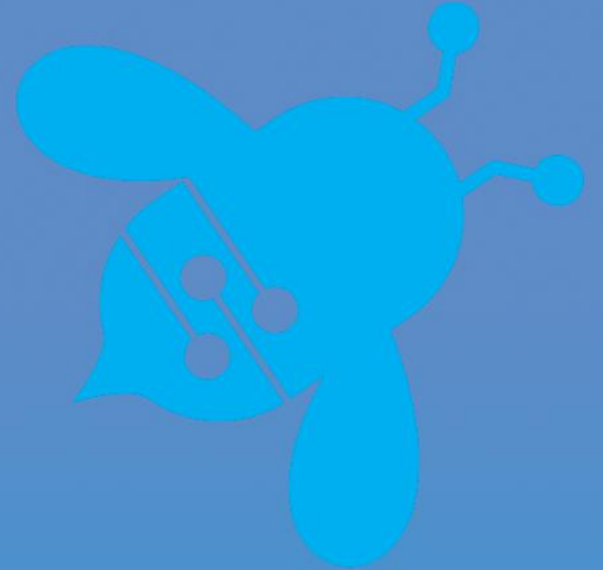


EWZ Challenge 3

Virtual Energy Storage

Team “Energy Online”

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Michael Stemmler (DINFK),
Simon Oeschger (DMTEC),
Stefan Zemljic (DINFK)





Problem

- Today, 40% nuclear energy → goal: 0% by 2034
- Slow growth of renewables (incentives, storage)

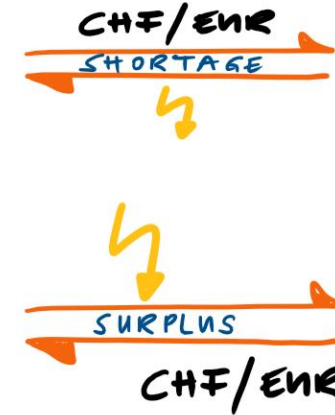
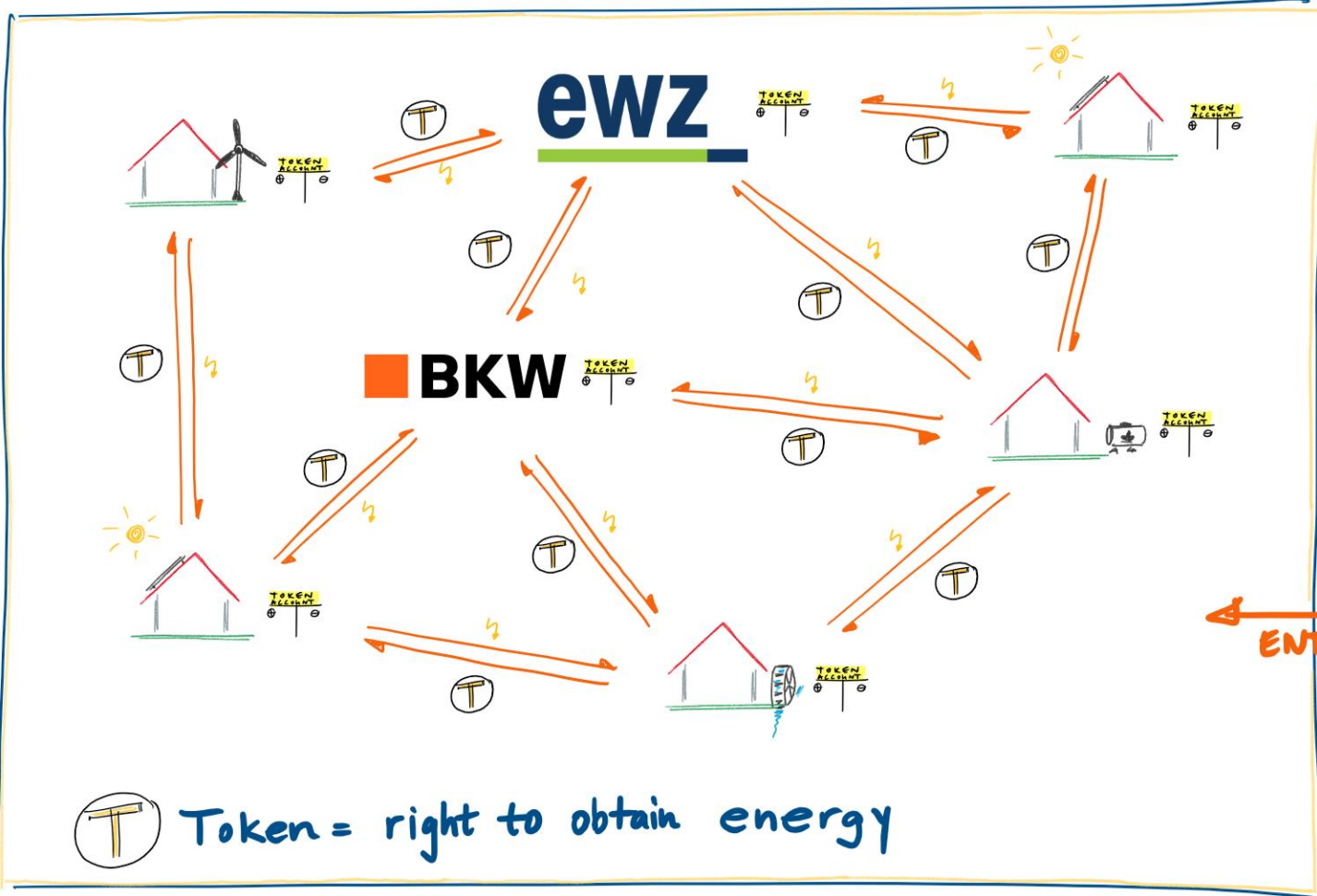
Solution

