Blockchains as a game changer for electricity mini & micro grids?

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Connecting Bits and Atoms for Development
Our vision: decentralized governance models for a better world
GIZ as an „honest broker“ in the blockchain space

The missing link in the chain between bits and atoms
The GIZ Blockchain Lab

Connecting bits and atoms for development

The Blockchain Lab examines and develops governance models für Distributed Ledger Technologies (DLTs) in the context of the 2030 Agenda for Sustainable Development.

At the interface of the startup ecosystem, public partners, research institutions, and the private sector, the Lab identifies the most promising blockchain use cases and create bridges between innovators (bits) and societal stakeholders (atoms).
GIZ projects within the energy sector
Distributed Ledger Technologies

An innovative IT-solution to transform the way we handle data

A blockchain is a constantly growing list of transactions which are stored in blocks and are secured through cryptography. A decentralized network of computers is processing, verifying and validating all entries.

Promises of DLT-solutions

• **Transparency**: Traceability of transactions

• **Disintermediation**: „Creating trust through technology, not through authority“
  • Crypto-economics: incentive structures and game theory as a vehicle for new forms of collaboration

• **Resilient and secure IT-infrastructure**: e.g. less blackouts

• **Inclusion**: lowering potential entry barriers

• **Automation** of contracts or processes (process efficiency)
DLT as a useful tool for electricity mini grids?

Setup: Rural Electrification in an African country (GIZ-project)

- Off-Grid locations
- Mainly diesel generated electricity
- Little to no grid connectivity
- Little to no incentives to invest in renewables
- Payments and the systems underlying it are limited
DLT as a useful tool for electricity mini grids?

DLT & Finance Solutions
- Asset Financing
- Payment Settlements

DLT & Grid Solutions
- Grid Monitoring
- Grid Balancing

DLT & New Electricity products
- P2P-Trading (local energy markets)
- Certification of green energy
Thank you!

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