

EDUREC

EDUcation **R**enewable **E**nergy **C**enter



Idea and Purpose:

EDUREC

impart knowledge
and
convince with applications

EDUREC

3 Priorities

1. Information and Training Centre

Vocational-School

2.

Workshop

Production School

3. Shop

Curriculum

Training material - Modules

- 1. Basics of sustainable action**
 - 2. electrical engineering**
 - 3. generator technology**
 - 4. photovoltaics**
 - 5. solar thermal energy**
 - 6. wind power**
 - 7. Biomass/biogas**
 - 8. hydraulic power**
 - 9. mechanical energy**
 - 10. energy business**
-
- ★ Methodology of instruction / workshop work/**
 - ★ online courses**

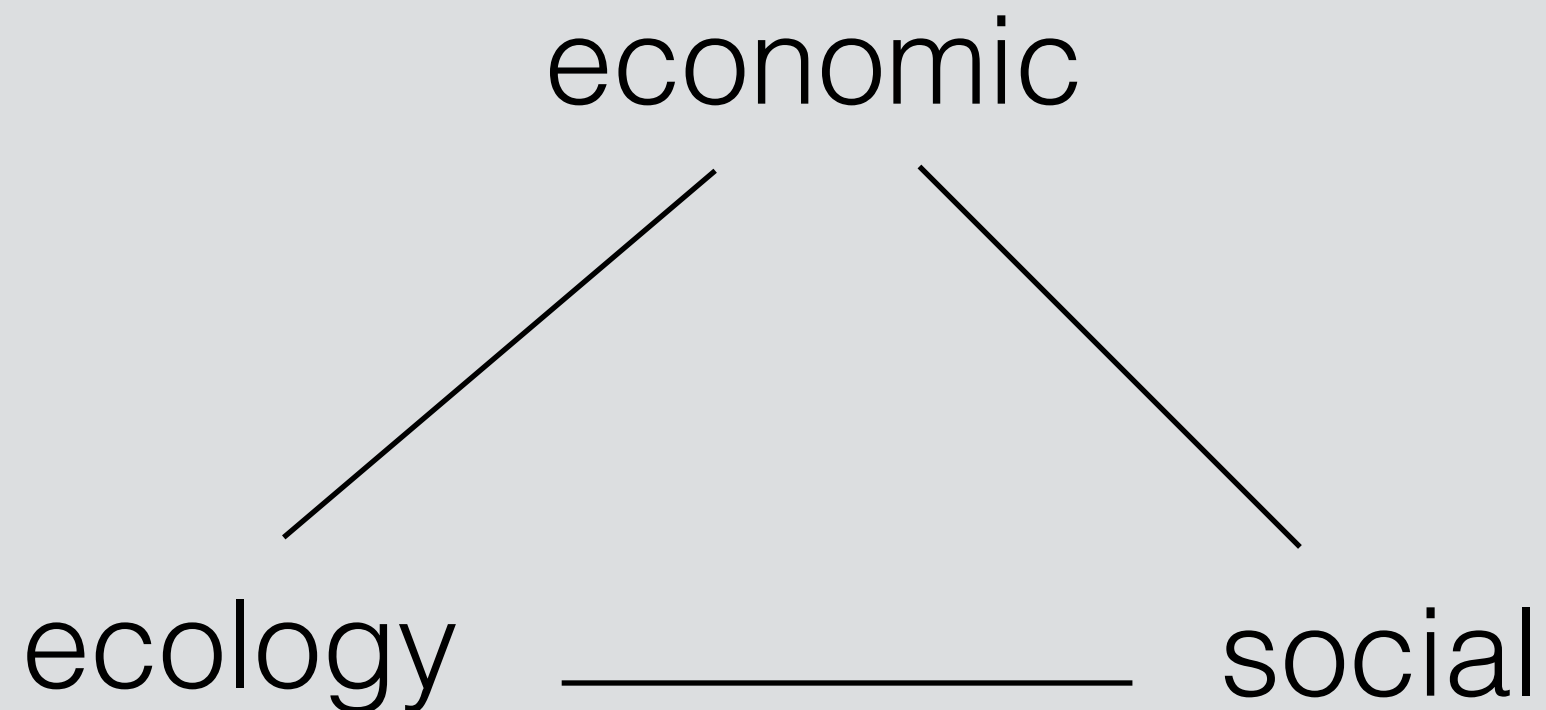
17 Development Goals



Goal 7:

