

maxx | Blockchain Hub

Safe and transparent solar PV installations

What is the maxx | Blockchain Hub?

There is a need for reliable and affordable electricity in Zimbabwe. Solar photovoltaic (PV) systems can provide this electricity but the initial investment often exceeds financial capability of households, companies and institutions. Schools and hospitals benefit a lot from PV systems but can rarely afford them. At the same time, many investors, social investors and charity donors are willing to finance projects. The problem is, how do they get involved? And how can they trust each other? The maxx | Blockchain Hub brings investors and clients together and provides a safe environment for everyone.



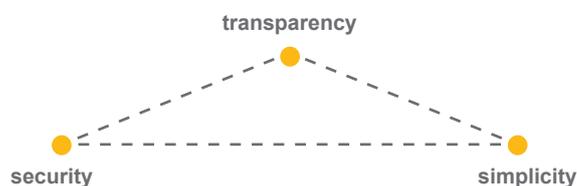
What it does

The maxx | Blockchain Hub links people with money and people who want a PV system. It provides a legal, administrative and organisational framework. The following tasks are carried out through the maxx | Blockchain Hub:

- Acquisition of capital and projects
- Organisation and monitoring of installation
- Contracting with the clients
- Collection of monthly rent for the PV system
- Monitoring, maintenance and repairs of the system
- Bookkeeping and administration
- Return on investment to investors
- Establishment of a fund for maintenance and funding of more installations

How it works

The PV system is connected to a smart meter that records the electricity production and documents it in the blockchain protocol. The blockchain technology enables maxx to transparently, safely and easily function as a link between investors and clients.



Transparent: All financial transactions are protocolled on the maxx | Blockchain Hub and everyone in the project can see them. Project participants will get an online login for the maxx | Blockchain where they see the current production and their contribution.

Safe: Investors and donors have proof that their money has reached its destination and the system is working, which reduces risk. Also, the publication on the blockchain is automated: no chance for fraud or corruption!

Simple: The high degree of automation in the project management process makes everything fast and easy. A contract is set up and saved on the blockchain at the beginning of the project. Large parts of the accounting are done automatically. Less costs for administration but increased benefits and safety!



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Do you want to try the concept?

Contribute to the first pilot projects as a donor, visit our crowd funding profile:
www.betterplace.org/en/projects/58180

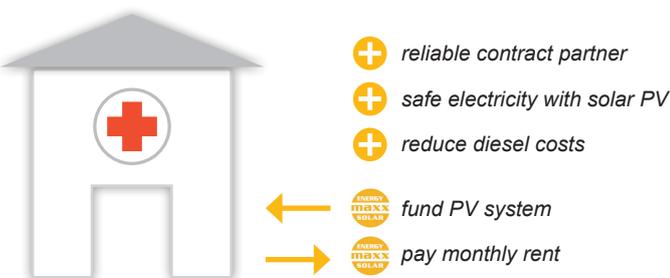
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What can it be used for?

The maxx | Blockchain Hub can be used to finance and build PV systems for everyone! However, because hospitals and schools have a greater positive impact on a whole region and are reliable and trustworthy institutions we have decided to start by promoting PV projects for schools and hospitals in Zimbabwe.

The first project is a PV system for Karanda Mission Hospital in Zimbabwe. The hospital wants to install a PV system as automatic back-up in case of blackouts, and to reduce Diesel and electricity costs from the grid. maxx-solar energy together with Sunergy Zimbabwe raised funds to finance the PV system, most of them as donations and a smaller share as investments. Karanda Mission pays a monthly rent for the use of the system.

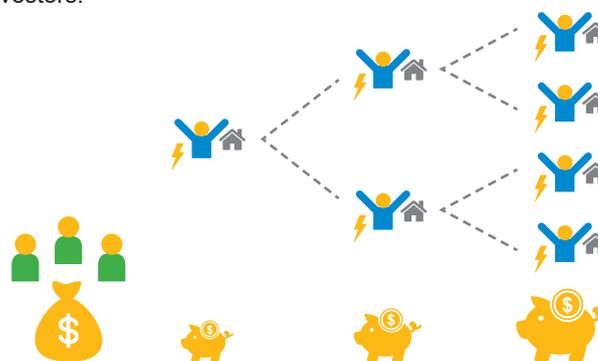


Why is the maxx | Blockchain Hub special?

The maxx | Blockchain Hub was developed to solve typical problems raised by PV projects:

1. High risk for investors and as a result high financing costs
2. Short system life span due to lack of funds and skills for maintenance.

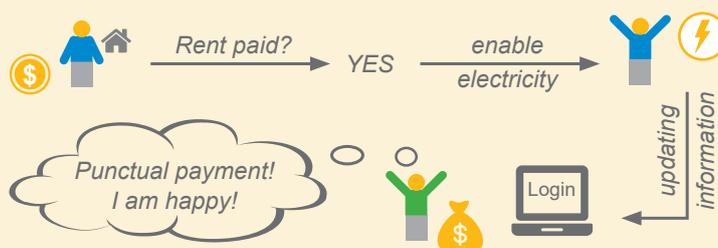
That is why the system rent is used to pay back the investment but also to create a revolving fund. The fund covers maintenance costs and serves as the basis for the installation of further projects. By organising everything through the maxx | Blockchain Hub we make sure that quality standards for PV installations are maintained, which benefits the clients and the investors.



The more projects we realise, the bigger the fund and the more projects can be financed.

What is Blockchain?

A blockchain can be compared to a collective memory on the internet. The memory is saved on many different computers and each computer owns a full copy. The collective memory answers every question based on its records. If the majority agrees that the answer is yes, or a requested transaction is possible, it is approved. The transactions are then saved in every memory. It is very difficult to betray a blockchain because the memory of the majority of the collective would have to be changed which is considered impossible. Because it is so safe, the first application of blockchain was a virtual currency: the Bitcoin. Bitcoins do not exist as real coins, only in a digital wallet. But they can be used to make payments just as in normal currency transactions.



But there is more to it than just currency. For the maxx | Blockchain Hub, we use the Ethereum blockchain and create smart contracts for each project. These contracts work automatically, similar to an Excel IF-function, individual conditions can be set. Once they are fulfilled, automatic actions follow.

E.g. if the client pays rent for the system, the electricity flow is enabled. Just as with a prepaid meter. And if anyone contributes to the PV system, they get an automatic update on the electricity provided.

The dena RES Project Zimbabwe is part of the worldwide dena Renewable Energy Solutions Programme coordinated by the Deutsche Energie-Agentur (dena) – the German Energy Agency – and supported by the German Federal Ministry for Economic Affairs and Energy (BMWi) within the German Energy Solutions Initiative.



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