

# Impulses for a sustainable future



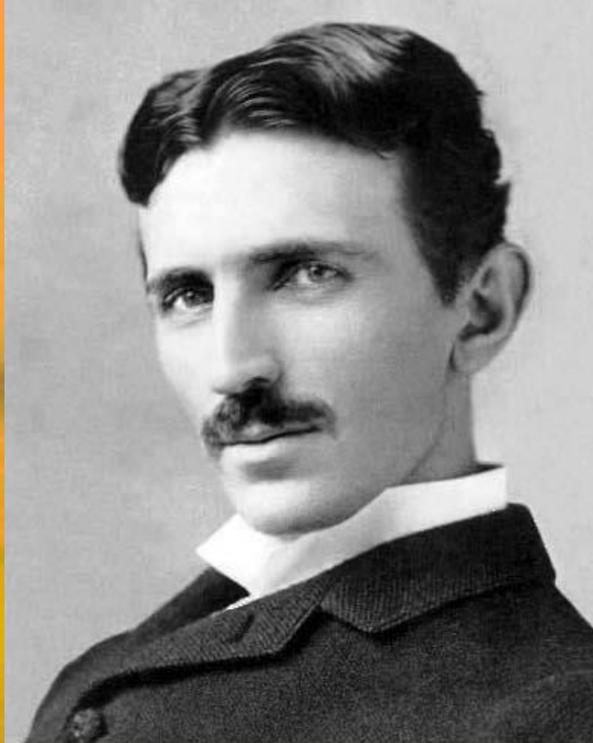
Such a wonderful nature and planet! Isn't it worth to protect this treasure?

There are so many problems, but there are many sustainable solutions as well!



Appropriate  
Technologies

## The great pioneer, Nicola Tesla (1856 - 1943)



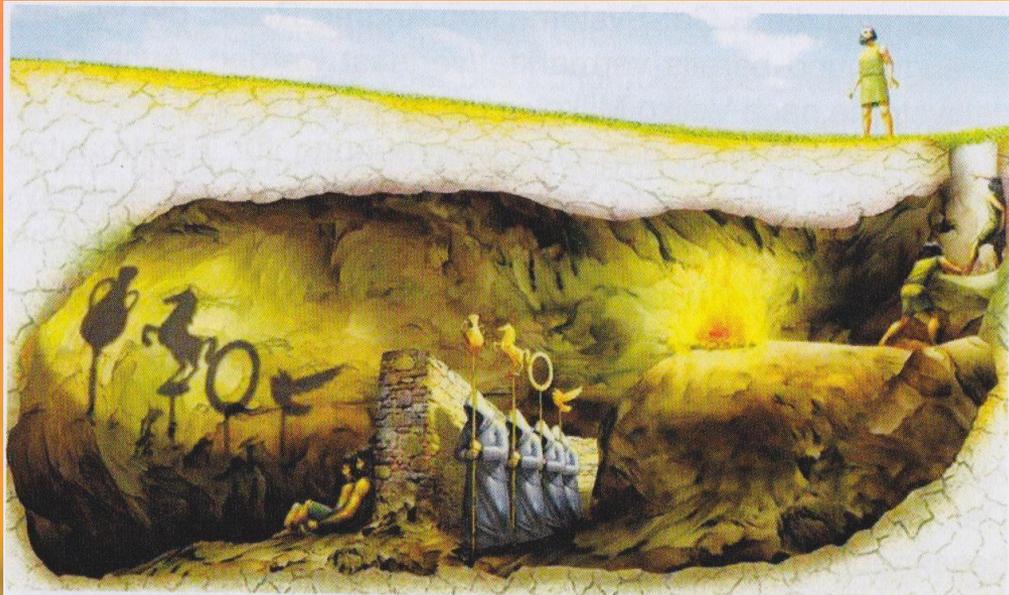
Before many generations pass, our machines are powered by a force that is available throughout our universe. (...) Energy is everywhere in space. (...) if this energy is kinetic - **AND WE KNOW THIS CERTAINLY** - then it is only a matter of time that mankind successfully connects its energy technology to the actual natural wheels.

Nikola Tesla, Lecture on May 20, 1891 in New York;

And he proved that this sentence is correct!

**Maybe it is time now for human to connect to the “natural energy wheels” to free human?**

# A Spiritual Approach



Plato's Parable of a Cave

- If we look the size of the sun, full of energy and the size of the Earth, this energy shouldn't be enough for planet Earth?
- Many people in the world pretend that God (who has many names) created the world with all species and nature in an amazing way based on a genius plan far beyond human imagination and limitation. But somehow **He forgets about the energy!** Really?
- We get Photons from the sun, which cross the vacuum of the space, invisible in space. When they touch the Earth they release their energy and ensure life and electrical power (Solar-cell). And there shouldn't be no another wave, which is doing that also in the night? Why God didn't create that? What about the **Neutrino**, available everywhere at all times and able to deliver energy (see below)? The beginning of a new Era?

# Potential of Solar Power



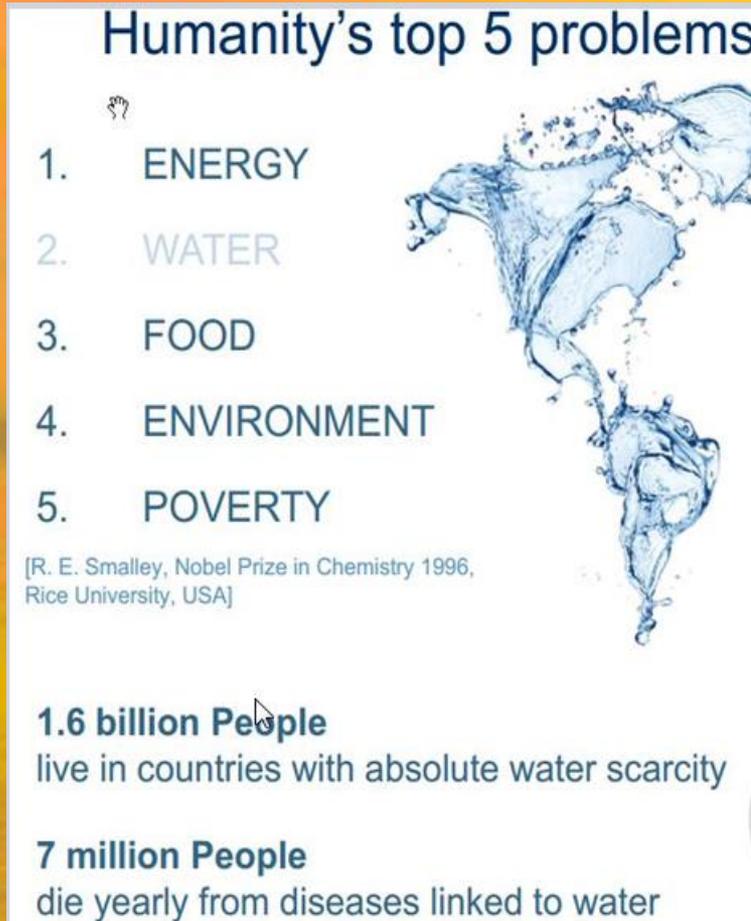
[www.dlr.de/dlr/desktopdefault.aspx/tabid-10200](http://www.dlr.de/dlr/desktopdefault.aspx/tabid-10200)

There is energy in abundance! We only need to use it!

# Desertec, a concept for a integrated energy-solution for Europe

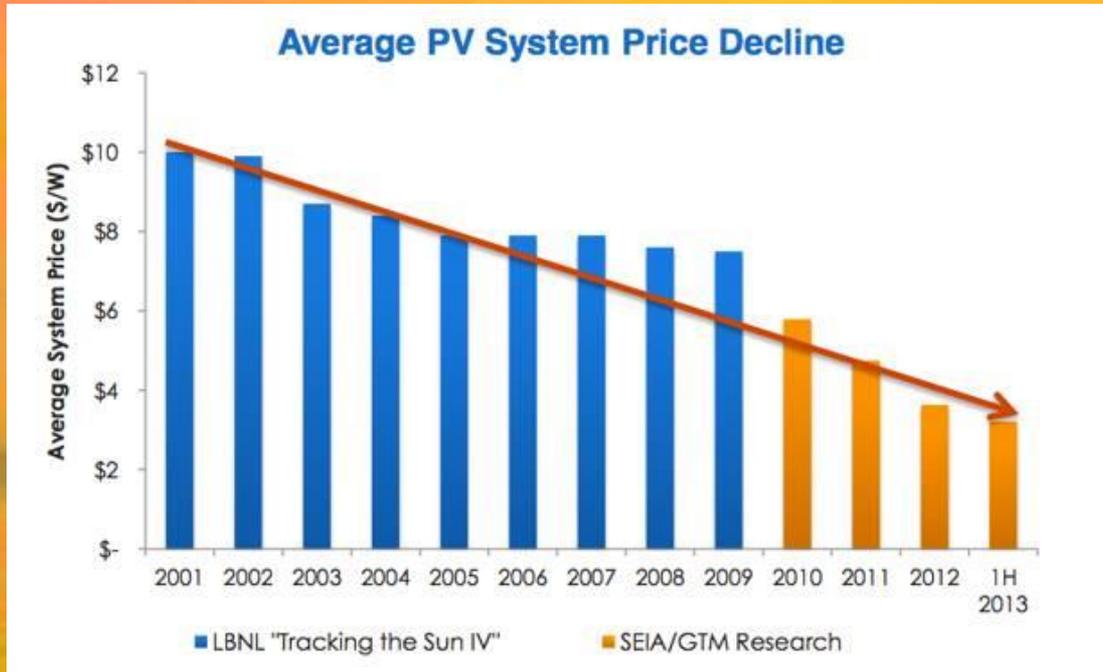


# Energy is the most serious actual problem!



- Many conflicts or war are only because of energy.
- 7 million people die annually from polluted air due to energy-conversion .
- A lot o trees are used for energy-generation and cooking with dramatic consequences.
- The climate change can be reduced.
- Subsequent mass-extinction of species and environmental problems can be reduced.
- Desalination of sea water could supply enough water.
- By vertical agriculture (many layers ) with artificial illumination a multiple output of food is possible.
- Energy is expensive for poor people. If it is free they have more money for other purposes.
- With free energy all this above will improve.
- Free energy could generate free people and solve a lot of problems.

# Total cost for Solar decreased drastically



- Unlimited free energy-ressource
- Protect the environment
- Energy-Autonomy!
- Almost maintenance free
- Earning money by selling energy!
- decentralized

# Arguments for using Solar

- Since 1970, solar energy has improved its **cost** position compared to oil by a factor of 5,355.
- The combination of solar and electric cars is **400 times more area-efficient** than the combination of oil and combustion engines.
- Solar energy is a **decentralized** resource. It can load electric cars locally without expensive and inefficient pipelines, rails, cargo ships, refineries, storage facilities and gas stations.
- Solar energy is already **cheaper** than diesel to generate electricity.
- Solar energy is already **cheaper** than kerosene to provide heat and light.
- Solar energy is already **cheaper** than oil to desalinate seawater.
- In small projects, solar energy with battery storage is already **cheaper** than diesel to provide energy continuously.
- In large projects, solar energy with specific storage is already **cheaper** than oil in order to provide energy.

Source: Book of Tony Seba, Clean Revolution

So easy you can build up a Solar System!  
Reduce your cost for electrical energy!



Online: Look for „Inverter for Solar and direct grid-connection“

# Safe Power-Supply by a Solar-System with Battery and Mains



Save the energy in high grade batteries, lead or Lithium-based. Excess energy can be provided to Mains.

Inverter for to supply solar power and also for to supply excess energy to the the grid  
[www.studer-innotec.com/en/](http://www.studer-innotec.com/en/)

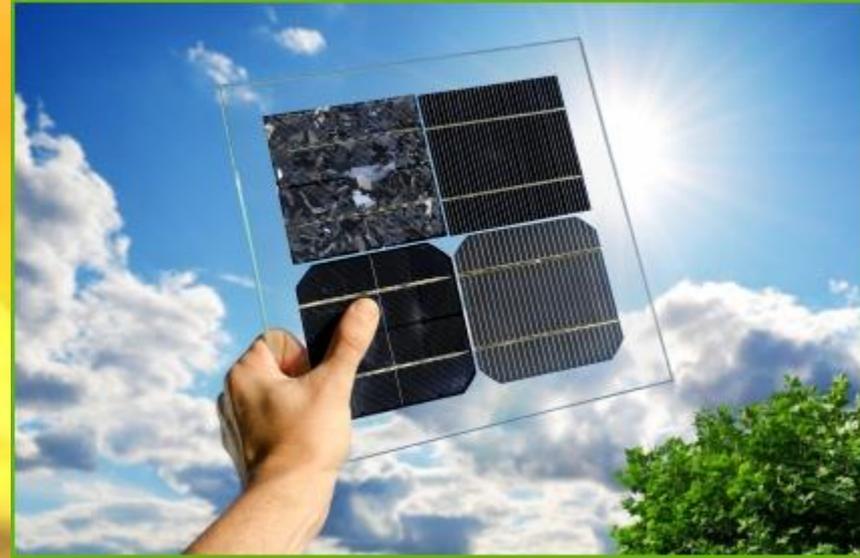
Solar and Mains with providing the grid, reduces your energy-cost!

# Solar Home-System



Energy-Management is mandatory to have good performance of the Solar-System

# Solar-Panels



# Agrophotovoltaik, food and energy



The advantages of combining open space systems with agricultural production. The photovoltaic panels, mounted at least 5 m above the ground, allow soil cultivation and harvesting using conventional agricultural machinery.

Numerous plants such as potatoes, hops or lettuce thrive even better under photovoltaic systems than in the blazing sun; other varieties such as barley, rapeseed or cabbage can hardly be influenced by the moderate shade. In China, Italy and Germany this is already practised as "Food and Energy". <http://www.agrophotovoltaik.de/english/agrophotovoltaics/>

# Solar-Water Pump



x m<sup>3</sup>/day  
y m height



Solar Array



Charge Controller for Battery-protection



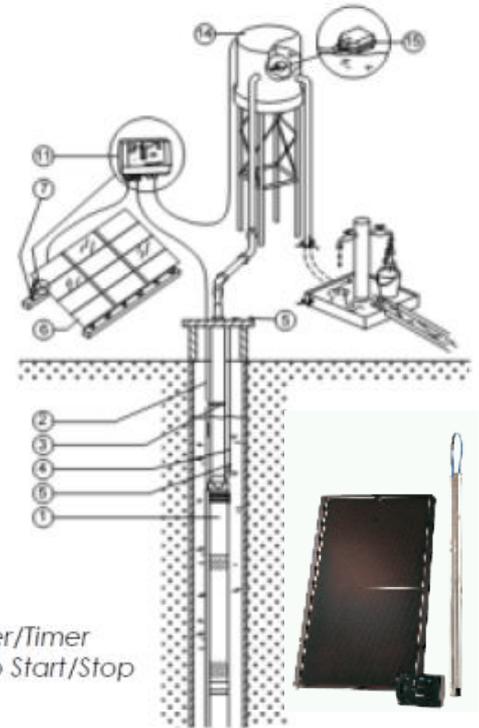
Solar or Car-Battery



Inverter 12V/24V-> 220V



Controller/Timer for Pump Start/Stop



Pumps: Grundfos SQFlex Solar, Aqua Marathone SXT 2000

**Version 2: Solar without Battery**



Well



Standard-Pump (220V/ 1 KW) to collecting Tank

**Version 1: Solar with Battery**

**Solar Pump Versions**

# Solar and Wind-Pumps



**HELICAL ROTOR PUMP**  
Based on original pumping principles, the helical rotor pump uses a few, simple components for effective pumping high head and low flow.

**PUMP CASING**  
Stainless steel for long pump life.

**BEARINGS**  
Powerful carbon/ceramic bearing system ensures extreme reliability.

**MOTOR**  
Only one motor for the entire pump range with built-in unique features.  
A newly developed segmented stator provides high efficiency.

**POWER TRANSMISSION**  
The unique Grundfos micro frequency converter ensures power transmission to the motor.

**SYSTEM EFFICIENCY**  
Maximum Power Point Tracking (MPPT) means even and high system efficiency regardless of power source.

**COMMUNICATION**  
Two-way communication between interface box and pump eliminates the needs for additional wires.

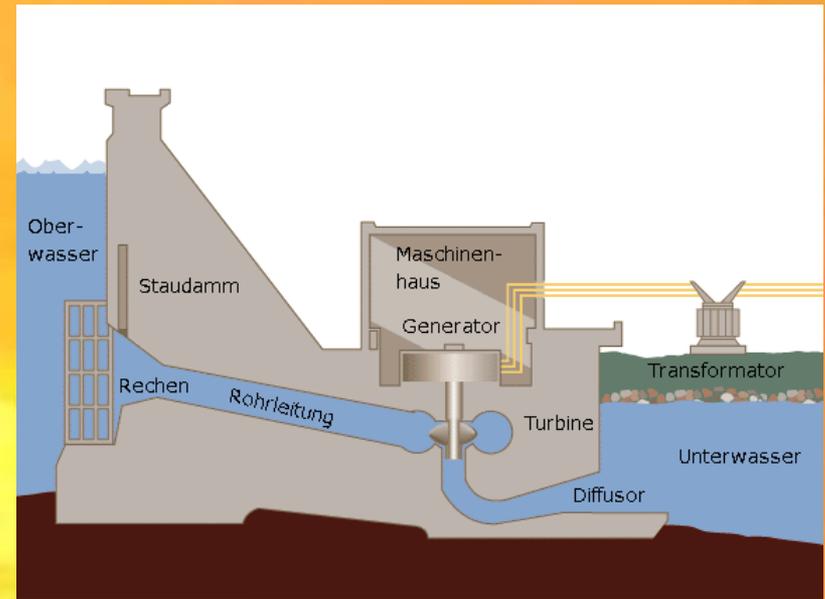
**ANY VOLTAGE**  
A wide voltage range enables the motor to operate at any voltage between 30V and 300V DC or 90-240V AC, which makes installation and sizing especially easy.