Securing access to affordable,
reliable, sustainable and modern
energy for all

Sustainability triangle



3 R's

reduce, replace

fossil fuels (wood, charcoal, Diesel, Kerosene)

reuse

recycle

Small Systems

for decentralized use

- photovoltaics
- Solar Thermal
- biomass
- Wind force
- Hydropower

For all points
working examples
already exist!

Small, decentralized installations
renewable energy

Produced by using
local materials in local conditions

photovoltaic



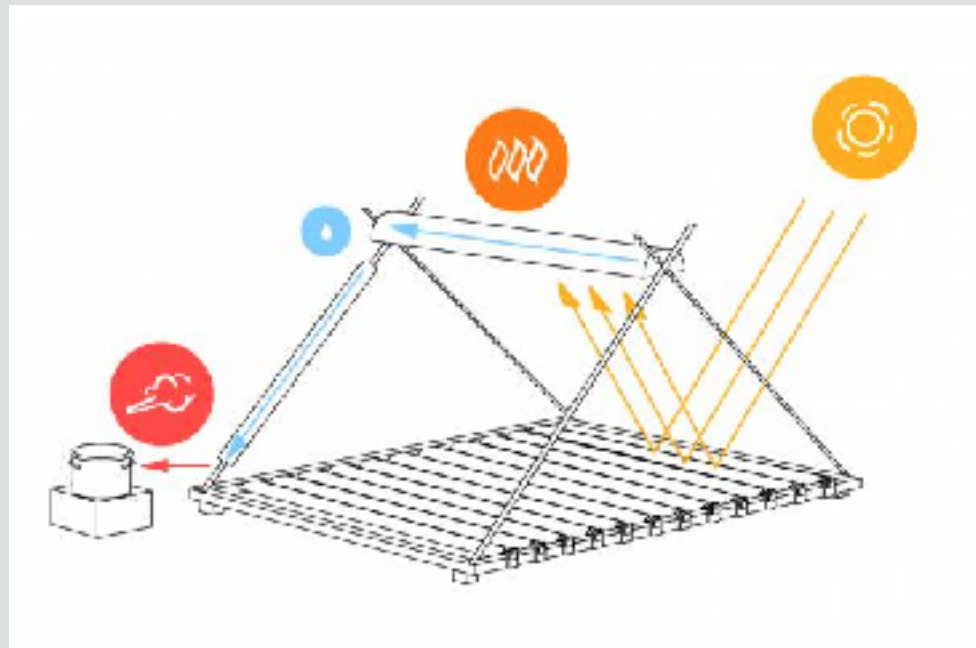
Solar Thermal



Solar Thermal



Solar Thermal



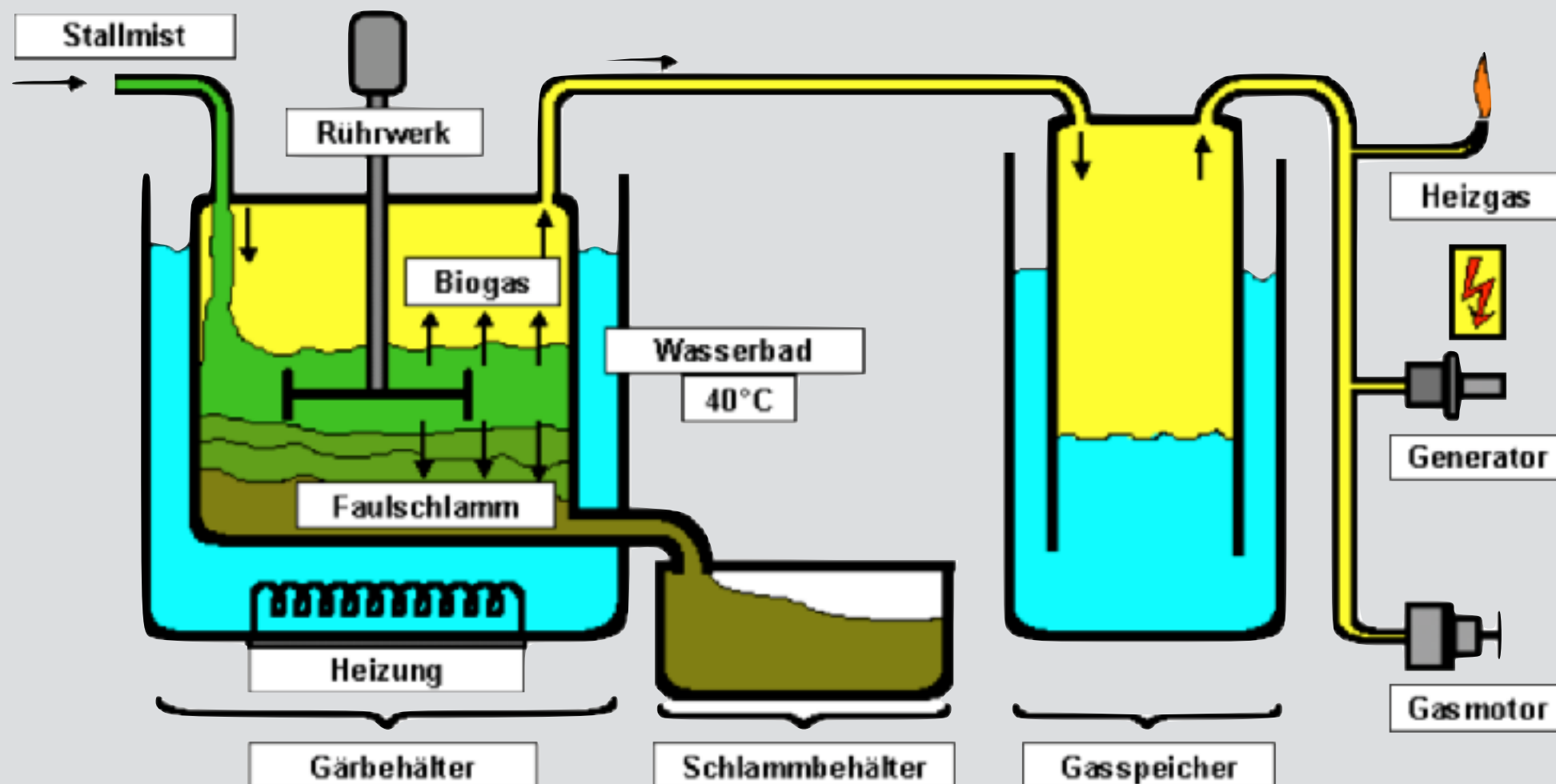
300°-400° C



Biomass



Funktionsweise einer Biogasanlage



Biomass



Wind Force



Landesstelle



KitRad by Hugh Piggot

https://prezi.com/oq_1zftak5sy/rotor/



https://prezi.com/oq_1zftak5sy/rotor/

Transkript von Rotor

Umgewickelte Lichtmaschine aus Auto

Einfache, selbstgelötete Ladeelektronik aus zugekauften Bauteilen