- Create an incentive system to grow renewables (DAO)
- Store “the right to obtain energy” as a token

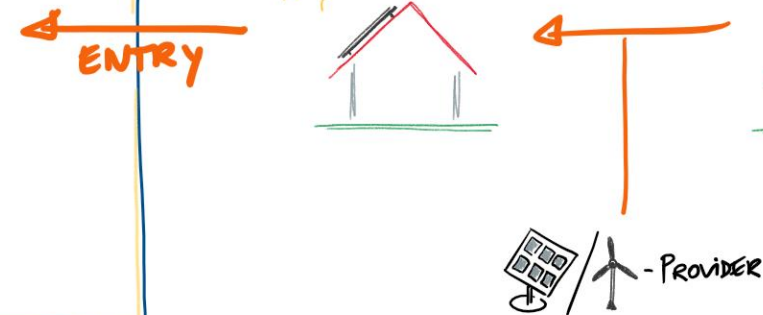
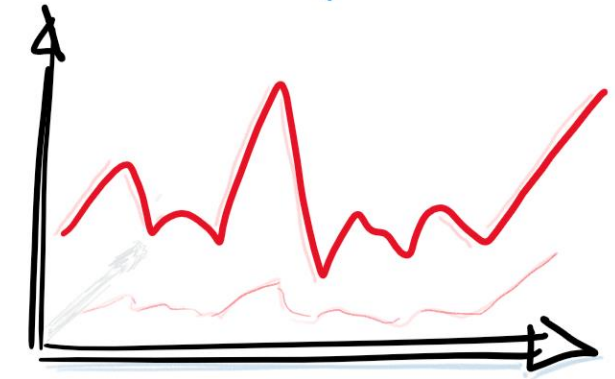




DAO - DECENTRALIZED AUTONOMOUS ORGANISATION



ENERGY MARKET





Disruption Potential

- Power suppliers lose monopolistic positions
- P2P trading without (cantonal) borders
- DAO acts as a very efficient self growing system
- DAO acts as a virtual power plant for power suppliers
- EWZ = Participant in DAO + grid, pv, meter provider

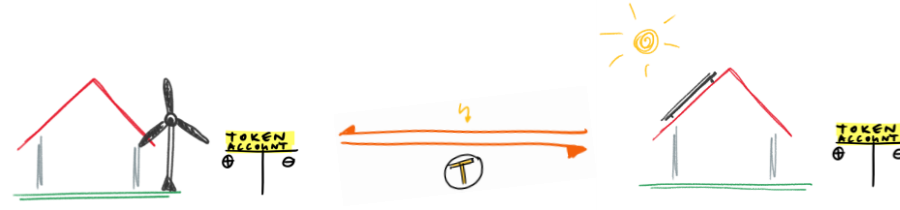
Difficulties / Open Challenges

- Secure smart meters and information transfer
- Legal uncertainty (Certificates, Token-qualification, ...)

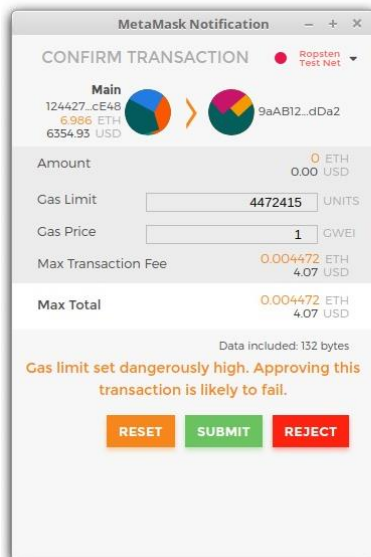




Software Demo



User



Request balance

Tokens: 1000014000

Destination:

Amount:

Send tokens

Supplier:

0xbb7033b360436e996e844

kWh:

10

SmartMeter:

0x6366bfb2428792ae1ec5f8

Price (total, not per kWh):

14000

Request Energy

SmartMeter

kWh:

20

Report production

Eventlog:

10 kWh bought

Purchase got notified