuring there is no direct connection to grid electricity.
- During the verification process, the VVB is tasked with examining operation records to confirm the utilization of renewable energy sources in the event of a failure in the renewable energy supply system (e.g., malfunctioning solar

panels, batteries, etc.). Should grid electricity be utilized under such circumstances, the project's emissions must be duly considered.

**1.2 | Is this decision applicable to other project activities under similar circumstances?**

No

**B. To be completed by the Project Developer/Coordinating and Managing Entity and/or VVB requesting deviation** (Submit deviation request form in Microsoft Word format)

## 2| Background information

Deviation Reference Number	DEV_615	
Date of decision	19/03/2024	
Precedent (YES/NO)	No	
Precedent details	NA	
Date of submission	23/01/2024	
Project/PoA/VPA	<input type="checkbox"/> Project	ID – GS11657
	<input type="checkbox"/> PoA	ID – GSXXXX
	<input checked="" type="checkbox"/> VPA	ID – GSXXXX
Project/PoA/VPA title	PoA GS11615 – VPA 01 – Solar Lighting Mayotte	
Date of listing	05/08/2022	
GS Standard version applicable		
Date of transition to GS4GG (if applicable)		
Date of transition to Gold Standard from another standard (e.g. CDM) (if applicable)		
Date of design certification/inclusion (if applicable)		
Location of project/PoA/VPA	Host country(ies) Mayotte	
Scale of the project/PoA/VPA	<input checked="" type="checkbox"/> Microscale <input type="checkbox"/> Small scale <input type="checkbox"/> Large scale	
Gold Standard Impact Registry link of the project/PoA/VPA		
Status of the project/PoA/VPA	<input type="checkbox"/> New <input checked="" type="checkbox"/> Listed <input type="checkbox"/> Certified design <input type="checkbox"/> Certified project	
Title/subject of deviation	Application of AMS-II-L to solar communal lighting	
Specify applicable rule/requirements/methodology, with exact paragraph reference and version number	<b>Applicable requirement category</b> <ul style="list-style-type: none"> <li>- Principles &amp; requirements</li> <li>- Activity requirements</li> <li>- Impact quantification methodology</li> <li>- Contextual requirements</li> <li>- Product requirements</li> <li>- Templates</li> <li>- Others</li> </ul>	

Specify the monitoring period for which the request is valid (if applicable)	Start date	End date
Submitted by	Contact person name: Pierre Vergnes	
	Email ID: p.vergnes@fonroche-lighting.com	
	Organisation: Fonroche Lighting	
Validation and Verification body (VVB opinion shall be included, where required by the applicable rules/requirements or request is submitted by the VVB).	Project participant: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
	If yes; VVB name: TÜV NORD JI/CDM Certification Program (CP)  VVB Staff name(s): Dr. Gregor Kochaniewicz	
Any previous deviations approved for the same project activity/PoA/VPA(s)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

### 3 | Deviation detail

#### 3.1 | Description of the deviation:

*\*Guidance\** Use the space below to describe the deviation and substantiate the reason for requesting deviation from applicable rules/requirements. Please include all relevant information in support of the request. You are requested to follow the principles for requesting deviations, given in the [Deviation Approval Procedure/ Design Change Requirements](#).

Deviation detail (to be completed by Project developer):

We are developing a renewable energy project activity by replacing traditional grid connected street lamps with lamps supplied by electricity generated by solar panels. There is currently no methodology of TYP I (renewable energy type) for replacement of inefficient street lamps. According to the clarification [CL 219](#) to apply methodology of Type II (energy efficiency) a deviation from the applied methodology shall be submitted and approval shall be sought. For our project we intend to apply AMS.II.L “Demand-site activities for efficient outdoor and street lighting technologies” v 2.0 in following way:

Equation (2)

$$ES_{i,y}(\text{kW}) = (Q_{i,bl} \times P_{i,bl} \times O_{i,bl} \times (1 - SOF_{i,bl}) - (Q_{i,pl} \times P_{i,pl} \times O_{i,pl} \times (1 - SOF_{i,pl})))$$

ES<sub>i,y</sub> = Electricity saving

$TD_y$  = Average annual technical grid losses during year  $y$  for the grid serving the locations where the luminaires are installed, expressed as a fraction.

$Q_i$  = Quantity of baseline ( $BL$ ) or project ( $P$ ) luminaires of type  $i$  distributed and installed under the project activity (units)

$Q_{i,BL}$  and  $Q_{i,P,y}$  = Quantity of baseline ( $BL$ ) or project ( $P$ ) luminaires of type  $i$  distributed and installed under the project activity (units).

$P_{i,BL}$  and  $P_{i,P,y}$  = Rated power of the baseline and project luminaries of the group  $i$

$O_{i,BL}$  and  $O_{i,y}$  = Annual operating hours for the baseline and project luminaires in year  $y$

$SOF_{i,BL}$  and  $SOF_{i,y}$  = Annual Failure Rate of baseline and project luminaires calculated as a fraction of  $Q$ . The value for  $BL$  is assumed to be the same as monitored for  $P$  and may vary from year to year

Due to replacement of grid connected baseline sodium lamps of 150 W by 40 W solar supplied project lamps:

$$P_{i,BL} - P_{i,P,y} = 150W - 0W = 150W$$

And the equation 2 will be reduced to:

$$ES_{i,y}(kW) = (Q_{i,BL} \times P_{i,BL} \times O_{i,BL} \times (1 - SOF_{i,BL}))$$

The conditions defined in the CL\_219:

1. Clearly demonstrate that the project technology will include battery systems with enough capacity to power the street lighting and
2. the battery systems are only charged by solar panels but not by electricity from the grid

applies.