Tiefbrunnenpumpe Aqua Marathon MA



MW600K

# Hydro-Power

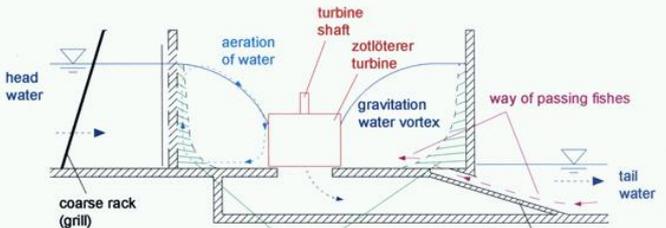


[www.smart-powersystems.com](http://www.smart-powersystems.com)

# Gravitation water vortex power plant

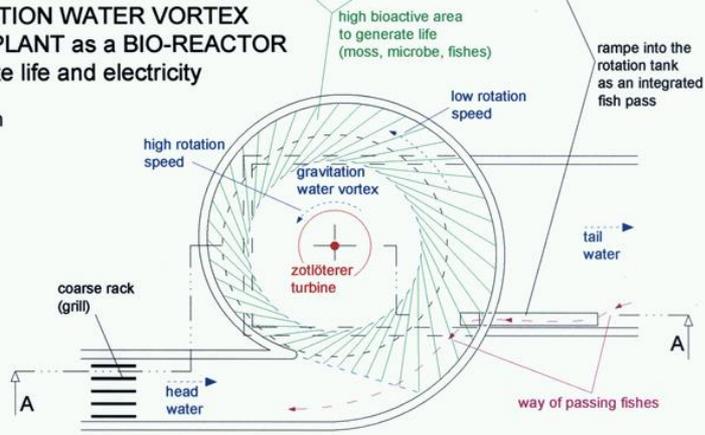


longitudinal section A-A

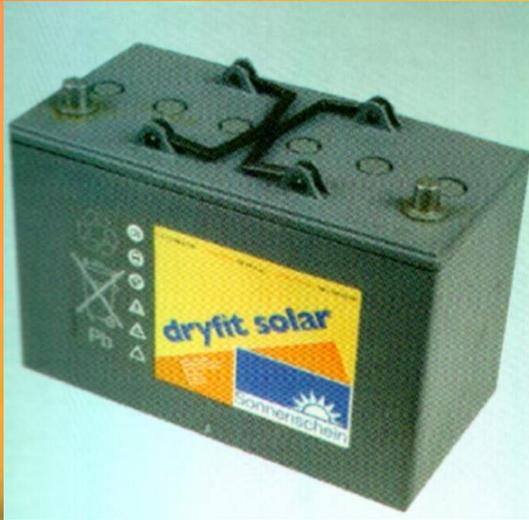


GRAVITATION WATER VORTEX POWER PLANT as a BIO-REACTOR to generate life and electricity

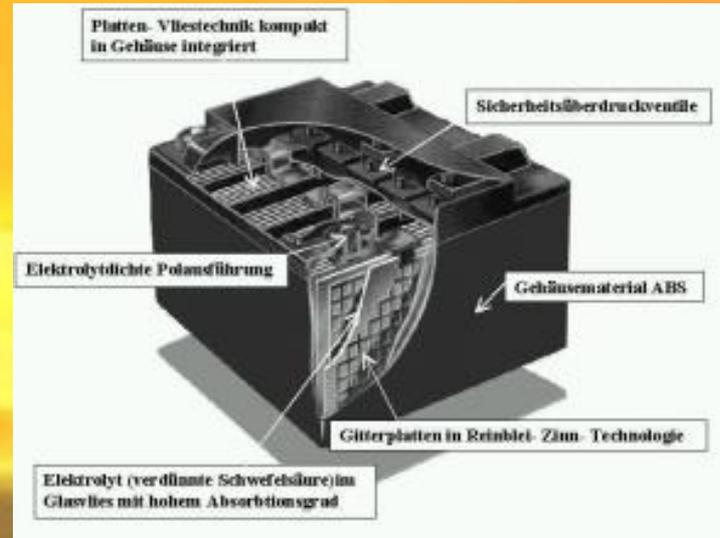
ground plan



# Batteries



Solar-Battery



Vlies-Battery

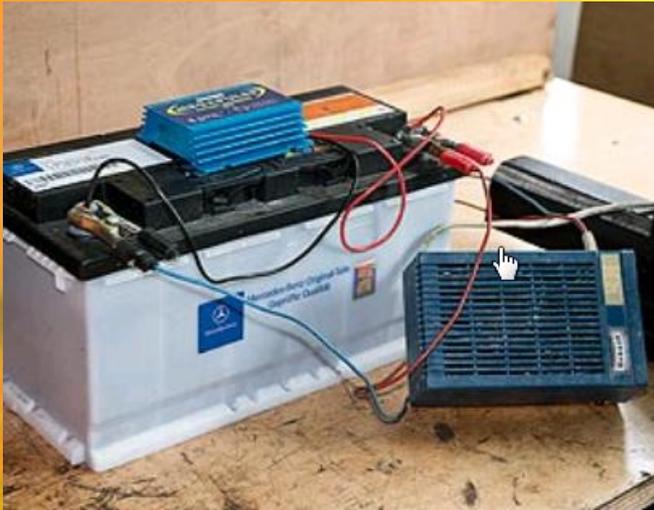


OPzS-  
Battery



Lithium-Batteries

# Mega-Pulses to extend Battery life-time and for better charging

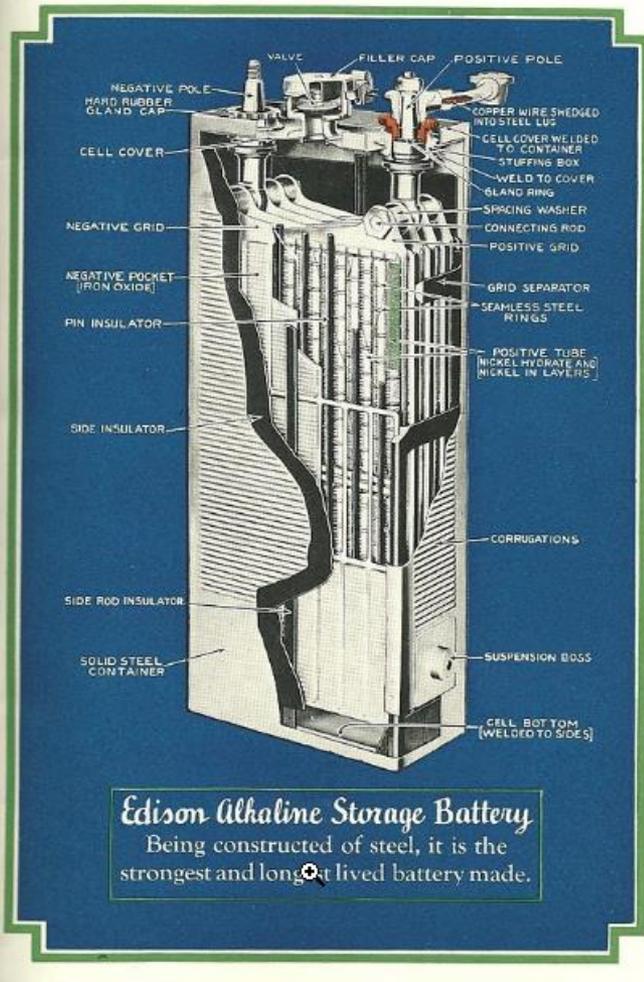


Battery pulser for the regeneration and care of all lead, GEL or AGM batteries. Treated with the Megapulse, batteries damaged by sulphation can be fully recharged and even batteries that were believed to be dead can be made ready for use again

[http://www.borderlands.de/Links/Free\\_Energy\\_Multiplier.pdf](http://www.borderlands.de/Links/Free_Energy_Multiplier.pdf)

# Nickel-Iron battery , the Edison Battery

## The Edison Battery

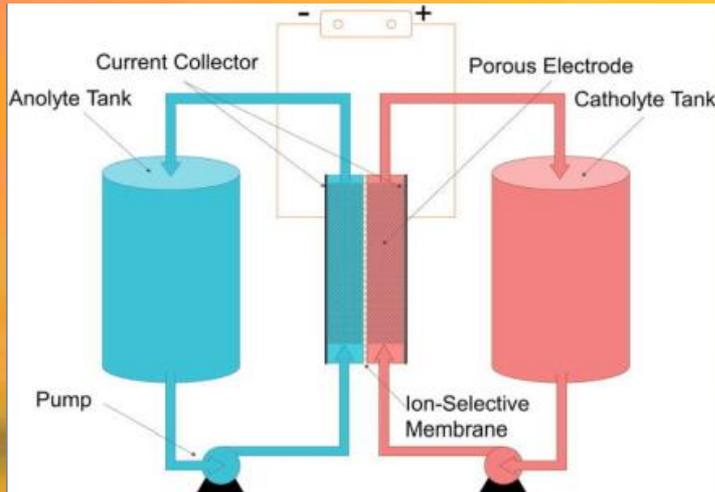


Different  
from  
all  
others

- Harmless
- No short circuit problem
- Not fire dangerous
- Also very effective hydrogen-producer
- Environmentally friendly
- Very fast rechargeable!
- Available in USA

[https://en.wikipedia.org/wiki/Nickel%E2%80%93iron\\_battery](https://en.wikipedia.org/wiki/Nickel%E2%80%93iron_battery)

# Redox-flow batteries

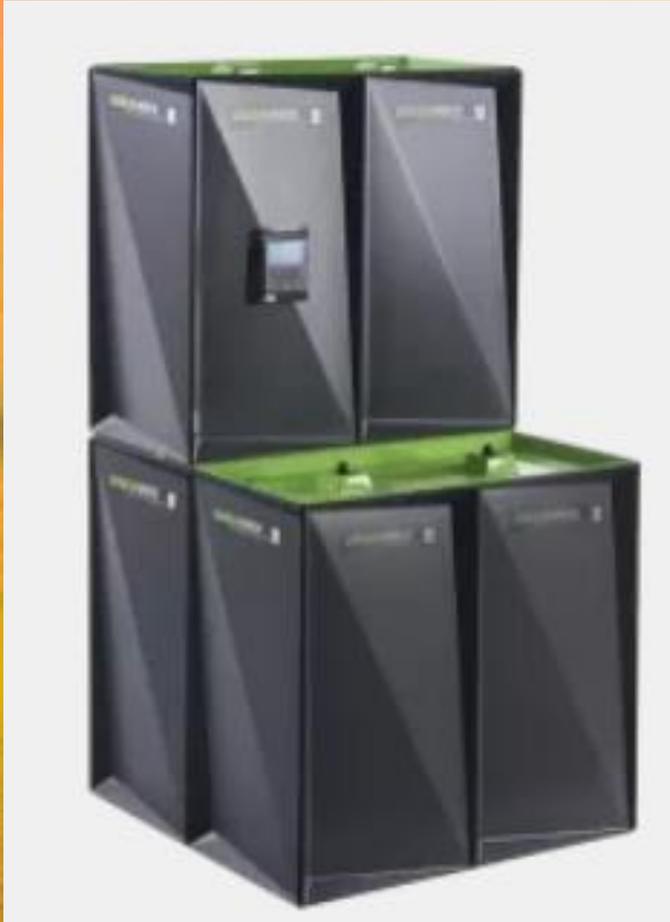


The redox flow cell is a very good way of storing energy over long periods of time, as it has **no self-discharge and no memory effect**. It stores the **energy in liquids**, so it has a very long service life, since no structural changes take place on the electrodes. In addition, large amounts of energy can be stored relatively inexpensively, as only large tanks and sufficient electrolyte solution are required.



[https://en.wikipedia.org/wiki/Flow\\_battery](https://en.wikipedia.org/wiki/Flow_battery)

# GREENROCK saltwater energy storage



GREENROCK's battery technology is the safest and greenest electricity storage device in the market for storing electric power. Maintenance-free and reliable at the same time. Robust due to the possibility of a complete deep discharging of the battery.

A wide temperature tolerance window allows additional flexibility.

From 5 KW to several hundred KW

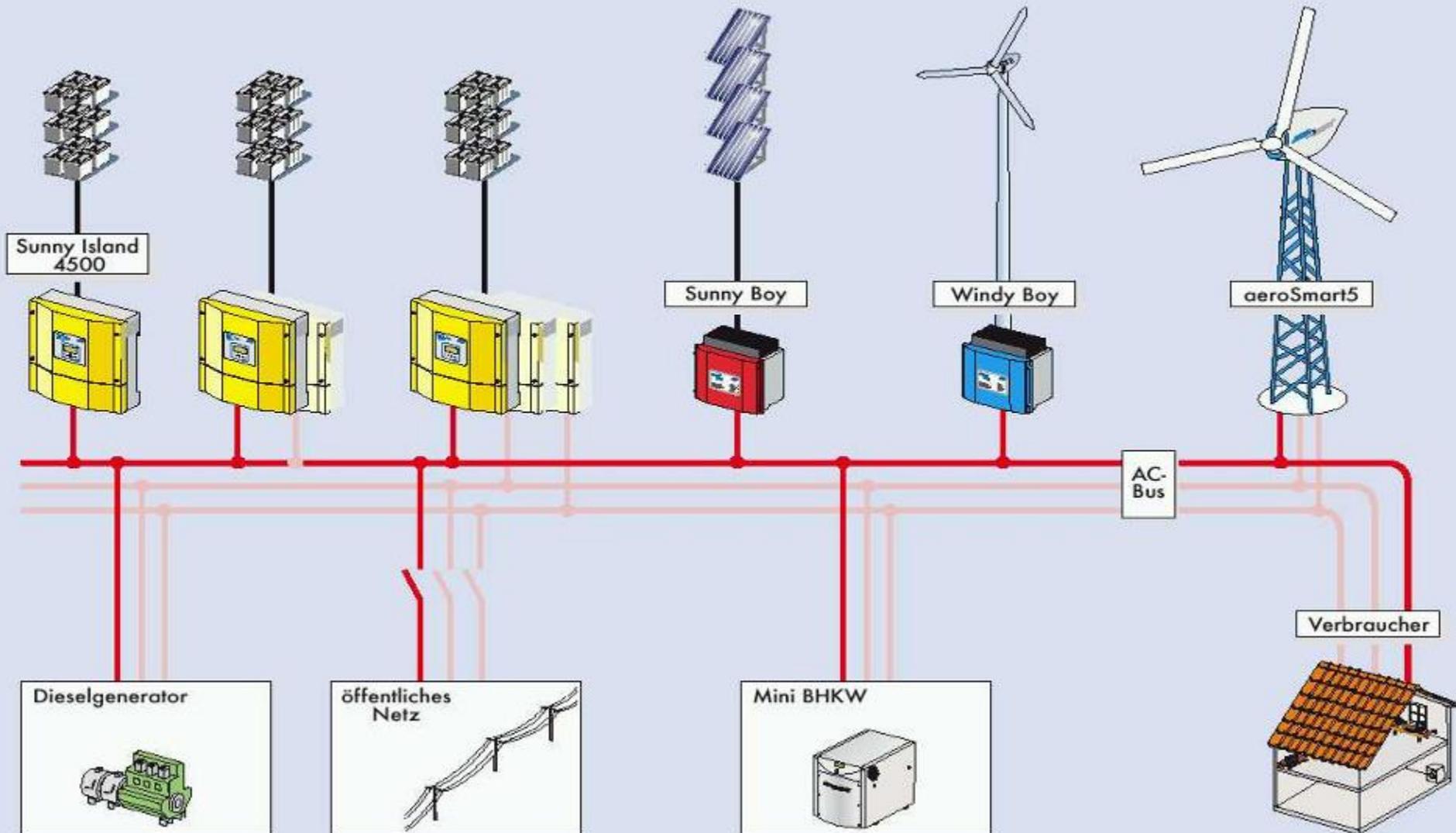
Consists of natural materials.

<https://www.bluesky-energy.eu/en/greenrock-saltwater-energy-storage/>

Battery-Charger and Inverter, Battery-Backup-System instead of a generator-set, which has normally too much power



# Sunny-Island-System for a complete village



# String Inverter to supply Solar-Power to the grid



Sunny boy

[www.SMA.de](http://www.SMA.de)

[www.steca.com](http://www.steca.com)



Sunny Backup-System

# Wind Generator



[www.smart-powersystems.com](http://www.smart-powersystems.com)

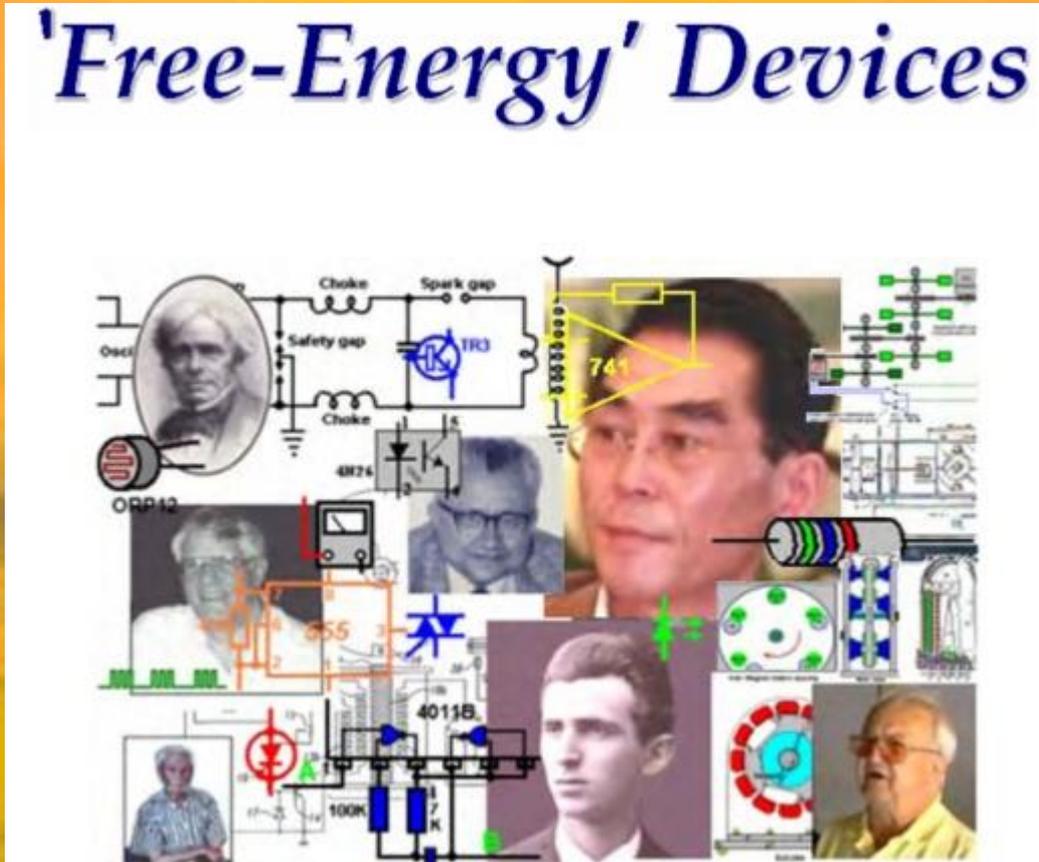
Making your own Wind-Turbine, plans etc. [www.i-love-windpower.com](http://www.i-love-windpower.com)

# Geothermal Power



Not compatible to all areas. Station in northeast Iceland

Free-energy, space-energy, Vacuum-energy, Zero-point-energy, Neutrino-Power, many names for the same energy?



