

## Application of the Oeko-Institut/WWF-US/ EDF methodology for assessing the quality of carbon credits

This document presents results from the application of version 3.0 of a methodology, developed by Oeko-Institut, World Wildlife Fund (WWF-US) and Environmental Defense Fund (EDF), for assessing the quality of carbon credits. The methodology is applied by Oeko-Institut with support by Carbon Limits, Greenhouse Gas Management Institute (GHGMI), INFRAS, Stockholm Environment Institute, and individual carbon market experts. This document evaluates one specific criterion or sub-criterion with respect to a specific carbon crediting program, project type, quantification methodology and/or host country, as specified in the below table. Please note that the CCQI website [Site terms and Privacy Policy](#) apply with respect to any use of the information provided in this document. Further information on the project and the methodology can be found here: [www.carboncreditquality.org](http://www.carboncreditquality.org)

Criterion:	<a href="#">4.1 Enhancing adoption of low, zero or negative emissions technologies and practices</a>
Project type:	<a href="#">Household biodigesters</a>
Date of final assessment:	<a href="#">31 January 2023</a>
Score:	<a href="#">3</a>

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# Assessment

## Relevant scoring methodology provisions

The scoring approach assesses the degree to which the technologies or practices applied under the project type facilitate the transition towards net zero emissions. The main consideration is whether the project type employs negative, zero or low emissions technologies or practices. Moreover, it is considered whether the project type poses risks for locking-in technologies or practices that may result in an increase in GHG emissions in the long-term, thereby undermining the achievement of net zero emissions, or whether the project type employs innovative technologies or practices which may accelerate the transition to net zero emissions. See further details on the scoring in the methodology.

## Assessment outcome

The project type is assigned a score of 3.

## Justification of assessment

This assessment refers to the project type “Household biodigesters” which is characterized as follows:

“Generation of biogas by anaerobic digestion of livestock manure, and possibly other household waste such as kitchen waste, through household size biodigesters (e.g., with a capacity of 2 m<sup>3</sup>). The biogas is used by households for cooking. The project type may include a compost unit that utilizes the fermented sludge from the biodigester to produce organic fertilizer. The project type reduces emissions by (i) avoiding methane emissions from the uncontrolled decomposition of livestock manure and (ii) by reducing the use of firewood or fossil fuels for cooking activities. Projects are located in rural areas in developing countries.”

According to the scoring methodology, household biodigesters partially belong to (i) technologies and practices that generate indirect upstream or downstream emission reductions as a result of the use of technology or practice, since the project type involve the use of renewable energy which reduces greenhouse gas (GHG) emissions from non-renewable biomass or fossil fuels, and partially to (ii) technologies and practices that emit comparatively lower levels of GHG emissions during their operation but still cause emissions, as the project type leads to continuous GHG emissions from manure management..

In the case of (i), the methodology assigns a default score of 5 and a score of 4 for technologies or practices that have a superior alternative or do not represent the best available technology. In the case of (ii), the methodology assigns a default score of 3. A score of 4 is applied to technologies or practices that use best available technology, and for which the risk of locking-in investments that lead to continuous GHG emissions is low. A score of 2 applies to technologies or practices that do not use best available technology and for which the risk of locking in investments which lead to continuous GHG emissions is significant. As continuous GHG emissions from manure management are a central aspect of this project type and result in a lower score, this aspect is the main basis for assigning the score.

We do not consider household biodigester as the best available technology to provide cooking services. Household biodigester can involve significant continuous GHG emissions (e.g., from methane leaks and venting). Other cooking technologies may be superior in terms of their GHG emissions impact, such as solar cookers or electric cooking with renewable electricity (once it becomes available). Household biodigesters may involve some lock-in risks, as they may continue to be used once installed, even when superior technologies become available. On the other hand, they do not require a huge investment and can easily be abandoned or dismantled. We therefore do not deem the lock-in risk as significant. Therefore, a score of 3 is assigned to this project type.