12 V Blei-Säure Batterie als Energiespeicher

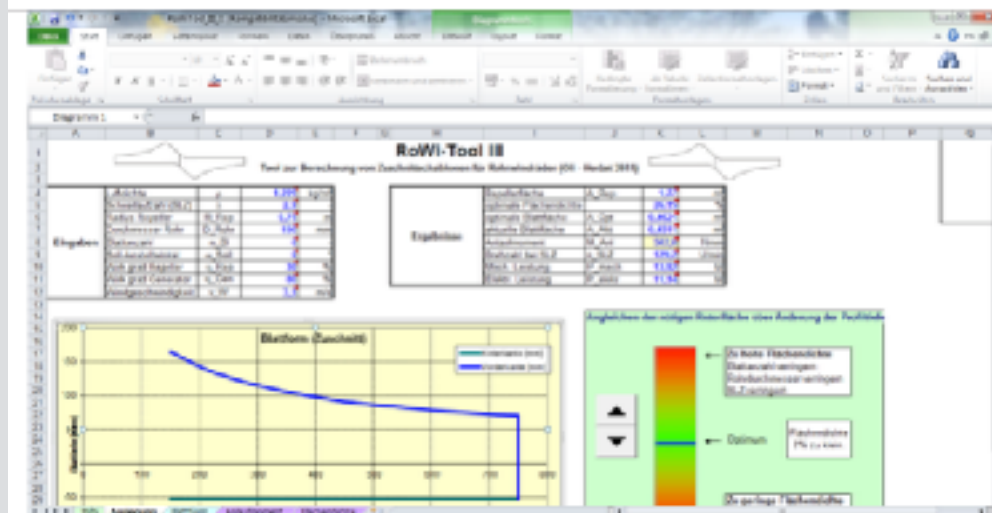
5 V Step-Down-Wandlung zum Laden von USB-Geräten

Rotor

Gefertigt aus Kanalgrundrohrresten

Winglets verbessern aerodynamische Eigenschaften

Schnittmuster mit RoWi - Tool III



Generator und Ladeelektronik

Off-Grid-Nutzung

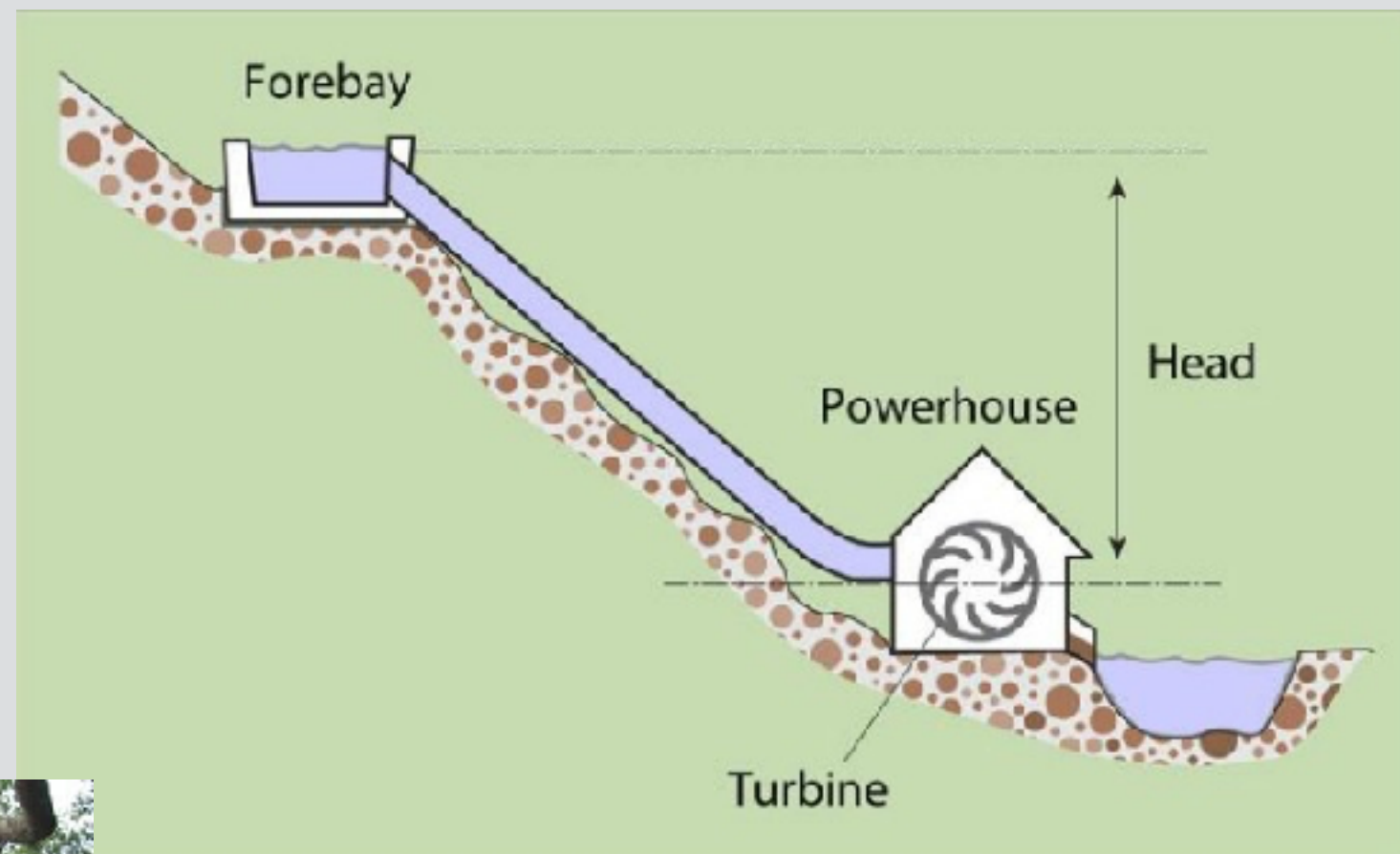
Geringe Strommengen können über Zeit gesammelt werden
Versorgung von Funkgeräten bzw. Mobiltelefonen lebensrettend