A free ebook about free energy with many ideas and concepts! [www.free-energy-info.tuks.nl/PJKbook.pdf](http://www.free-energy-info.tuks.nl/PJKbook.pdf)

Film

# Running Magnetic-generator by FRIEDRICH LUELING



He mechanically moved some magnets back and forward and was able to run this machine continuously without additional energy. He presented it on TV at UFA-Wochenschau **08.02.1966**

<https://www.youtube.com/watch?v=Y0T3JWEnSIE>

[https://www.youtube.com/watch?v=BmGx\\_XQTOHw](https://www.youtube.com/watch?v=BmGx_XQTOHw),

practical: <https://www.youtube.com/watch?v=h2PupzLzjkl>

# Working magnetic-generator of Thomas Engel published 2013 in German newspaper FAZ.



*The inventor and his motors. The older version on the left*

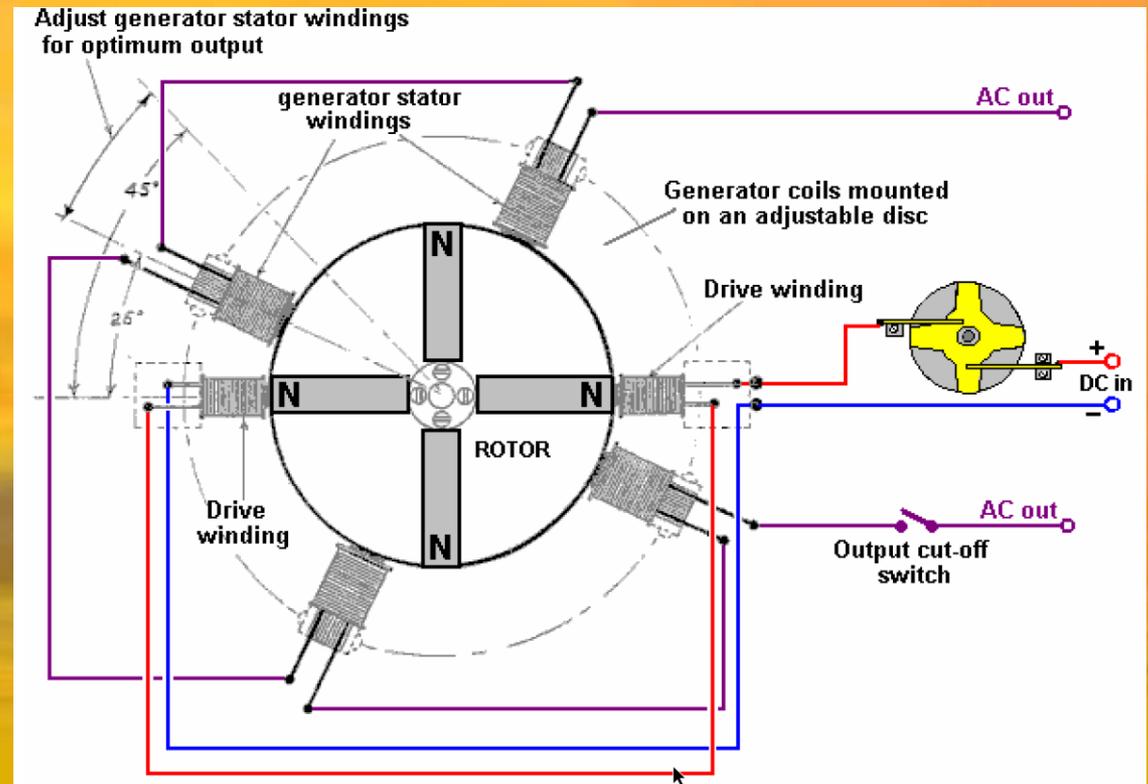
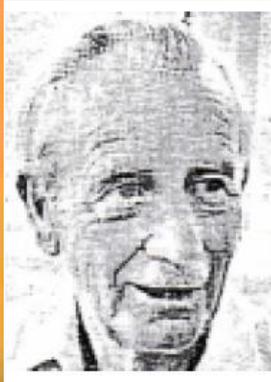
Magnets are rotated at certain times. The energy for the movement (8 mA at nine volts) is considerable less than the energy produced by that engine. The maximal rotation speed was 400 RPM. The function had been proved by the journalists of a leading German newspaper FAZ.

Shortly after he published that article he died.

Good explanation: [www.youtube.com/watch?v=4Ge2h8Apgd8&app=desktop](http://www.youtube.com/watch?v=4Ge2h8Apgd8&app=desktop)

[http://blog.hasslberger.com/2013/11/german\\_inventor\\_solves\\_permane.html](http://blog.hasslberger.com/2013/11/german_inventor_solves_permane.html).

# Running magnet-generator of Robert Adams



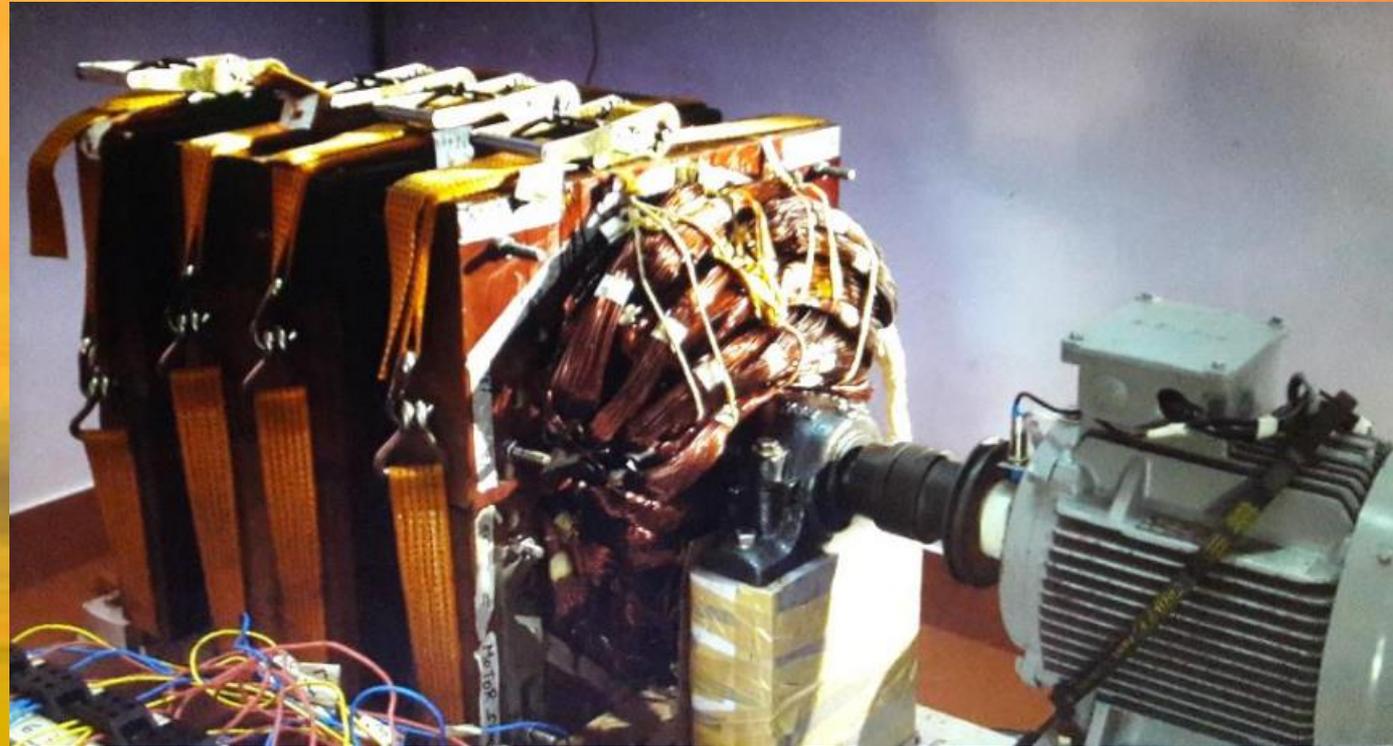
When he was 70 years old, Robert Adams of New Zealand designed a very effective magnet-generator. **He was told to destroy his device or he would be killed.** Robert decided that at his age, he had very little to lose and so he published his design. His generator achieves a power output which is eight times greater than the input power.

[www.free-energy-info.com/Adams.pdf](http://www.free-energy-info.com/Adams.pdf)

[www.free-energy-info.com/PJKbook.pdf](http://www.free-energy-info.com/PJKbook.pdf)

<https://www.youtube.com/watch?v=J2bPDDWqSvM&pbjreload=10>

# Paramahansa Tewari overunity-generator



News from India: In India, the energy revolution is now beginning with Paramahansa Tewari - and: it is not hindered in India, rather promoted!

A lot of Details: <http://rexresearch.com/tewari/tewari.htm>

INDIA PERMITS FREE ENERGY TECHNOLOGY DESPITE THREATS FROM UK, US, SAUDI ARABIA: <https://wearechange.org/india-permits-free-energy-technology-despite-threats-from-uk-us-saudi-arabia/>

# Magnetic generator with Overunity-effects

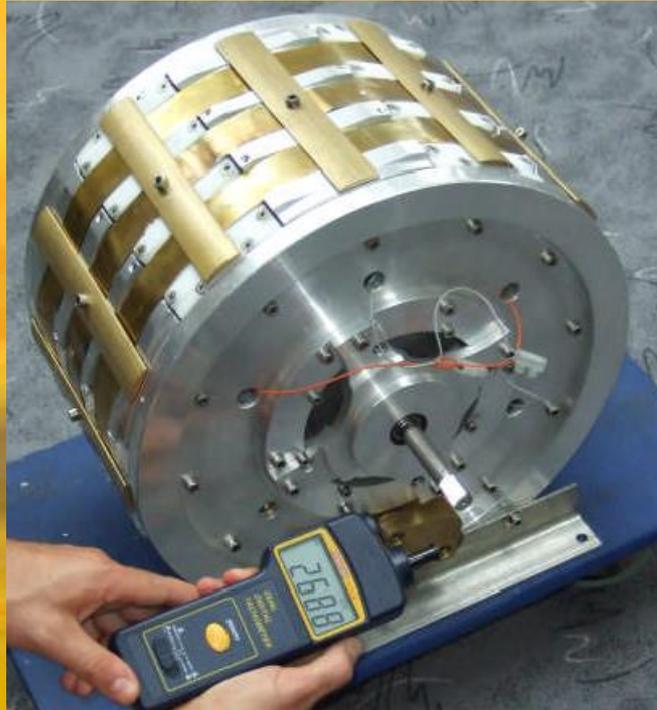


## Film

MD10 of InfiniySAV with 5 KW  
right: with 1 KW output



# Magnetic generator of Muammar Yildiz



Magnet-Generator  
of Muammar Yildiz

[https://www.youtube.com/watch?v=zmUqcD\\_R4H4](https://www.youtube.com/watch?v=zmUqcD_R4H4)

# Official presentation of the Magnet-Generator of Muammar Yildiz



In Belluno, Italy at the 5th of July, there was an official presentation of the magnet generator, running more than 6 hours producing 7.5 KW (180 kWh daily).

[www.youtube.com/watch?v=3yf6GyamSKw](http://www.youtube.com/watch?v=3yf6GyamSKw)

# What is the source of the energy?

The magnet seems to be a converter of space energy.

If the magnetic field is used for energy, it is reestablished by the energy of the space.

The source for that energy might be the expanding universe (Prof. Dr. Claus Turtur).

The space is full of energy and the universe is expanding accelerated. Where is this energy coming from?

If I put a magnet on a metal, much more energy is necessary than to separate it sideways.



# How magnetic-generators can work?

- Friedrich Luelling mechanically moved the magnets if they work opposite to rotation
- Thomas Engel mechanically rotated the magnets if they work opposite to rotation. The energy for the movement (8 mA at nine volts) is considerable less than the energy produced.
- A construction of a magnetic shield that decrease the magnetic-field if it is unfavorable.
- Robert Adams magnets in the rotor and in the stator 4 Energy-harvesting coils and 2 smaller control-coils. The time of the activation of the coils is crucial.
- Pulsed solenoid coils to reduce the unfavorable magnet forces at specific positions.
- Pulsed solenoid coils which take the induced energy at certain positions and positively influence the magnetic field.
- Pulsed solenoid coils that force specific magnets at specific times to saturation.
- Using a motor to start and run the magnetic generator continuously and tap the overunity energy of the magnet-generator. In that way the speed etc. can be regulated very well. Only overunity is interesting!
- The magnet generators have mostly bifilar coils of 0.40 and 0.56 copper wire (Bedini).

# Using Water to generate Power with overunity-effects Brown-Gas or HHO-Motors

Film (0:44)



<https://carboncleansystems.com/>



Stanley Meyer and his water powered car

*Water motors and the Aquaflex motor from Jose Vaesken Guillen*

<https://www.youtube.com/watch?v=2MNXN-RkWYA&feature=youtu.be>

# HHO-Generators can be made by yourself!



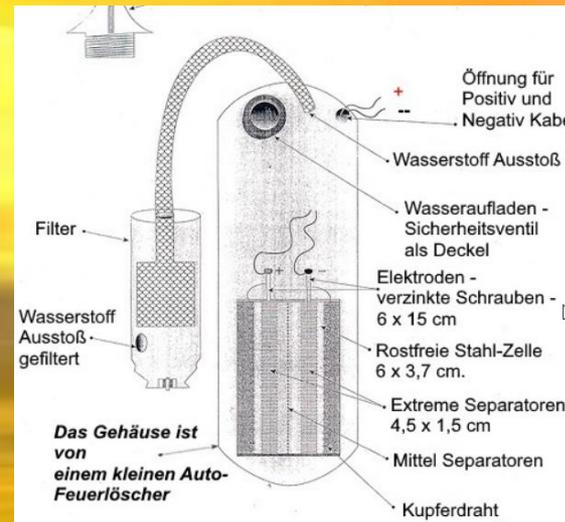
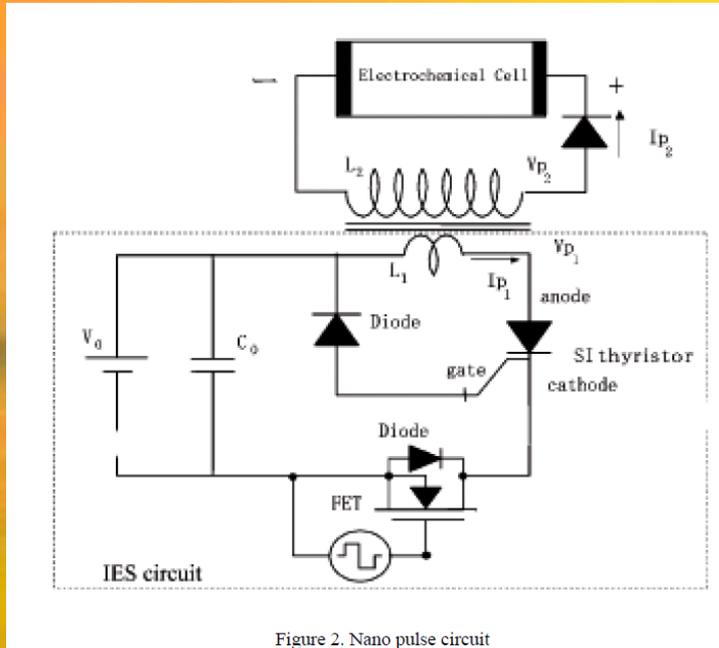
self-made-HHO-generator: <https://www.youtube.com/watch?v=cqjn3mup1So>

No petrol only water: <https://www.youtube.com/watch?v=bRatjlvFyQQ>

Home made hydrogen generator HHO: <https://www.youtube.com/watch?v=twzUACFTC4k>

<https://carboncleansystems.com/>

# Hydrogen production with pulsed electrolysis is 30 times more efficient



[www.ijee.ieefoundation.org/vol3/issue1/IJEE\\_13\\_v3n1.pdf](http://www.ijee.ieefoundation.org/vol3/issue1/IJEE_13_v3n1.pdf)

[www.h2innovativelab.com](http://www.h2innovativelab.com)

# Hydrogen-Production

## Hydrogen production

- Chemical: e.g. acid + metal
  - Catalytic: e.g. molybdenum preparations
  - Bacteriell: Procedure Penn State University (USA)
  - Hydrocarbons Reforming (thermal)
  - Electrolytic: with current
- Electrolytic: with high-frequency voltage: very efficient!

## Energy balance

Approx. 2 L water per hour resulted in 2.5 m<sup>3</sup> H<sub>2</sub>

Electrical energy: 5A x 24 V = 120 Watt in 1 hour: 0,12 KWh

For 2.5 m<sup>3</sup> H<sub>2</sub>, approx. 12.5 KWh are required.

