

Call for proposals

Sustainable rain- and greywater management solutions for a mobile “tiny house” in Switzerland



Background

Cewas Middle East and the Swiss organization energietal toggenburg issue this call for proposal to find a **sustainable, small-scale, decentralized solution** for collection, treatment and reuse of rain- and greywater in a **mobile living facility / ”tiny house”** that is designed to promote **sustainable livelihoods**.

Energietal toggenburg’s mobile home is built on the principles of upcycling, reuse and the usage of self-sufficient, ecofriendly technologies. It is currently introduced to different municipalities in the Swiss region of Toggenburg, where it is rented out as an event locality to interested community members. Next to heating, electricity and a dry toilet, the facility is equipped with a kitchen that includes a kitchen sink as well as with a bathroom including a shower. Kitchen sink and shower are currently supplied with fresh water tanks that have to be refilled periodically. The greywater is currently collected in tanks for later disposal. In addition to that, the roof of the facility is equipped with copper gutters for rainwater collection. The rainwater is currently not being collected nor used but is meant to be used as irrigation water for the planned vertical garden on one of the outer walls of the vehicle.

Once the showcase period has ended in December 2019, the tiny house is going to be gifted to a local group of artists and artisans who form a community of practice exploring sustainable, alternative and self-sufficient livelihoods.

Energietal toggenburg is looking for an improved, self-sufficient and eco-friendly solution for managing rain- and greywater in the tiny house. The solution must be based on the principles of decentralized sanitation, resource recovery and safe reuse.

The winner of the call for proposal receives a grant of up to USD 5000 to design and install the proposed solution in Switzerland.

Requirements

Respondents to the call for proposals must be:

- Capable of designing (according to the technical details provided) and installing a solution for energietal toggenburg that includes a proven sustainable technology for collection, treatment and reuse of rain- and greywater. The solution must take into consideration the Swiss climate.
- Member of the founder or management team of an established organization/company or start-ups, that has a proven, tested technology.
- Familiar with the principles of decentralized sanitation, resource recovery and safe reuse as well as a self-sufficient, sustainable lifestyle.

We offer:

- A unique marketing opportunity with great potential for creating new partnerships, acquiring customers and augmenting the visibility of the winner's brand.
- A grant of up to USD 5000 for the winner of the competition.
- Facilitation of the process to ensure a satisfactory outcome for all involved parties

Use of the grant

The winner must use the grant to cover material and travel costs related to the development and installation of the proposed solution. Travel costs include expenses for flight tickets and food. To budget these expenses, use the following lump sums as guidance:

1x return flight ticket to Switzerland: 1200 USD or less

Food expenses/day/person: 50 USD or less

The definitive use of the grant and corresponding budget will be subject to negotiations between the winner, cewas Middle East and energietal toggenburg.

Application Procedure

The application procedure is a two-stage process.

1. Applicants must submit an application by May 15, 2019 using the application form available at www.cewasmiddleeast.org/mobiletinyhouseapplicationform. Technical details of the applicant's solution can be annexed, but the initial proposal should be a general description of the approach based on the information provided in this document.
2. The most promising proposals will then be shortlisted and interviewed before the final selection. Detailed technical information required for the design of the solution will be provided as needed.

The solution should be installed and in operation before October 2019.

Format of the application

Please submit your application via the application form available at www.cewasmiddleeast.org/mobiletinyhouseapplicationform.

The application has to be in English. Language competence is not an evaluation criterion. The application is meant to provide the applicants the opportunity to present themselves as a company, give an introduction to their product/service and describe the approach by which they would use the grant to provide an improved and sustainable solution for energietal toggenburg. The application should be as detailed as possible based on the information provided in this document.

Technical details of the current set-up

Additional information will be submitted to the shortlisted candidates.

Dimensions: The wagon is 2.98m x 9.22m x 2.47m.

Fresh Water: Fresh water for kitchen sink and shower is currently being supplied by a 100l-tank to the facility which has to be refilled periodically.

Grey Water: The grey water from kitchen sink and shower is collected in a separate tank which has a capacity of 100 liters and is emptied periodically into the (municipal) sewerage system. Alternatively, the wagon can be connected directly to the sewerage system (where possible).

Rainwater collection: The roof of the wagon is equipped with two copper gutters that collect and transport rainwater for disposal or potential reuse. The narrower (2.98m x 2.47m) side of the wagon is meant to be equipped with a vertical garden/green wall.

Energy: The tiny home is equipped with photovoltaics with a combined output of up to 4.25 kilowatts (kWp). Energy is stored in a 6 kWh battery, surplus power can be fed into the grid. Energy is used for lighting and more importantly heating. Despite being highly energy-efficient and complying with the very strict "Minergie" standard, power consumption spikes in cold winter nights.

Submission deadline:

Applications must be submitted by May 15, 2019.

Contact

Simon Joncourt, cewas project manager
Hirschengraben 8
3011 Bern
simon.joncourt@cewas.org

Illustrations



The tiny house seen from outside



Kitchen with kitchen sink



Example of a tank used to store fresh- and greywater



Wall of the tiny house intended for the vertical garden