Durchschnittlich 22 W möglicher Ertrag

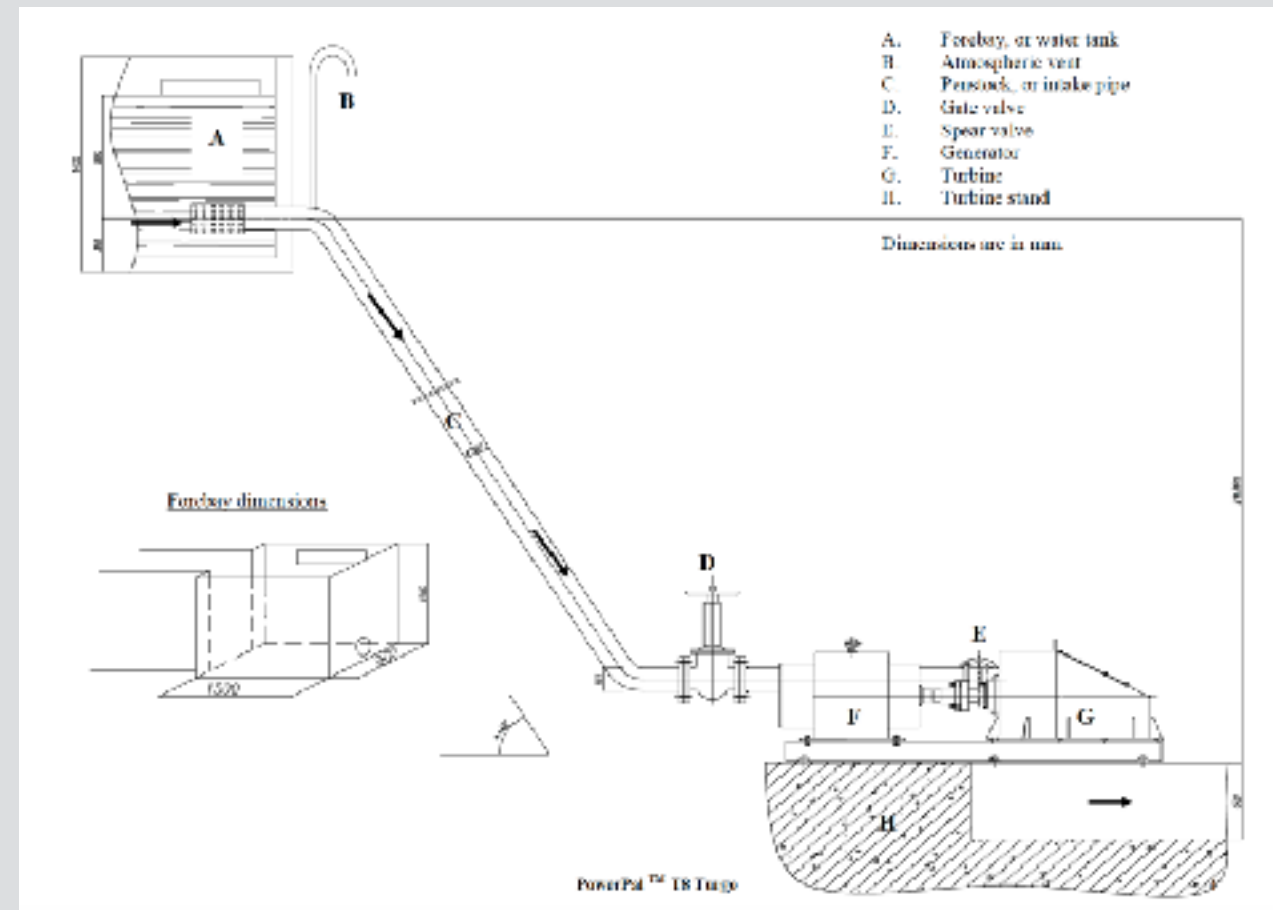
Jahresproduktion 200 kWh

- ca. 6% eines 2-Pers.-Haushalt

Hydropower



Hydropower



Mechanic Power



Mechanic Power



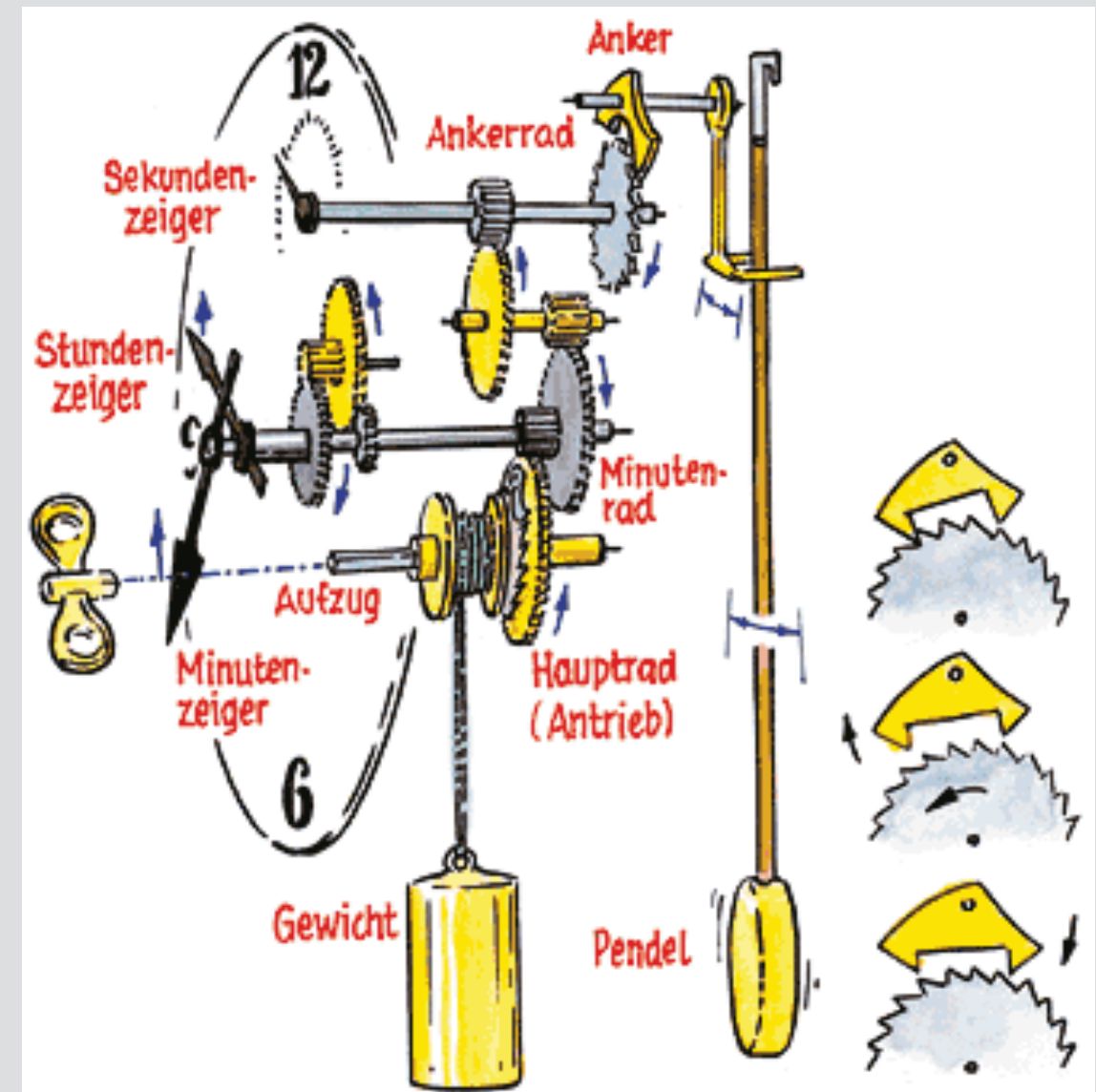
Mechanic Power



Mechanic Power



Mechanic Power



Every region, every
place needs its own
form of energy

Teachers and students in Berlin
participate in the project:

equip EDUREC
with equipment
and teaching materials

Other equipment
for the workshop:

Tools, machines for:
Metal, wood, plumbing, electrical