$12.5 / 0.12 = 104$  less energy was used

H<sub>2</sub> at room temperature and pressure 1 bar: 3 kWh / m<sup>3</sup>

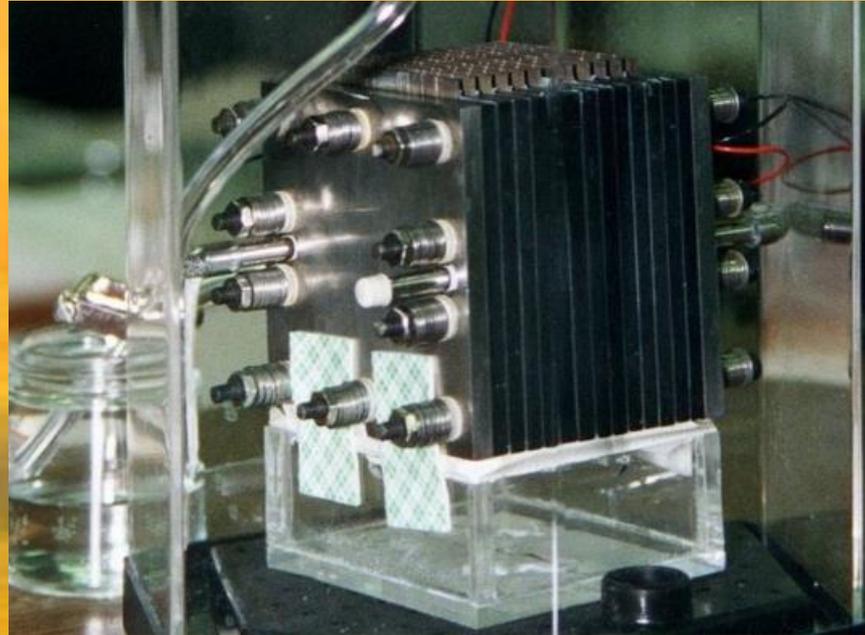
**Energy yield:** Output / Input:  $7.5 / 0.12 = 62.5$  (Overunity!)

Film (34:00)

<https://www.youtube.com/watch?v=YNRdx1u9dQo>

Online-Movie Thrieve starting from 34:00

# Fuel Cell



A fuel cell is a galvanic cell that converts the chemical reaction energy of a continuously supplied fuel and an oxidizing agent into electrical energy. Depending on the type of fuel cell, methanol, butane or natural gas can also be used in addition to hydrogen.

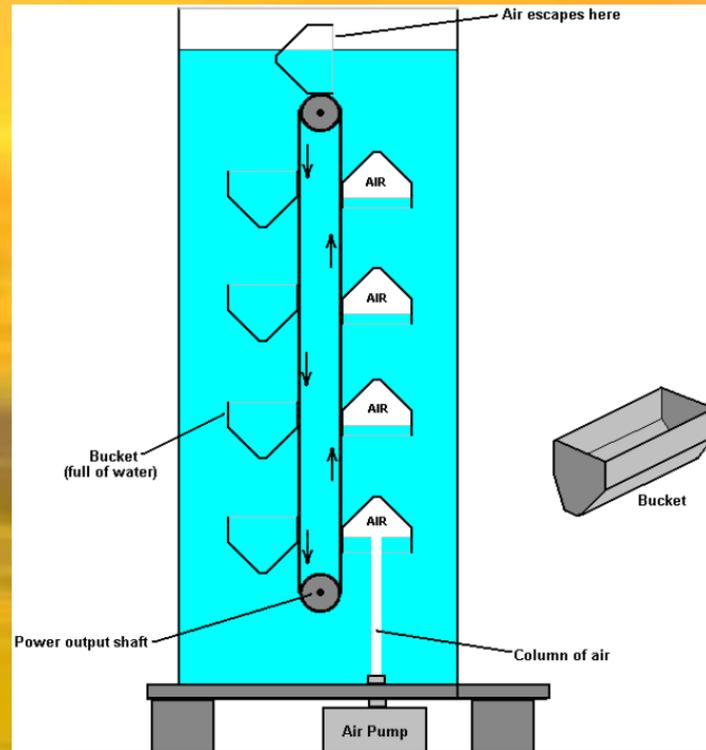
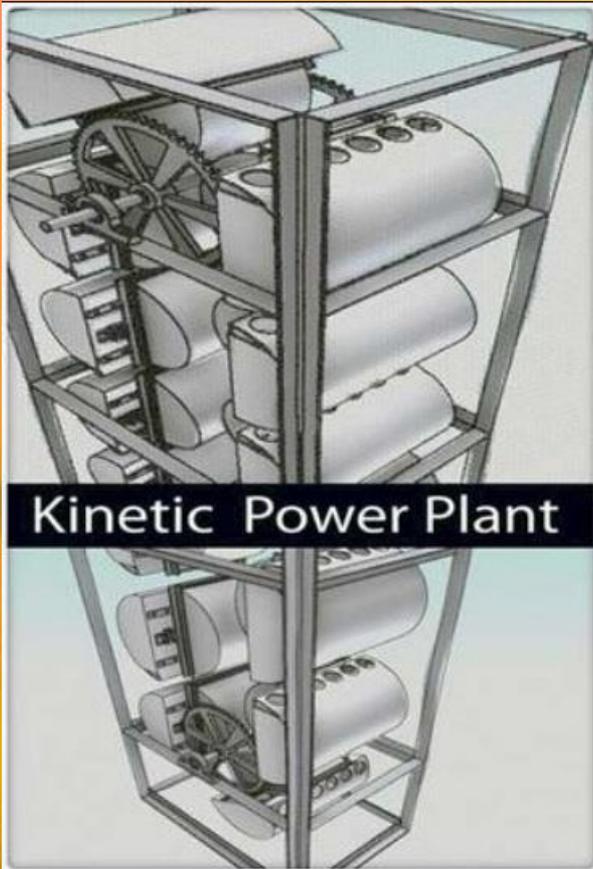
It can produce hydrogen and oxygen from (solar) electricity and, conversely, produce electricity from hydrogen or other media.

[https://en.wikipedia.org/wiki/Fuel\\_cell](https://en.wikipedia.org/wiki/Fuel_cell)

[www.horizonfuelcell.com/](http://www.horizonfuelcell.com/)

[www.horizonfuelcell.com/h-series-stacks](http://www.horizonfuelcell.com/h-series-stacks)

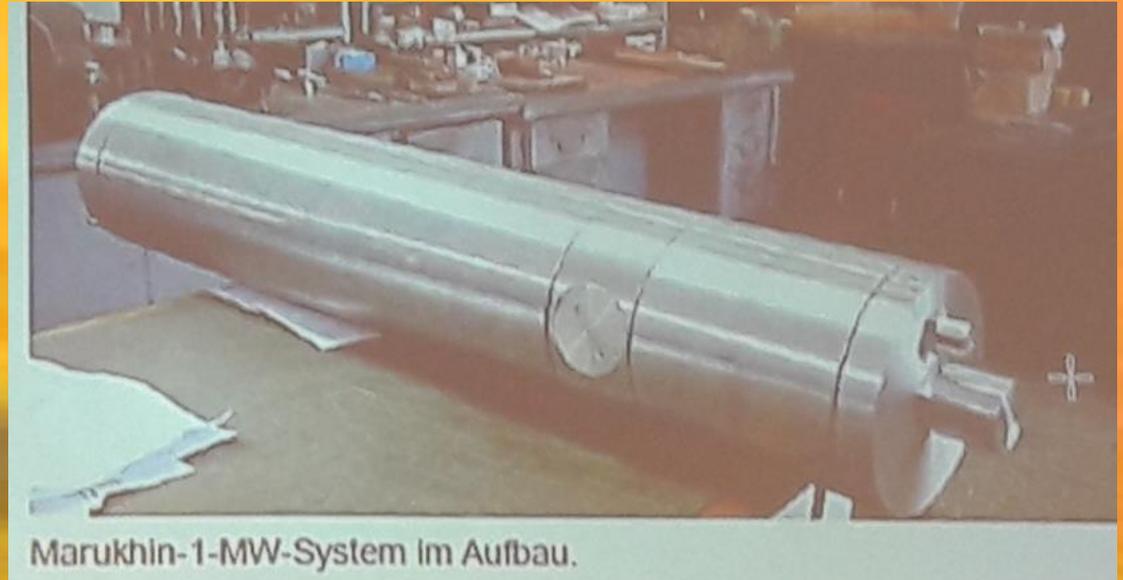
# Kinetic Power Plant



Film

- Energy conversion through the use of buoyancy and gravitational forces.  
12 kW at the output and only 1.7 kW power requirement for compressed air generation, i.e. a COP of 7:1 !
  - This results in a COP (efficiency) of 7:1.
- [www.e.cat.deutschland.de](http://www.e.cat.deutschland.de) [info@e-cat-deutschland.de](mailto:info@e-cat-deutschland.de)

# Hydraulic Energy Generators HEG



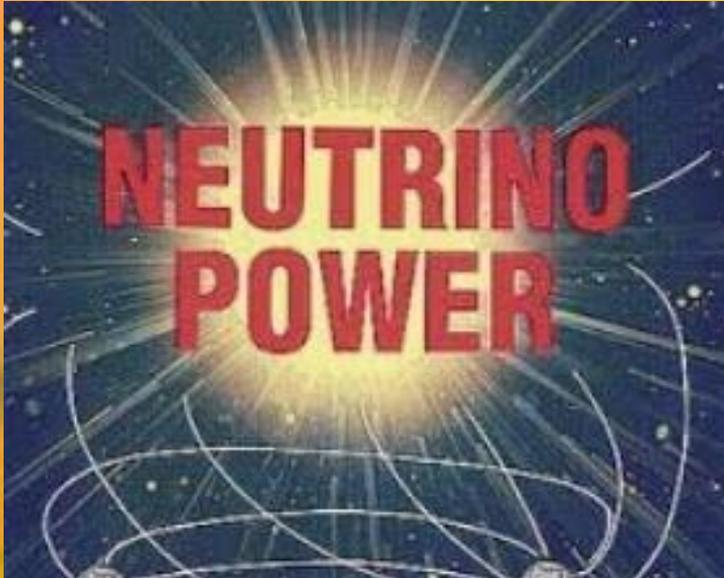
**Dr. V. V. Marukhin**, has developed a revolutionary energy system whose efficiency is unrivalled worldwide. The system of the Hydraulic Energy Generator HEG is based on a permanent hydraulic-pneumatic oscillation process and is the logical further development of the well-known hydraulic ram.

They have an output of between 20 kW and 1,500 kW, while the production costs are low.

Reference: [Adolf.schneider@vtxmail.ch](mailto:Adolf.schneider@vtxmail.ch); [www.transaltec.ch](http://www.transaltec.ch)

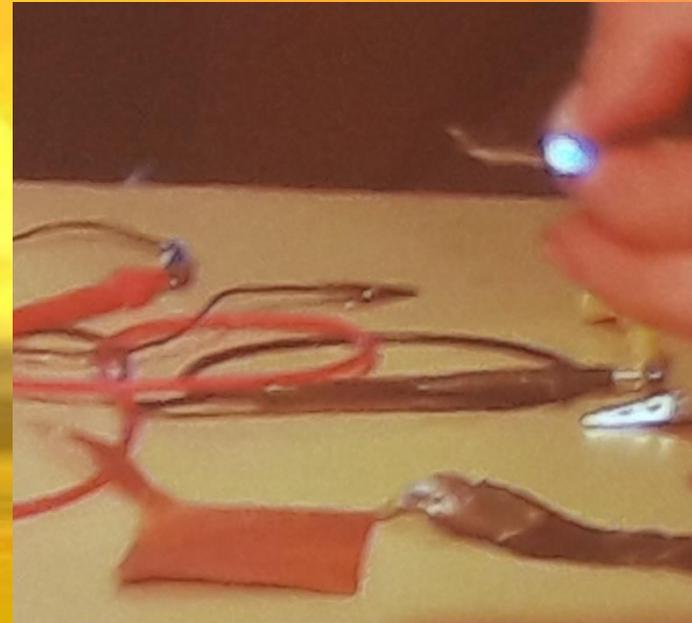
# Neutrinos, the energy of the future!

## They are everywhere and penetrate everything



### **Produce neutrino energy foil yourself:**

<https://patents.google.com/patent/WO2016142056A1/en>



Here it is visible that a LED is on when connected to the energy-foil

Neutrinos are hardly detectable, but they could be carriers of free energy. The Nobel Prize for this topic was awarded in 2015. It's been taken seriously ever since. NEUTRINO, the energy source of the future: <https://www.youtube.com/watch?v=QQy-89t7foE>; <https://neutrino-energy.com/>

# LENR-Technology, E-Cat-Technologie of Ing. Andrea Rossi



**Cold Fusion** is a type of nuclear reaction that would occur at, or near, room temperature. It has a COP (ratio of energy used to energy produced) of 57:1 (0.38KW / 29.2 KW).

Steam up to 550 °C is produced

There is a demo of A. Rossi's E-Cat technology of the 1 kW QX reactor in Florida

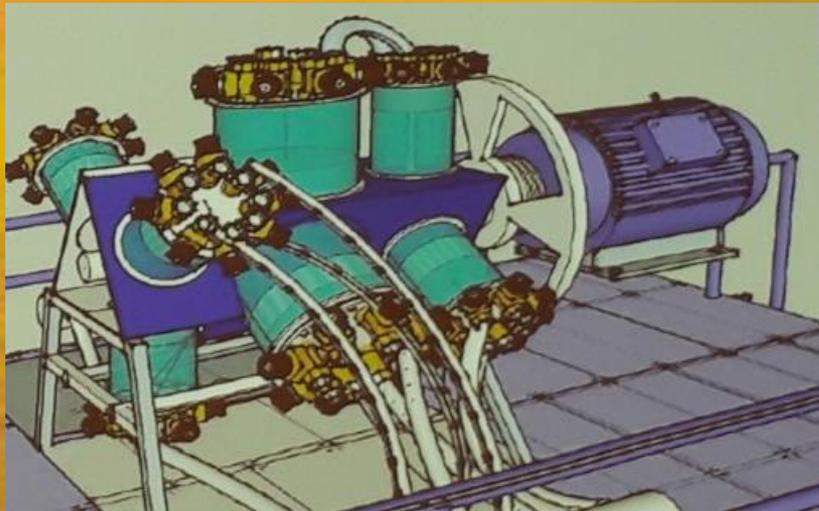
<http://andrea-rossi.com/>

<http://andrea-rossi.com/1mw-plant/>

<https://peswiki.com/directory:cold-fusion>

<https://www.youtube.com/watch?v=qzZmPkBqaJ0>

# STV-G Generators from Gigathor by Dr. Wolf Weber



Works with Vacuum and Water. But maybe the Source is gravitational energy?  
Systems with 5 KW or 15 KW or more are available.  
The **overunity-factor** is **636 %**.

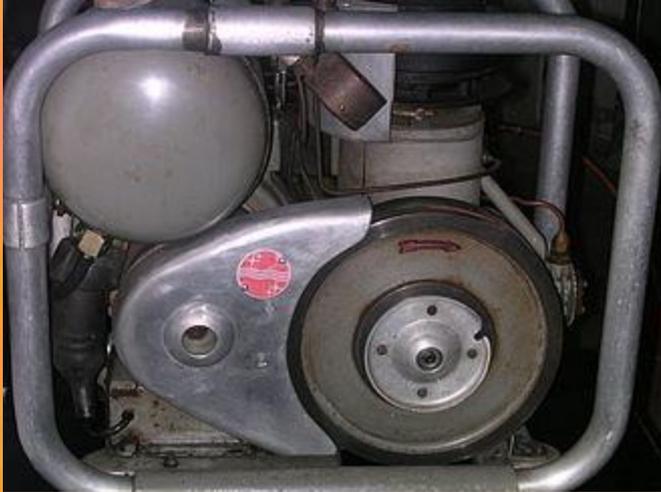
Film

<https://gigathor-sa.beepworld.de/>

[http://www.borderlands.de/net\\_pdf/NET0113S28.pdf](http://www.borderlands.de/net_pdf/NET0113S28.pdf)

<https://www.slimlife.eu/gravitationvakuumgem.html>

# The stirling motor



A Stirling engine is a heat engine that is operated by a cyclic compression and expansion of air or other gas at different temperatures.

## **Advantages**

Stirling engines can run directly **on any available heat source** like solar, geothermal, biological, nuclear sources or waste heat from industry.

A continuous combustion process can be used to supply heat, so emissions can be reduced.

Some bearings and seals are on the cool side, so they require less lubricant and last longer.

The engine mechanisms are in some ways simpler than other engine types. Crude Stirling engines **can be made using common household materials.**

For a properly designed system the risk of explosion is low.

In some cases, low operating pressure allows the use of lightweight cylinders.

They can be built to run quietly and without an air supply (submarines etc).

They start easily and run more efficiently in cold weather.

A Stirling engine used for pumping cold water has high efficiency.

They are extremely flexible and can be used as combined heat and power in the winter and as coolers in summer.

Waste heat is easily harvested making Stirling engines useful for dual-output heat and power systems.

In 1986 Chevrolet Celebrity had a Stirling engine. Fuel economy was improved 45% and emissions were greatly reduced. Acceleration (power response) was equivalent to the standard internal combustion engine. A catalytic converter, muffler and frequent oil changes are not required. Why they stopped it?

## **Disadvantages**

Size and cost issues

Power and torque issues

Stirling engines that run on small temperature differentials, are quite large

Gas choice issues: The gas used should have a low heat capacity.

Film

# Stezler Motor and Keppe-Motor



The Stezler engine uses conjoined pistons in a push-pull arrangement which allows for fewer moving parts and simplified manufacturing.

[https://en.wikipedia.org/wiki/Stezler\\_engine](https://en.wikipedia.org/wiki/Stezler_engine)

Film



**KEPPEMOTOR**  
Nova Tecnologia para um Novo Mundo.

**HKRIA Award**  
Motor de Alta Eficiência Energética

**HKRIA Award**  
Prêmio Máximo de Inovação e Tecnologia

**Global Leap Award**  
2015-16

**PRÊMIO POTÊNCIA FIEE 2017**  
Tecnologia premiada na categoria Energias renováveis, Eficiência energética e Qualidade

**MOTORES ELETROMAGNÉTICOS RESSONANTES DE ALTA EFICIÊNCIA**

**SUN - SAOIR DE TETO**

**PRIMEIRA LINHA DE VENTILADORES TRIVOLT DO MERCADO (110/220V AUTOMÁTICO E BATERIA/ PAINEL SOLAR)**

**BOMBA CENTRÍFUGA SOLAR KEPPE MOTOR (DISPENSA INVERSOR)**

**VENTILADOR OSCILANTE 40 CM VERSÕES PAREDE, PÉDESTAL, CHÃO**

An excellent design for reduced power demand of small fans.