1. Battery systems with enough capacity.

Fonroche Lighting is realizing solar & photometric studies for each specific places and project we are realizing.

Studies done are collecting all the necessary data for sizing a solar streetlight (solar irradiation, type of infrastructure to light up, local norm for illuminance, night length, expected duration of the project). Our aim, by this way, is to provide 365 night of lighting guarantee per year, without any interruption in lighting performance of our product. To explain it more clearly, we're joining to this document an example of study realized for a municipality in Mayotte. This kind of study is done on the way for any kind of project.

2. Battery systems are only charged by solar panels

Our products are 100% off-grid (see technical documentation in annex 1). Each of solar streetlights is composed of a photovoltaic panel which is capturing sun beams and transforming this energy into electricity. This electricity is then stored into a battery which is storing electricity during day time and which will realise partially this energy during night time for feeding an LED lamp which will supply light around the solar streetlight. No energy and no electricity is taken from the grid for supplying the

necessary power to the battery in order to make themselves functioning 365 nights per year.

3.1.1 | VVB opinion (to be completed by VVB, if applicable):

*\*Guidance\* If required by SustainCERT or Gold Standard for this particular deviation, please add here the VVB's opinion.*

In the opinion of the VVB the application of the Type II methodology AMS.II.L "Demand-site activities for efficient outdoor and street lighting technologies" v 2.0 to the this Type I project activity will result in correct calculation of emission reduction.

**3.2 | Assessment of the deviation:**

*\*Guidance\* Use the space below to describe how the deviation complies with the requirements, and, where applicable, the accuracy, completeness and conservativeness is ensured. Please include all relevant information in support of the request.*

3.2.1 | Deviation assessment (to be completed by Project developer):

The use of this methodology TYPE 1 (renewable energy type) seems to be the most adapted one for the project we intend to realize which to install new streetlighting capacities in Mayotte using solar energy for their own functioning and which will avoid any further development of conventional streetlighting projects.

Thanks to the project we are reducing the fossil fuel consumption which is necessary for the functioning of conventional streetlight.

This changing into type of methodology applicable will allow us to be more in line with the real impact of the project, and with the real structuration of the project (using renewable energy for its own functioning).

3.2.2 | VVB opinion (to be completed by VVB, if applicable):

*\*Guidance\* If required by SustainCERT or Gold Standard for this particular deviation, please add here the VVB's opinion.*



In the opinion of the VVB the application of the Type II methodology AMS.II.L “Demand-site activities for efficient outdoor and street lighting technologies” v 2.0 to the replacement of the grid connected street lamps by solar panel powered lamps does not contradict with applicability conditions of the methodology. The application of the methodology will result in accurate and complete calculation of emission reduction. The project luminaries are going to be permanently real time monitored and maintained. In the opinion of VVB application of the  $SOF_{i,BL}$  to the project activity will result in conservative calculation of emission reduction.

### 3.3 | Impact of the deviation:

*\*Guidance\* Use the space below to describe the impact of the deviation on project design, safeguarding principles assessment, SDG assessment, emissions reductions, monitoring frequency, data quality, potential risk or any other relevant aspect of the project. Please substantiate the impact assessment with relevant and verifiable data/information.*

#### 3.3.1 | Impact assessment (to be completed by Project developer):

The deviation request and changing any methodology type’s applicable will not cause any other potential deviation onto the project design. The project aim’s is to use the most efficient methodology applicable according to project expectation.

All the project requirement will remain the same as the commitment of Fonroche Lighting taken in both PoA and VPA done for Mayotte’s project.

#### 3.3.2 | VVB opinion (to be completed by VVB, if applicable):

*\*Guidance\* If required by SustainCERT or Gold Standard for this particular deviation, please add here the VVB’s opinion.*

The deviation does not result in deviation from project design as specified by the applied methodology. The non-efficient streetlamps in the baseline are going to be replaced by efficient streetlamps. All safeguarding principle as defined by PAR\_Safeguarding-Principles-Requirements are met and sustainable development indicators are defined. Methodology requirements for monitoring and emission reduction calculation are not affected. The only potential risk related to recycling of components of the luminaries, solar panel and batteries, are met by PP cooperation with recycling companies. In the opinion of the VVB the deviation does not result in any additional risk.

### 3.4 | Documents:

*\*Guidance\* List of documents provided (note that once a decision has been made by Gold Standard, this deviation form along with supporting documents will be made public on the Gold Standard website. If any of the supporting documents are confidential, please indicate here to ensure they are omitted.)*

Version number	Release date	Description
5	11.04.2022	Additional information added: <ul style="list-style-type: none"> <li>- date of listing, design certification, transition</li> <li>- standard version</li> <li>- specific reference to a requirement deviated from</li> <li>- any previous deviations/design changes approved</li> </ul> Guidance on VVB opinion
4	14.01.2021	
3	16.07.2020	
2	03.05.2018	
1	01.07.2017	Initial adoption