(Collected and compiled by the Berlin crafts industry)

One option

Initial training

Regional Office for the Promotion
of Industrial Occupations in
Developing Countries

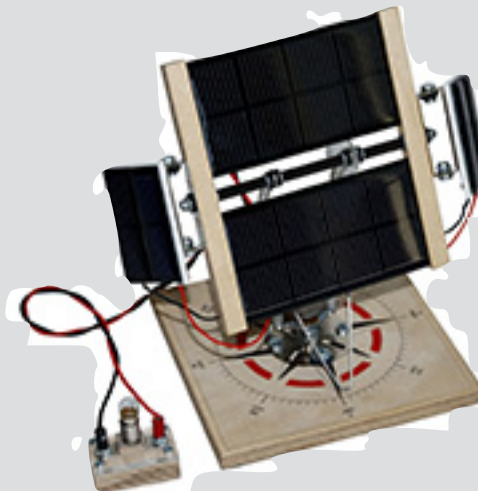
Berlin

Educational materials

- German
- English

Educational materials

**teaching models
homemade**



**Solarvillage Kettmanshausen
Prof Bley**



training material

Online course PV technology





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Partner:

Bintumani D-SL e.V.
professional competence vocational schools in Berlin
SRH College/University
Landesstelle für Entwicklungszusammenarbeit
KitRad
Dr. Krebs/Greenstep
Solarvillage Kettmanshausen/ Prof Bley

...

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Partner in Sierra Leone:

barefoot women solar engineers

Bintumani D-SL e.V

NGOs in Sierra Leone

Sierra Leone (West Africa)

Bintumani D-SL e.V.
since 1998

- Hospital
- Pediatric Surgery
- Training workshop
- Metal, wood, computers
- Waste Management
- Energy for small villages





Thank you
for your attention

Ideas ?