<http://www.keppemotor.com/institucional/?lang=en>

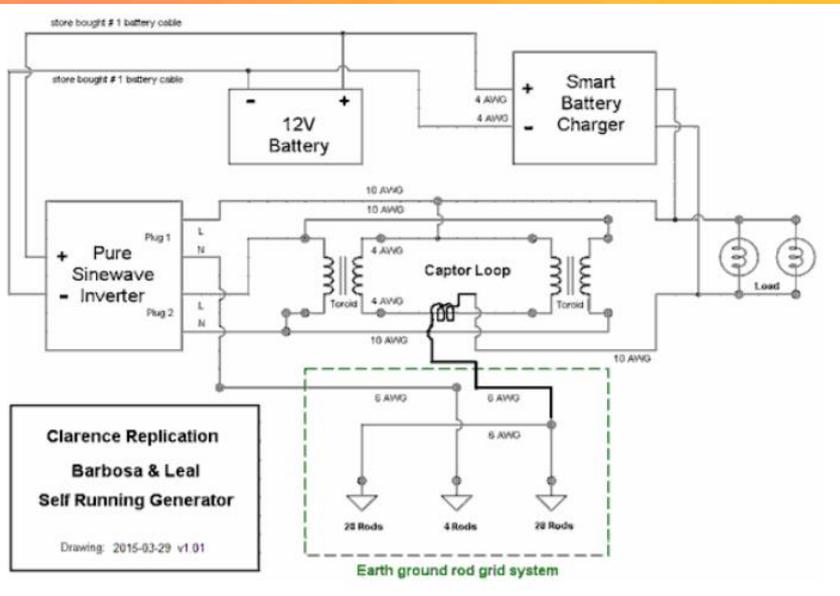
<http://www.slimlife.eu/keppemotor.html>;

<https://www.youtube.com/watch?v=lfclxTssOOE>

[http://svrswiss.org/pdfs\\_aso/Eckhardt-190212.pdf](http://svrswiss.org/pdfs_aso/Eckhardt-190212.pdf)

Film 0:40

# Solid State Solutions



These solutions are purely electrical / electronic solutions. Energy can also be generated here!

The self-recharging Battery supply of Carlos F.Benitez:

[http://www.rexresearch.com/benitezbattycharg/benitez.html\\_Energy\\_Multiplier.pdf](http://www.rexresearch.com/benitezbattycharg/benitez.html_Energy_Multiplier.pdf) ;

It had been copied by John Bedini, Bruce Perreault, Ronald Brandt etc.

Ron Pugh's Battery Charger: <http://www.free-energy-info.com/SChapter19.pdf>

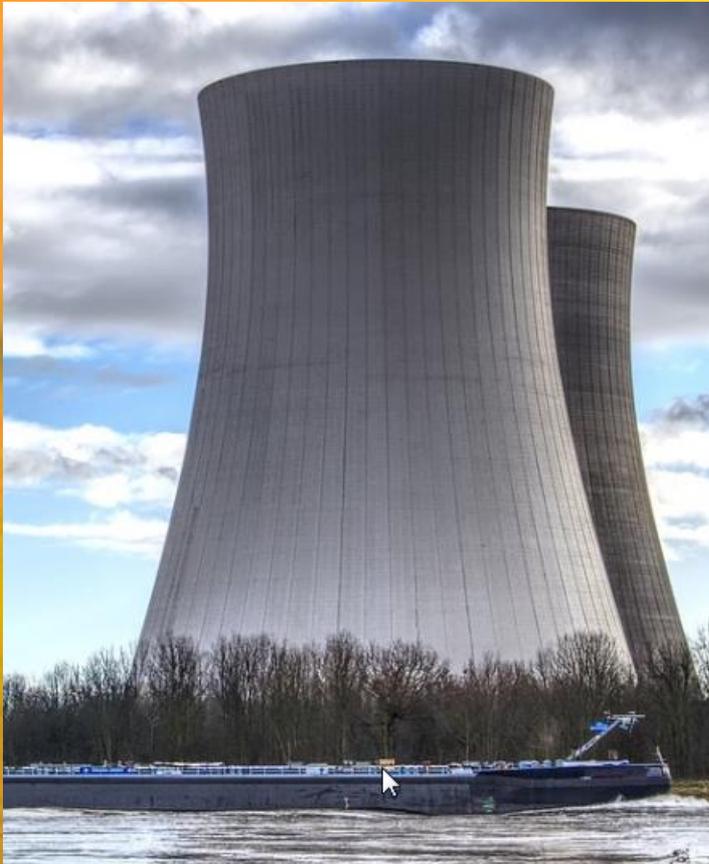
Power From Circuitry <http://www.free-energy-info.com/SChapter29.pdf>

A Self-Charging Battery Power Supply. <http://emediapress.com/peterlindemann/benitez/>

Pulse-Charging Battery Systems <http://www.free-energy-info.co.uk/Chapter6.pdf>

charging battery [http://www.r-charge.net/Free-Energy\\_ep\\_56.html](http://www.r-charge.net/Free-Energy_ep_56.html)

# Dual fluid nuclear reactor and the Thorium-Reactor



## **Dual fluid nuclear reactor**

Although there are now good alternatives, this type of nuclear reactor is still the better alternative .

Outstanding safety properties, extremely low costs and the ability to destroy actinides such as plutonium or spent fuel rods from light water reactors in short periods of time. The remaining waste is only fission products that decay within 300 years

<https://www.youtube.com/watch?v=gYedTbZYqIY>

[https://en.wikipedia.org/wiki/Dual\\_fluid\\_reactor](https://en.wikipedia.org/wiki/Dual_fluid_reactor)

<https://dual-fluid-reaktor.de/>

## **Thorium-based nuclear power generation**

Thorium-based nuclear power generation offers several potential advantages over a uranium-based as much greater abundance of thorium on Earth, superior physical and nuclear fuel properties, and reduced nuclear waste production and the lack of easy weaponization potential.

[https://en.wikipedia.org/wiki/Thorium-based\\_nuclear\\_power](https://en.wikipedia.org/wiki/Thorium-based_nuclear_power)

# Energy-Saving Lamps



New LED-Technologies opens new options for saving Power

# Fridge and Deep-Freezer



Sunfreezer 60  
Refrigerator

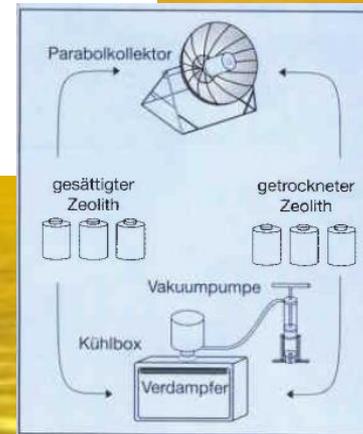


Sunfreezer 50  
Refrigerator +  
Deep-Freezer

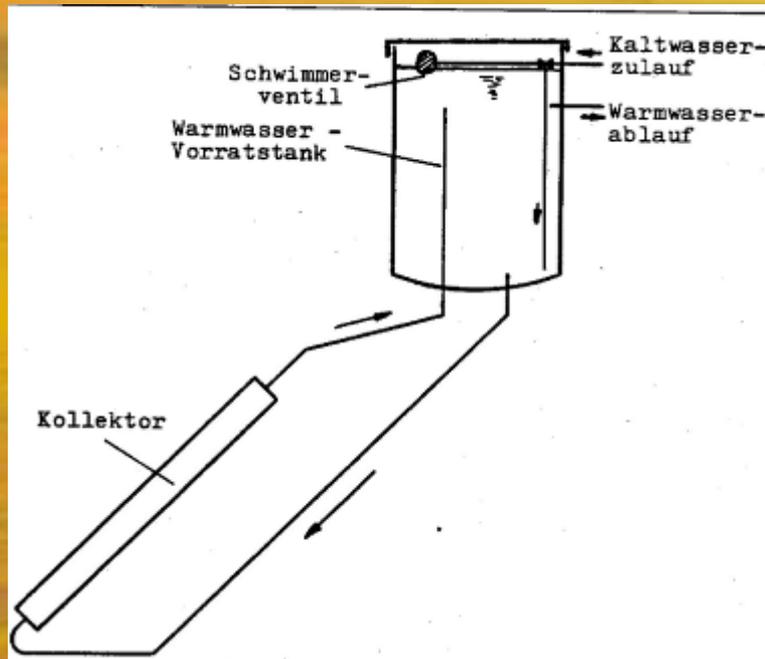
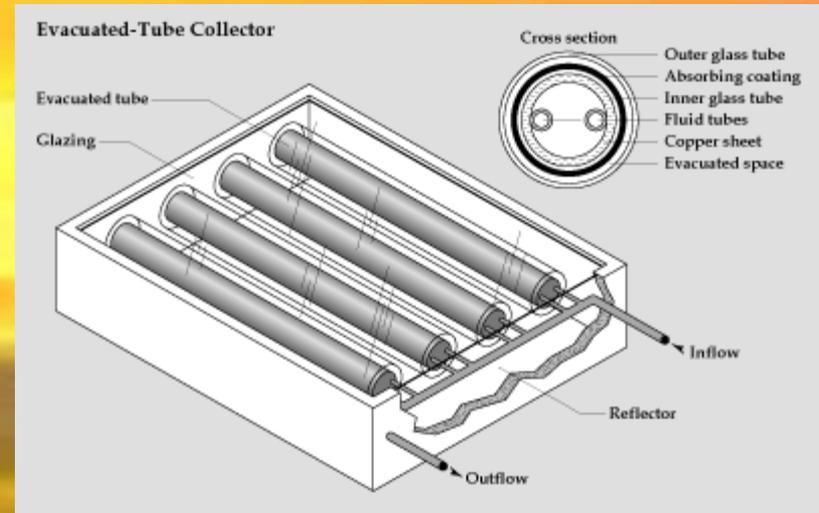


Solar Chill

Sunfreezer for 12V, 190-280 Wh/day



# Solar Thermal System for Hot Water

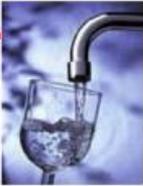


# What all you can do with hot Solar Water?

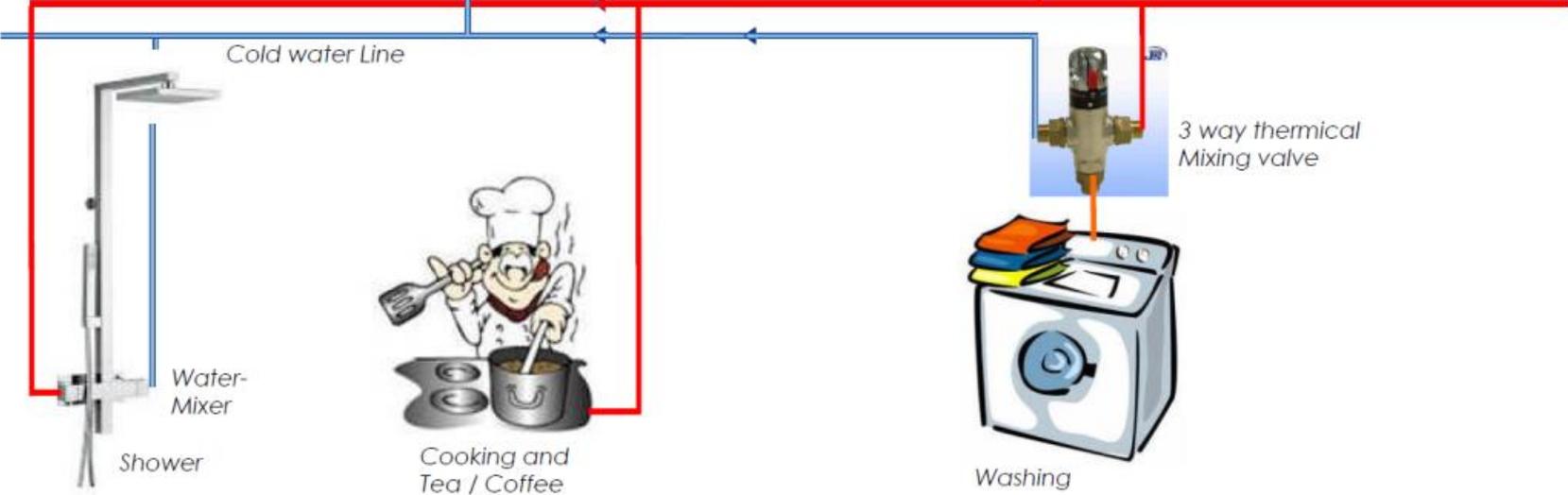


Hot Water (up to 100 °C)

Trinking-Water Monitoring-  
Unit and Shut off valve (optonal with heat exchanger) and small Tank for example a thermo-valve to open if Temp > 98°C)

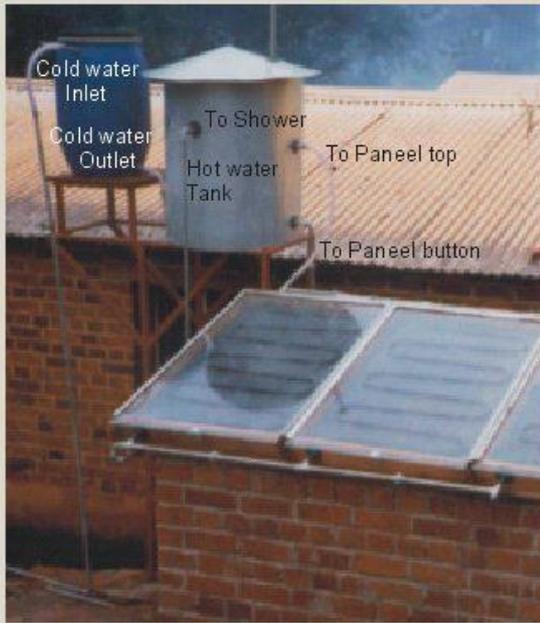


Trinking-Water by Pasteurisation

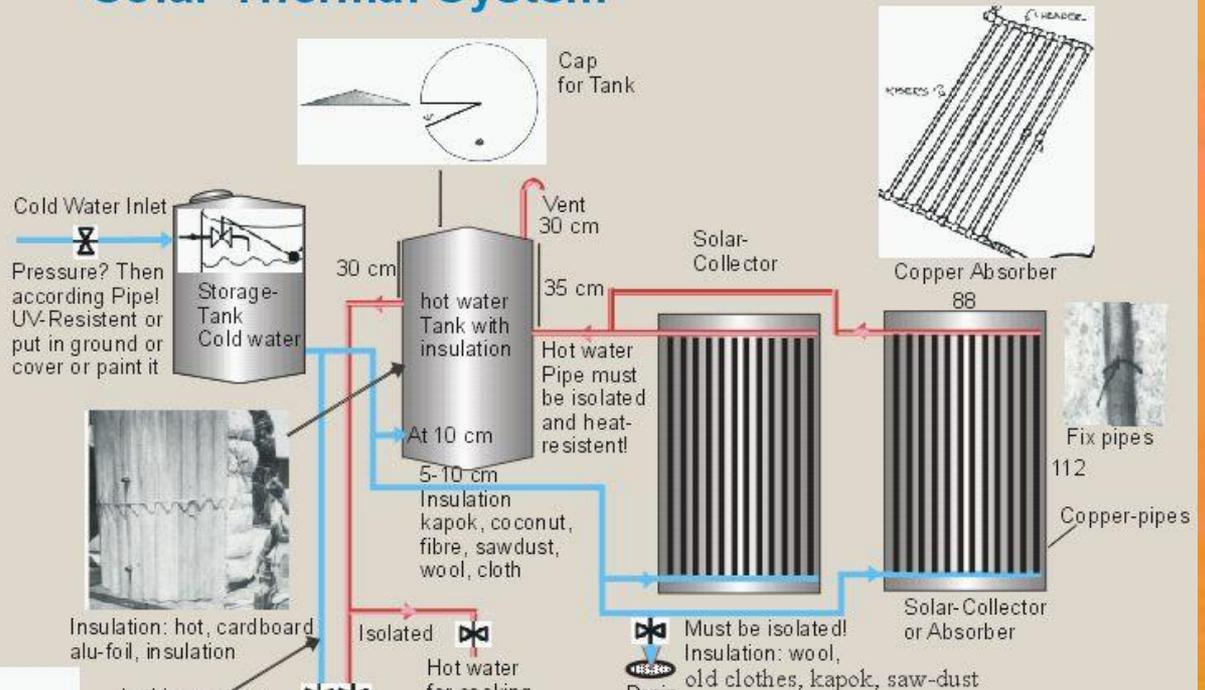


# How to build a Solar Thermal System by yourself

## Solar-Thermal-System

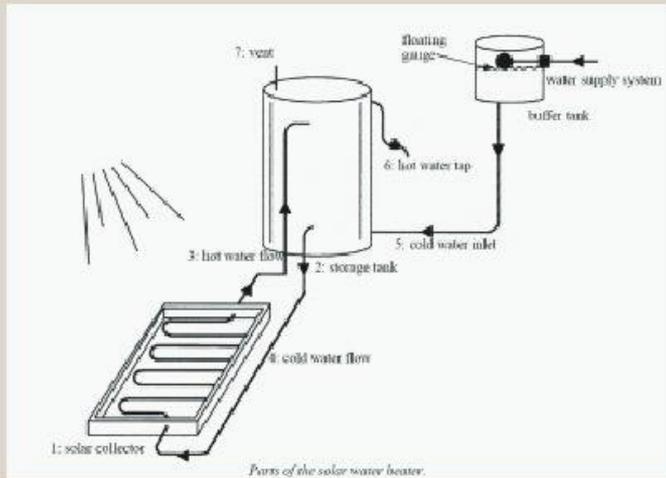
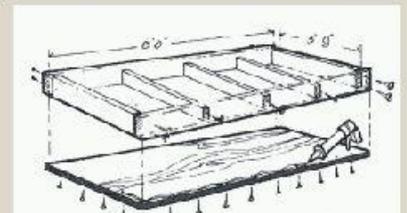
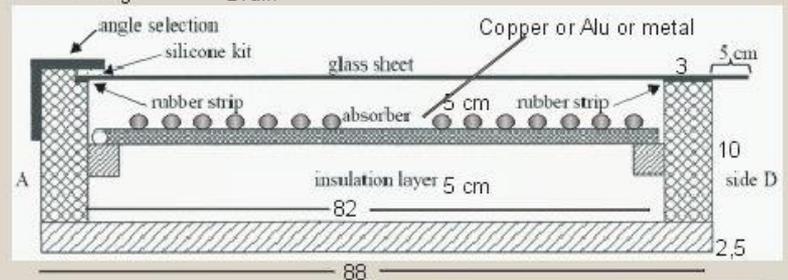


One example in Africa



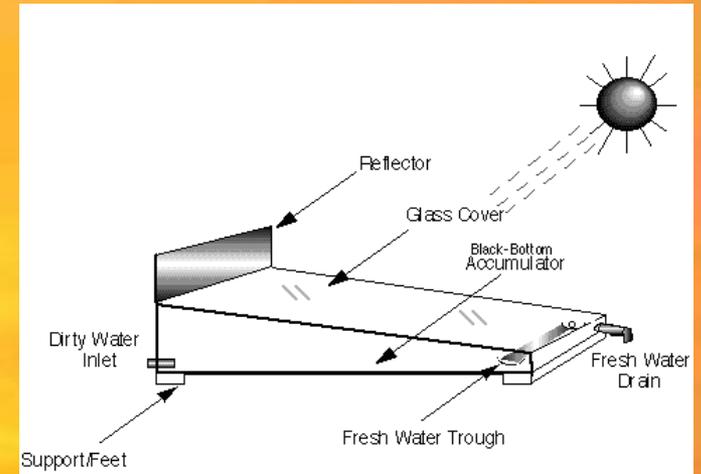
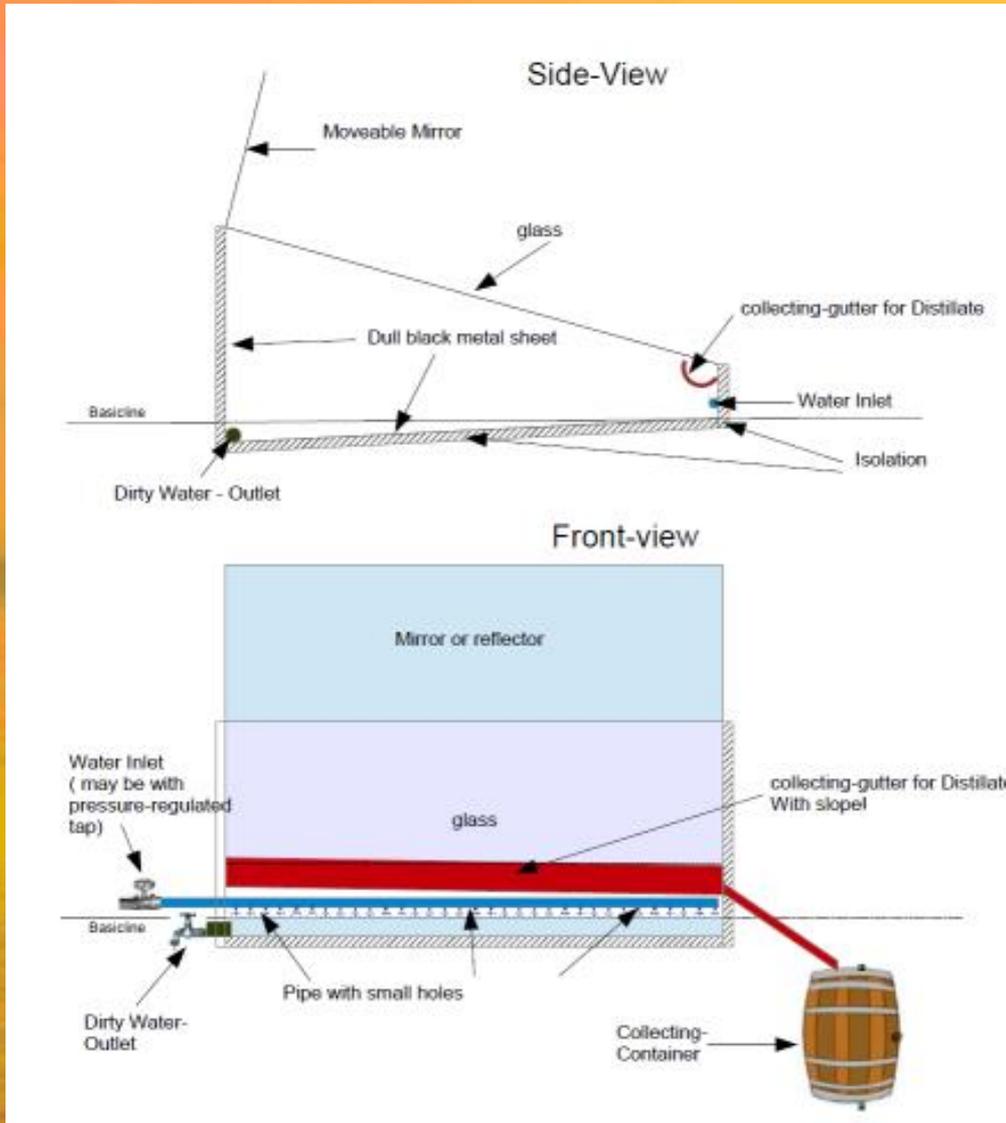
Insulation: hot, cardboard alu-foil, insulation

In this way you have a Storage-Tank for cold water! You get it from here



Principal System

# Solar Distiller



About 11 l / day



# Solar-Cookers



## Box-Type Solar-Cooker with cleaning of Water by Pasteurization

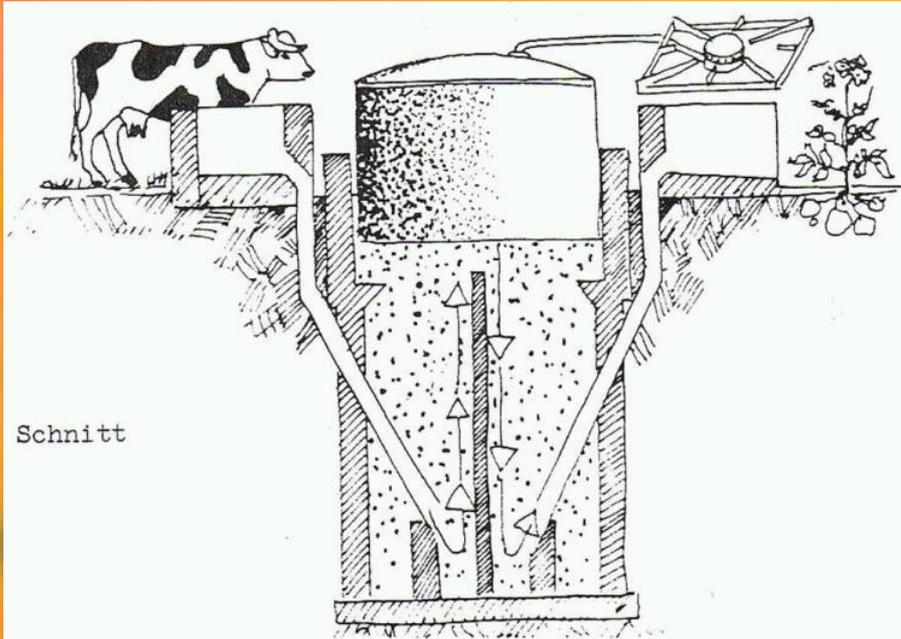


[www.solar-papillon.de](http://www.solar-papillon.de); [www.she-omc.org](http://www.she-omc.org); [www.uhog.ch](http://www.uhog.ch)  
optional with electrical backup or oil-cooker

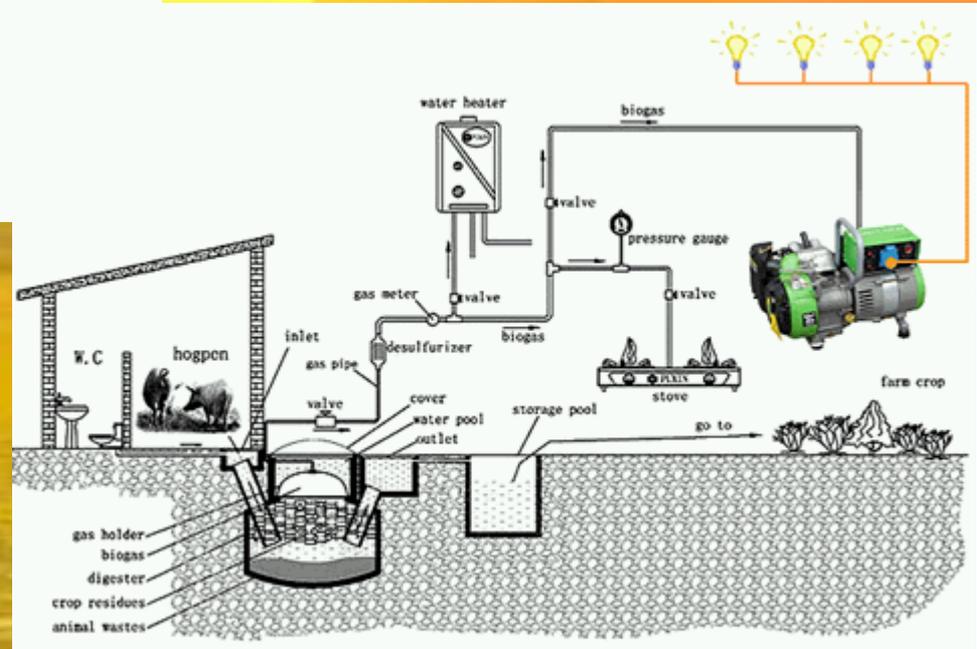
# Parabolic-Solar-Cooker



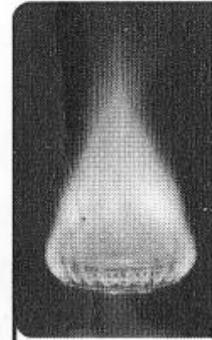
# Bio-Gas System



Schnitt



# Small Biogas-Systems are available

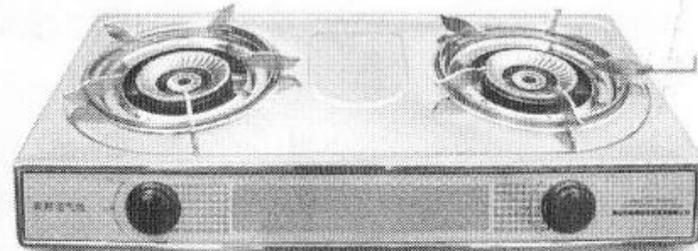


പാചകവാതകം ഉൽപ്പാദിപ്പിക്കു



ചെടികൾക്ക് ജൈവവളവും

**LATEST VERSION IN  
BIO-GAS PLANT  
(FROM WASTE IN  
WEALTH)  
CONCEALED PORTABLE  
FIBRE GLASS  
PRESSURE PLANT**



മാലിന്യനിർമ്മാർജ്ജനം  
പാചക വാതകം  
80% **LPG** ലാഭിക്കാം

# Bio-Gas Systems

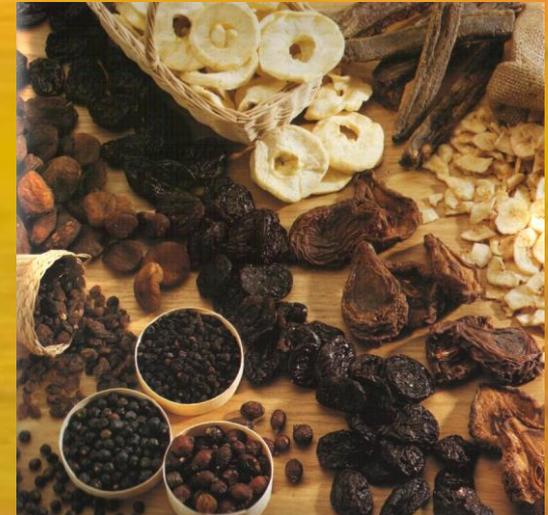


For example from India for 414 Euro

# Solar Dryer for to dry fruits, vegetable, herbs, fish, meat, medical plants and more in a very good quality.



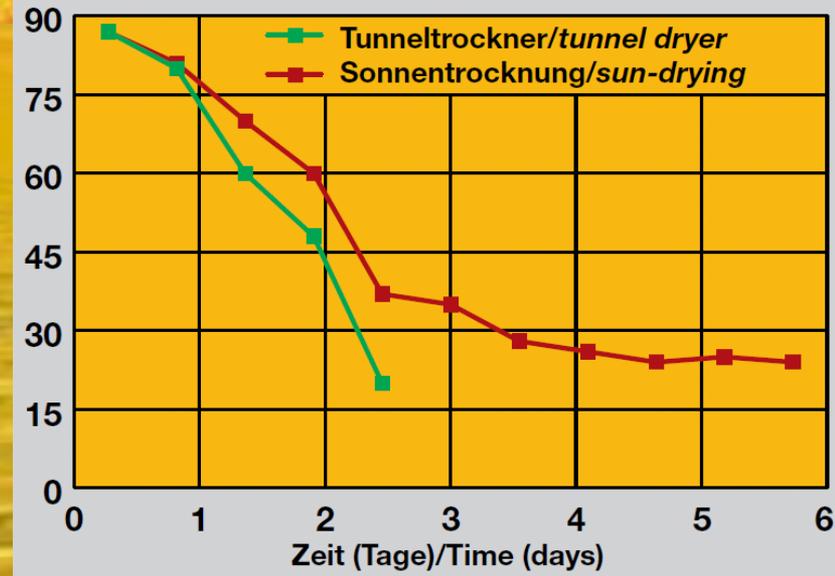
Cost: 120 \$; Working time:  
16 hours for the small Unit!



[www.alternative-technology.de/Solar\\_Dryer/solar\\_dryer.html](http://www.alternative-technology.de/Solar_Dryer/solar_dryer.html)

professional: [www.innotech-ing.de/](http://www.innotech-ing.de/)

# Compare traditional open air-drying with the Solar Tunnel Dryer



## Benefits of the Solar Dryer

- Dried foods are tasty, nutritious, the nutritional value and flavor of food is only minimally affected by drying
- Dried foods are high in fiber and carbohydrates and low in fat, making them healthy food choices
- Vitamin A is retained during drying
- Storage space is minimal, easy-to-store
- Transportation costs are reduced; dried Products weigh only about 1/6 of the fresh food product
- The energy input is less than what is needed to freeze or can
- easy-to-prepare; solar food drying is a very simple skill
- longer storage of dried products (because of more complete drying)
- Can open new markets and income and is a **good start-up technology**. It improves the bargaining position of farmers. Sometimes farmers sell at very low prices during the harvest season
- You can have up to 50% more productivity in agriculture
- For diabetics dried fruit prepared without adding sugar is a healthy choice.
- Dried fruit can be used in stews, soups and casseroles or enjoyed as snacks. It can also be added to cereals for breakfast or used in making ice cream and baked products

**More:** [http://www.alternative-technology.de/Solar\\_Dryer/solar\\_dryer.html](http://www.alternative-technology.de/Solar_Dryer/solar_dryer.html)

# protos Plant-Oil Cooker



Contact Email: [eva.delabre@bshg.com](mailto:eva.delabre@bshg.com);  
[claus-peter.hutter@euronatur.org](mailto:claus-peter.hutter@euronatur.org)

# Wood-saving stove, saves up 70 % of firewood!



Contact [www.eg-solar.de](http://www.eg-solar.de)

# Isolation Box for simmer boil the food (rice etc)



# Grey-water reuse

Water for cleaning (shower, washing machine, hand-washing, washing dishes) can be recycled very well by special units. If the cleaning agent and dirt has is removed and the water is available again



a purifier of all water used for washing  
capacity about 500 litres a day  
to be installed above ground  
domestic, ecological filter material  
can be used even in winter



[http://www.biolan.fi/english/default4.asp?active\\_page\\_id=246](http://www.biolan.fi/english/default4.asp?active_page_id=246)

<https://www3.epa.gov/region9/water/recycling/>

[https://en.wikipedia.org/wiki/Reclaimed\\_water](https://en.wikipedia.org/wiki/Reclaimed_water)

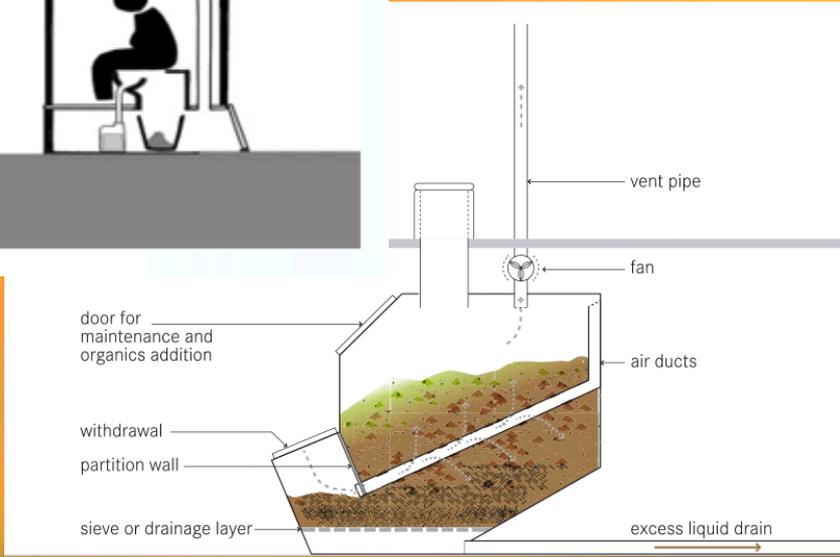
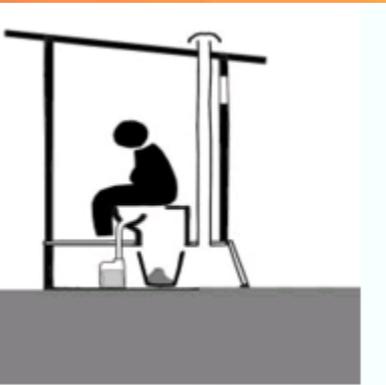
# Potable water direct from the environment! It works!



<https://www.designboom.com/technology/cloudfisher-fog-net-water-foundation-02-02-17/>

<https://www.aqualonis.com/cloudfisher>

# Composting dry Toilet



The human Exkrement are very precious fertilizer if managed properly!  
A composting toilet is a type of dry toilet that uses a predominantly aerobic processing system to treat human excreta, by composting or managed aerobic decomposition. These toilets generally use little to no water and may be used as an alternative to flush toilette.



Inside view of a bucket toilet in Ulaan Baatar, Mongolia. The bucket has a layer of saw dust at the bottom.

at least 50-100 m away from the next spring.  
Hole max. 1 m above Ground-Water level. Never flood the Hole.  
Rain should not come into the hole.  
Lid from wood hat flies may not come in. Air-Pipe should have a mosquito-net at the end.  
If possible put sand or ash in the hole after using, to reduce smell and coming of the fly.  
[www.komposttoilette.de](http://www.komposttoilette.de); [www.berger-biotechnik.de](http://www.berger-biotechnik.de);  
<http://www.germantoilet.org>;  
<http://www.loolaboo.com/> (this design ->)



That's the product, a excellent fertiliser



# Solar air conditioner

Solar Air-Conditioner absorbs solar energy to heat the inside medium by using a vacuum solar collector. The refrigerant from the compressor goes through the copper coil inside the collector and undertakes a heat exchange. The refrigerant heated by the medium inside the solar collector will go through a cycle inside the system cooling and heating. We use a smaller compressor instead of standard compressors to run our system which saves electricity dramatically. A smaller compressor consumes much less electricity and works together with our solar collector to saving electricity.

Water inlet for fill hose from inside unit condensation providing continuous temperature consistency.

Add water before operation when first installing !

Four copper line connections total for thermal processing and inside cooling.

Inner reinforced water tank for thermal heating. Inner and outside shell are made of SUS3042B food grade stainless steel plates, welded by argon arc.

A thick polyurethane insulation 55mm providing 24 hour heat control.

High-efficiency inner copper coil used as a Heat Exchanger.

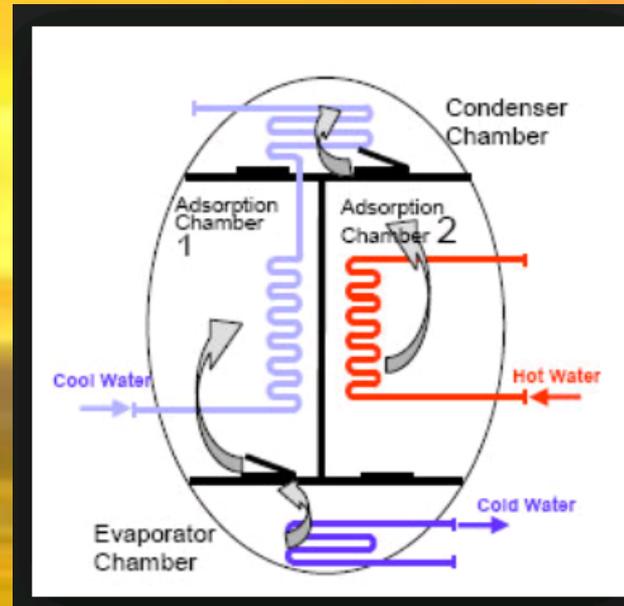
Silicon rings to connect and seal the vacuum tubes with an Absorption rate: = 93%, thermal radiation rate: = 6%.

Stable solar conversion throughout the day (tubes passively track the sun).

Up to 70 % energy saving!



# Adsorption chillers as Air-condition



In contrast to absorption chillers, adsorption chillers require relatively low temperatures to generate cooling capacity. 65 - 85 °C are sufficient for the full capacity of these chillers (solar thermal). On the cold water side, flow temperatures down to 5 °C are feasible, with best results at 10 °C. This makes the adsorption refrigeration technology suitable for normal air conditioning systems, also with dehumidification function, and for technical processes in industry and commerce.

Links: <https://engineering.ucsb.edu/~yuen/references/rer-8.pdf>

<https://fahrenheit.cool>

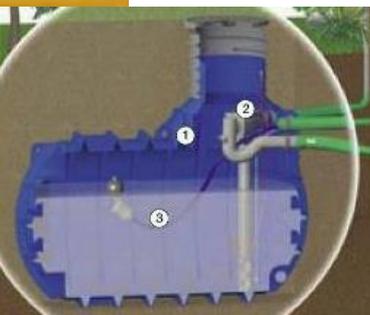
# The autonomous house

To reduce the cost several houses can be linked to one system

Potable water  
3l/day /sq meter  
from ambient humidity



Rain-water-Cistern



Composting  
water-free  
toilet



Inverter  
Battery->220V



Reverse-Osmosis for potable  
water of rain-water  
Grey-water recycling  
(shower, washing-machine)



Pellet-Heater  
or wooden stove

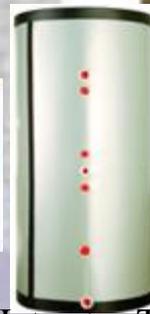
Solar-paneel for  
electric power

Charge controller

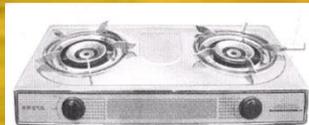
Batteries  
Energy-backup  
by a Generator  
(charging the batteries)



Hotwater-Tank



Solar Thermal System  
for Hot water and heating



Cooking with Solar,  
Biogas or gas-bottle



Optional Solar-cooker

# Law for the expansion of renewable energies



The success story of the law for the expansion of renewable energies generated a lot of jobs and economical growth in many countries.

It needs to be adapted to the new technologies. That people can sell energy for a reasonable price and win/win-Situations are generated. This is a important Task!

[https://en.wikipedia.org/wiki/German\\_Renewable\\_Energy\\_Sources\\_Act](https://en.wikipedia.org/wiki/German_Renewable_Energy_Sources_Act)

# Saving Energy and Ressources

- Replace Outdoor Lights by Solar-lights
  - Replace all new indoor lights necessary by energy saving versions.
  - Install Moving-detectors to switch on light only if somebody is passing.
  - Switch on Indoor lights by a light-Sensitive Sensor, so only if needed.
  - There is a way to switch off not really necessary Units by remote (Air-Conditions etc). So if Power-failure, only the really needed devices can be switched on and a smaller Generator can manage that.
  - Replace the electrical Heating-Units by Solar
  - If not applicable use Gas instead of electricity
  - Most electrical devices need some electricity, even switch off (Television, Computer). So switch off by an external Power-switch.
  - Switching of air-condition if nobody in the room, because they need considerable energy. There are Air-Conditions which use the cool air from the room to cool more down.
  - All devices for heating should be well insulated for not losing energy.
  - Laundry: There is washing Agent, where you can run laundry with lower water-Temperatures. Generally consider washing with less high temperature.
  - Some devices can be switched by an electronic Timer with battery-backup.
  - Do not let fridges run with too low temperature. They need very much temperature if Setup to very low temperature. Keep the fridge on a cold place. The backside away from the wall. Check sealing are correct.
  - Notebook need much less energy than Desktop-Computer and are more mobile. Consider that when buying new ones.
- Others**
- Irrigation in the daytime wastes a lot of water. If needed best is in the early morning. By an automated System, it can be done very efficient.
  - Advice people with water-flush-toilette to use manually close the water if only few water is needed. Water-flush-toilette use 15 l of water each time!

# What we can learn of nature? Nature does not have waste!



All is integrated in a **circular-System**. Nature is very successful, so we **have to come to a circular-System as well!** All has a value, and if it is only for energy (plastic etc). Many countries proof it that with rubbish you can make money, if it is separated.



**Waste to Energy Incinerator (EfW)** is a renewable energy solution. It can reduce the volume of waste to just 10%.

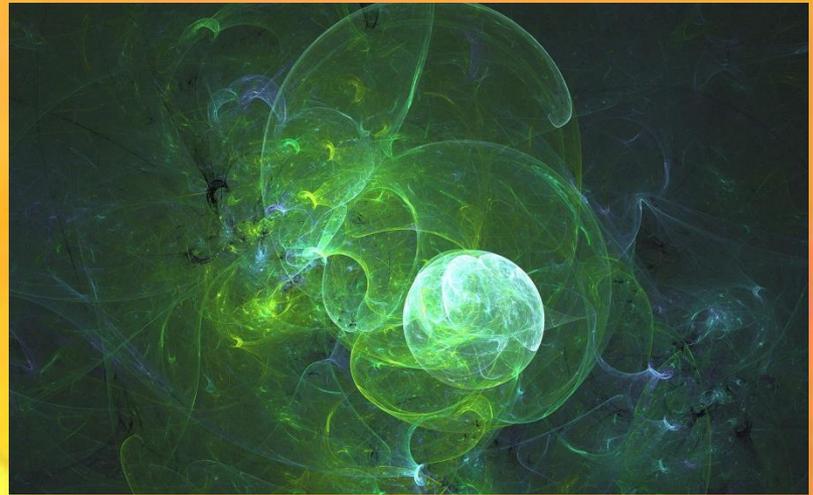
<https://en.wikipedia.org/wiki/Incineration>; <https://www.inciner8.com/>  
<https://www.youtube.com/watch?v=qYhP0NP7iMs>

A house made of bottles



## What else can we do?

- **We are all sitting in the same boat.** If we open our horizon of consciousness to a world community and act with common responsibility all can win!
- Distribute this and other information for a sustainable future, as much as possible.
- This video is open Source. Take it and upload it again with some advertisement and make some money and do something good for the planet.
- Try to find your topic where you have compassion. Search for more information in the Internet and do it. Do not waste too much time only with collecting information. Live and practice are the best teachers!
- Share the experience and information with others. There is enough business for all!
- Join groups like free-energy-societies in many countries or [www.keshefoundation.org/](http://www.keshefoundation.org/) or <https://gaia-energy.org/home> to cooperate. **The key to success is the cooperation.**
- Do not believe all negative propaganda about new energy-solutions. Keep in mind that some pay well to remove competition.
- Presenting relevant people, groups, companies, institutions and governments sustainable solutions and make suggestions, how to implement it.



# Thank you!

This should be only an overview. For sure not all is correct. For that the links should help to go more in detail.

Check yourself what is useful for specific applications.

Follow the links and critics to get a clear view of relevance.

Not all alternatives are ready for “mass-production”.

The success story of the law for the expansion of renewable energies

[https://en.wikipedia.org/wiki/German\\_Renewable\\_Energy\\_Sources\\_Act](https://en.wikipedia.org/wiki/German_Renewable_Energy_Sources_Act)

**With material of..**

[www.appropedia.org](http://www.appropedia.org)

<https://peswiki.com/>

<http://www.borderlands.de/index1n.php3>

<http://www.alternative-technology.de/>

[www.slimlife.eu/](http://www.slimlife.eu/)

<http://www.buch-der-synergie.de> (German)

[www.wikipedia.com](http://www.wikipedia.com)

Thank you!

# Advanced agricultural and fishing technologies

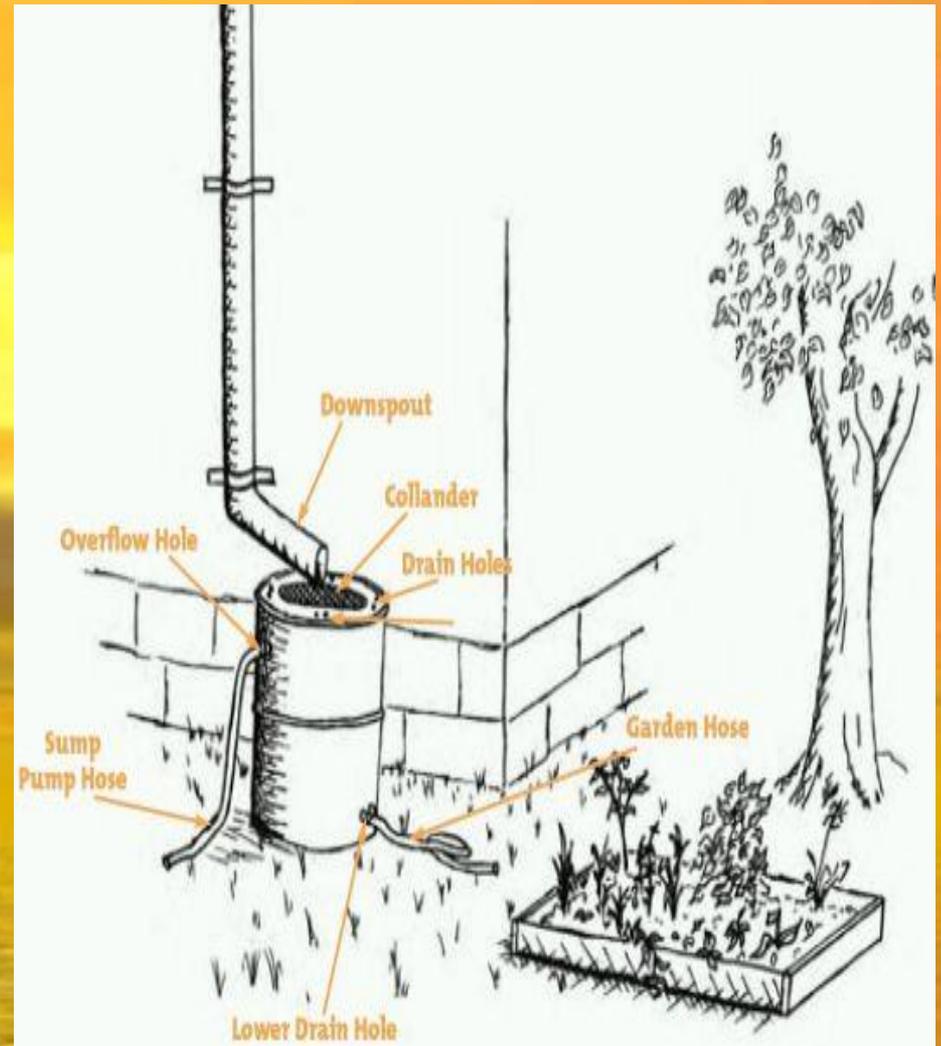
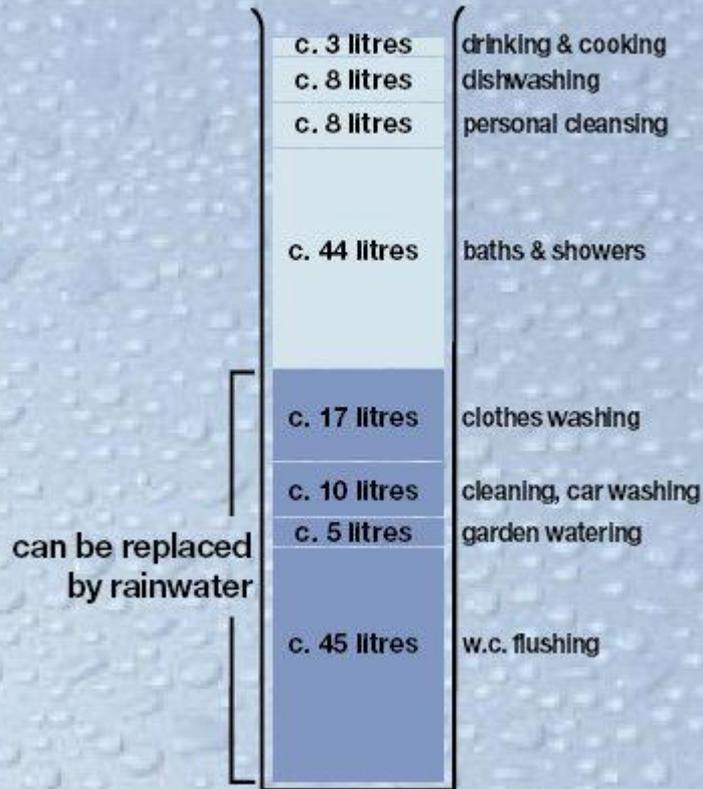
## Water, irrigation and more



Aqua-Ponic-Systems

# How much water you can save using rain-water?

Mains water usage averages 140 litres per person per day

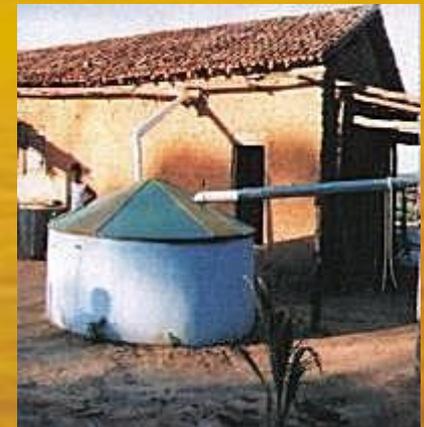


Simple System using Rainwater

# Using the presents of the sky: Building a Cisterne

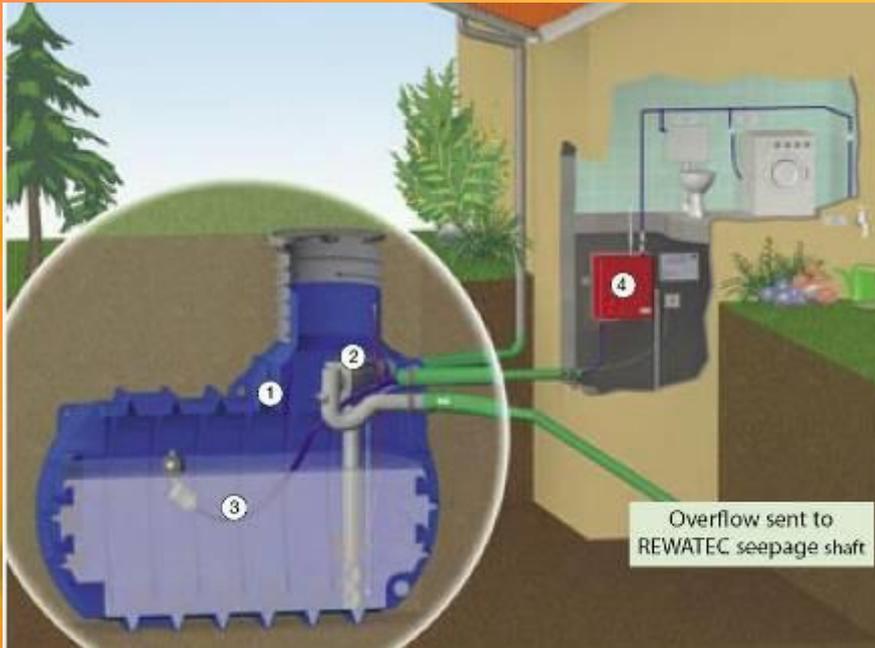


Collecting with the gutter



[www.freerain.co.uk](http://www.freerain.co.uk); [www.rewalux.com](http://www.rewalux.com)  
[www.nordestino-ev.de/cisterna.htm](http://www.nordestino-ev.de/cisterna.htm)

# Details on a Rainwater-Collection-System



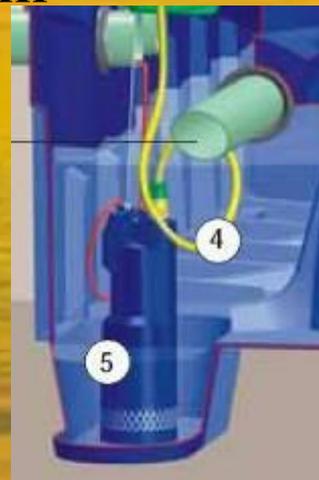
Complet System



Filter-System



Inlet-Pipe



Pump

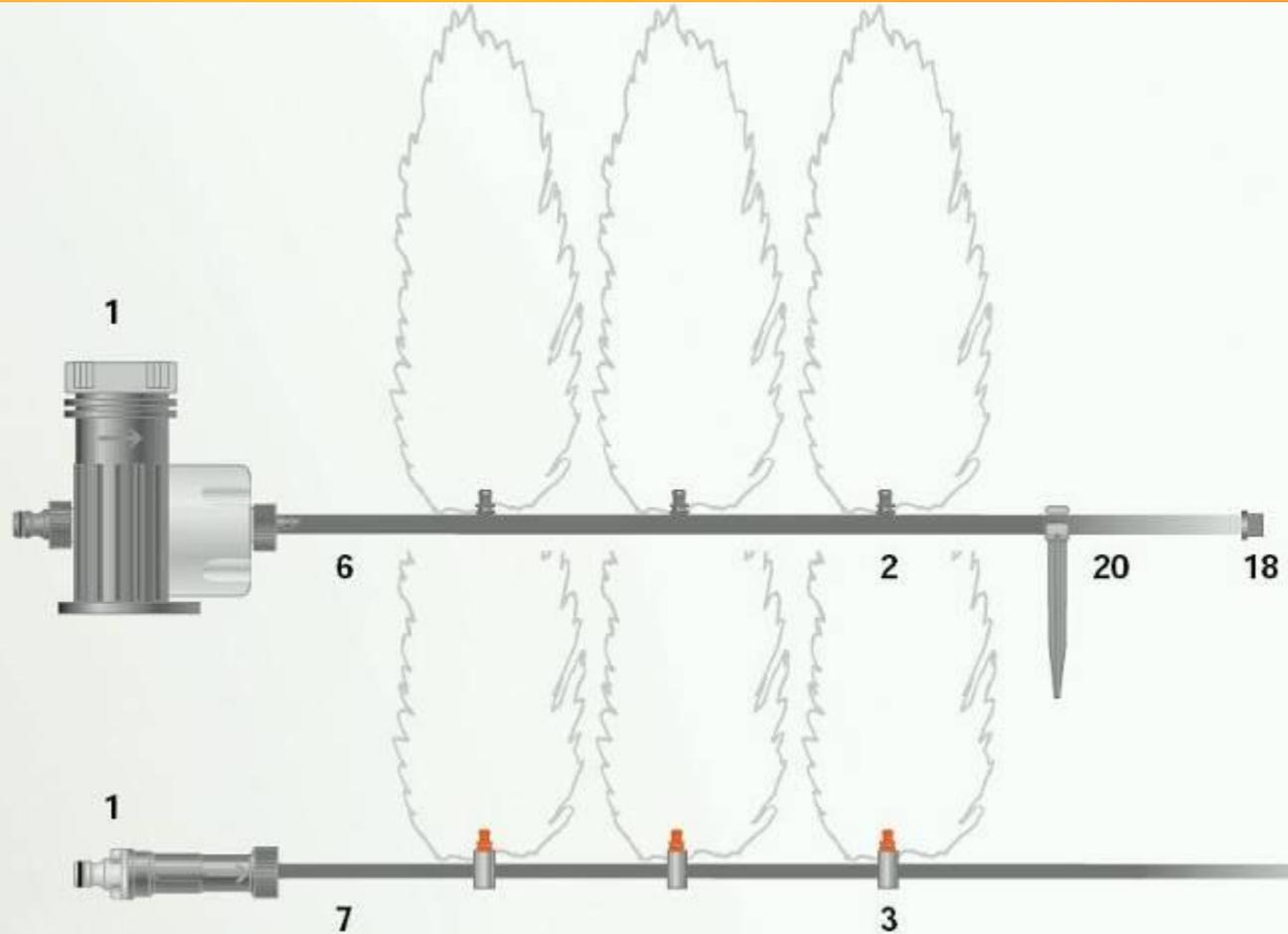


Tiny animal protection

# Irrigation-Systems



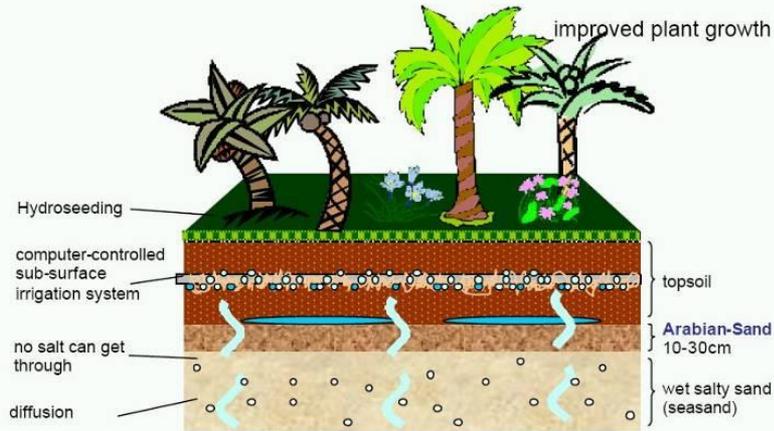
# Drip-Irrigation-Systems



Instead of using this System, using normal Pipes and short pulses on a valve or Pump

# Subsurface Drip Irrigation, buried clay pot irrigation

90 % water saving



Arabian Green LLC • P.O.Box 84820, Dubai, UAE • email:ae\_green@emirates.net.ae



# Different Technologies

	Surface irrigation	Subsurface Irrigation	Sprinkler Irrigation	Drip Irrigation	Subsurface Drip Irrigation
<b>Evaporation losses</b>	high	Low	high	Low	none
<b>Seepage losses</b>	medium	High	low	low	none
<b>Water conservation coefficient</b>	40-50%		60-70%	80-90%	>95%
<b>Salinization risk</b>	low	high	high	low	none
<b>Silting risk</b>	medium	low	high	medium	none
<b>Methane production</b>	yes	no	no	no	low
<b>Installation costs</b>	low	low to medium	high	high	medium
<b>Suitable soils</b>	heavy soils, no slopes	transparent topsoil over blocking layers	all soils w/o or only little slope	any kind of soil, any slope	all soils, any slope
<b>Feasible Plant Cultures</b>	plants resistant to stagnant water	any	any	mainly permanent cultures such as Wine, Olives, Fruit but also vegetables	any

Salinization risk: None!

[www.aquaplue.com](http://www.aquaplue.com), AquaSpa Irrigation-System

# Purification of Water



70% of the Diseases are a  
Consequence of the Water Quality  
and Quantity!

# Water Filters: Ceramic-Filter, clay-filters with silver, Charcoal-Filter, upflow filter, slow sand filtration, Chlorine disinfection



# UV-Cleaning and Reverse-Osmosis-System



UV-Lamp 11 W; Pump: 1,6 l/min



Reverse-Osmosis-Systems

# Sodis



## How to apply SODIS?

- 1 Wash the bottle well the first time you use it



2



Fill the bottle with water and close the lid well

3



Expose the bottles to the sun morning to evening for at least 6 hours

4

The water is now ready for consumption



# PAUL - Waterbackpack



PAUL - Waterbackpack is a small, transportable and easy to use dead-end membrane filtration unit for basic water supply in cases of natural disasters for small groups in the range of 200 – 500 people in remote areas.

<https://www.uni-kassel.de/fb14bau/en/institute/iwau/siedlungswasserwirtschaft/paul-waterbackpack.html>

# Watercone

cheap and mobile solar Potable Water generation from sea water or brackish water on the base of condensation by solar still

## Function



1. Pour salty / brackish Water into pan. Then float the Watercone® on top. The black pan absorbs the sunlight and heats up the water to support evaporation..



2. The evaporated Water condensates in the form of droplets on the inner wall of the cone. These droplets trickle down the inner wall into a circular trough at the inner base of the cone.



3. By unscrewing the cap at the tip of the cone and turning the cone upside down, one can empty the potable Water gathered in the trough directly into a drinking device.

[www.watercone.com/product.html](http://www.watercone.com/product.html)

# Cold storage of the water



Due to cooling down by evaporation, Temperature is about 14 °C

# Protecting water: Washing with the soapnut and washing balls with ceramics

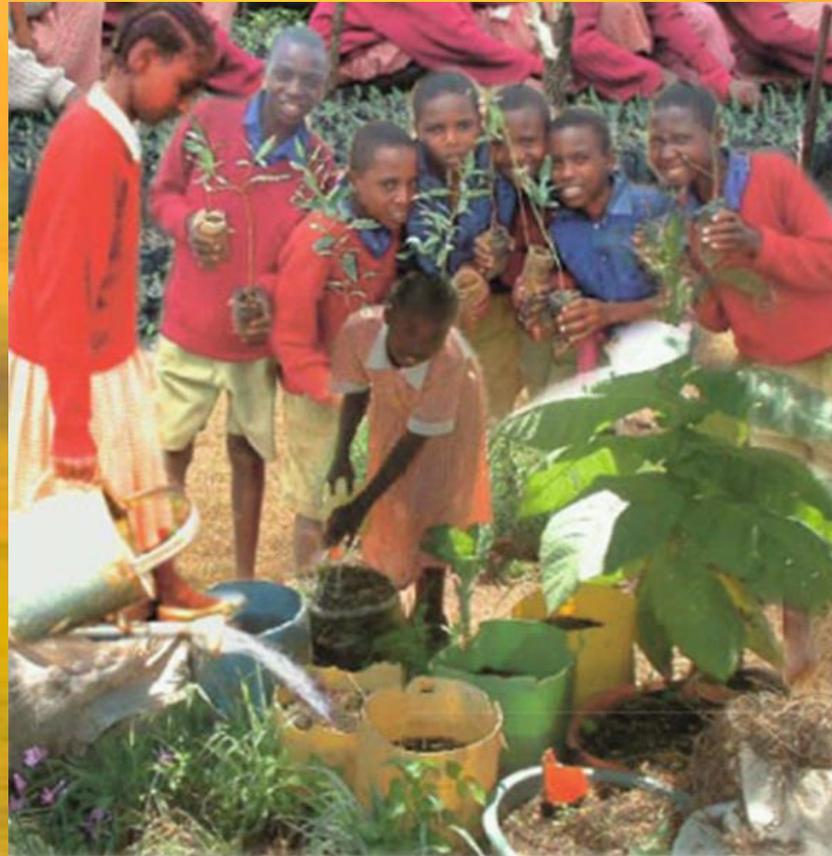


The soapnut tree washes without chemical additives and thus protect people and the environment.

# Reforestation

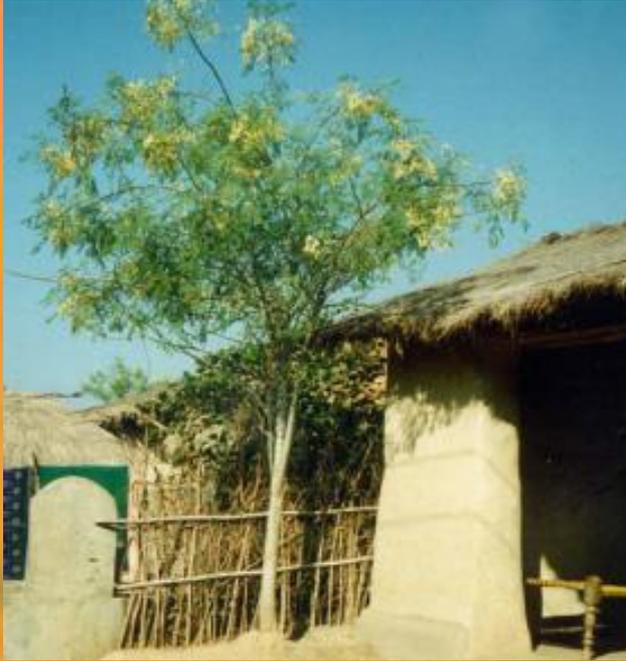
*Trees are our brothers and sisters and they help us so much!*

*Let's join to plant new trees and we understand more of the wisdom of nature!*



[www.alternative-technology.de/Reforestation/reforestation.html](http://www.alternative-technology.de/Reforestation/reforestation.html)

# The wonderful tree Moringa, could save millions of lives!



Can be cultivated like this above or that below



2 times the Protein of Yogurt  
7 times the Vitamin C of Oranges  
3 times the Potassium of Bananas  
4 times the Vitamin A of Carrots  
for cleaning of water and many more...



[www.treesforlife.org/our-work/our-initiatives/moringa/moringa-tree](http://www.treesforlife.org/our-work/our-initiatives/moringa/moringa-tree)

[www.tfljournal.org](http://www.tfljournal.org)

# Consider the possibilities of Moringa

**Leaves:**  
Nutrition  
Medicine



**Trees:**  
Alley Cropping  
Erosion Control



**Flowers:**  
Medicine



**Pods:**  
Nutrition  
Medicine



## Consider the Possibilities

Nutrition • Disease Prevention • Ointment • Alley Cropping • Fertilizer • Erosion Control • Water Purification • Cosmetics • Textile Printing • Insecticide • Fungicide • Lubricants • Tanning Leather • Dye • Fiber Products • Fences • Ornamentation & Shade • Wind Barrier • Cane Juice Clarifier • Honey Production & Clarifier • Condiment • Cooking Oil • Food • Traditional medicine: Anemia • Anxiety • Asthma • Blackheads • Blood impurities • Blood pressure • Bronchitis • Catarrh • Chest congestion • Cholera • Colitis • Conjunctivitis • Cough • Diabetes • Diarrhea • Dropsy • Dysentery • Eye and ear infections • Fever • Glandular swelling • Gonorrhea • Headaches • Hysteria • Intestinal worms • Jaundice • Lactation • Malaria • Pain in joints • Pimples • Pregnancy • Psoriasis • Respiratory disorders • Scurvy • Semen deficiency • Skin infections • Sore throat • Sores • Sprain • Stomach ulcers • Tuberculosis • Tumor • Urinary disorders • Wounds



**Roots:**  
Medicine



**Seeds:**  
Water Purification  
Medicine  
Oil



**Gum:**  
Medicine



**Bark:**  
Medicine

Sources: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

Not only are the leaves highly nutritious, but every single part of the Moringa tree has been used for beneficial purposes. Here again is the list of all the many specific uses people have found for Moringa. [When the words "Consider the Possibilities" appear:] It's time that we seriously consider the possibilities that Moringa holds for benefiting our world.

# Alfalfa (Lucern), Quinoa, very nourishing!



## Alfalfa

Good for feeding young children! All what is necessary is inside. Problem: Taste is not good. Can be eaten or a drink can be mixed, may be with other (good taste) ingredients.

<http://en.wikipedia.org/wiki/Alfalfa>



## Quinoa

The nutrient composition is very good compared with common cereals. Quinoa seeds contain essential amino acids like lysine and good quantities of calcium, phosphorus, and iron.

# Chia-Seed, very interesting!



Seeds, chia seeds, dried	
Nutritional value per 100 g (3.5 oz)	
<b>Energy</b>	2,034 kJ (486 kcal)
<b>Carbohydrates</b>	42.12 g
Dietary fiber	34.4 g
<b>Fat</b>	30.74 g
Saturated	3.330
Monounsaturated	2.309
Polyunsaturated	23.665
omega-3	17.8 g
omega-6	5.8 g
<b>Protein</b>	16.54 g
<b>Vitamins</b>	
Vitamin A equiv.	54 µg (7%)
Thiamine (B <sub>1</sub> )	0.62 mg (54%)
Riboflavin (B <sub>2</sub> )	0.17 mg (14%)
Niacin (B <sub>3</sub> )	8.83 mg (59%)
Folate (B <sub>9</sub> )	49 µg (12%)
Vitamin C	1.6 mg (2%)
Vitamin E	0.5 mg (3%)
<b>Minerals</b>	
Calcium	631 mg (63%)
Iron	7.72 mg (59%)
Magnesium	335 mg (94%)
Manganese	2.723 mg (130%)
Phosphorus	860 mg (123%)
Potassium	407 mg (9%)
Sodium	16 mg (1%)
Zinc	4.58 mg (48%)

<https://authoritynutrition.com/11-proven-health-benefits-of-chia-seeds/>

<http://draxe.com/chia-seeds-benefits-side-effects/>

# Seaweed offers a lot of opportunities!



## Health Benefits of Seaweed

Organic Facts  
www.organicfacts.net

### Nutrients\*

Protein 12%  
Calories 2%  
Carbohydrate 2%  
Dietary Fiber 1%

### Vitamins\*

Vitamin A 104%  
Vitamin C 65%  
Folate 37%  
Riboflavin 26%

### Minerals\*

Manganese 49%  
Copper 13%  
Iron 10%  
Potassium 10%



Aids in reducing accumulation of fats and aids in weight loss

Useful in maintaining healthy digestion

Helps to prevent colon cancer and leukemia

Protects skin against harmful effects of ultraviolet B radiation and slows down aging process

Effective in exerting anti-diabetic effects

Helps to detoxify and cleanse body

Reduces risk of thyroid enlargement or goiter hypothyroidism and mental retardation

Helps to strengthen eyes and hair

Beneficial in improving heart and dental health

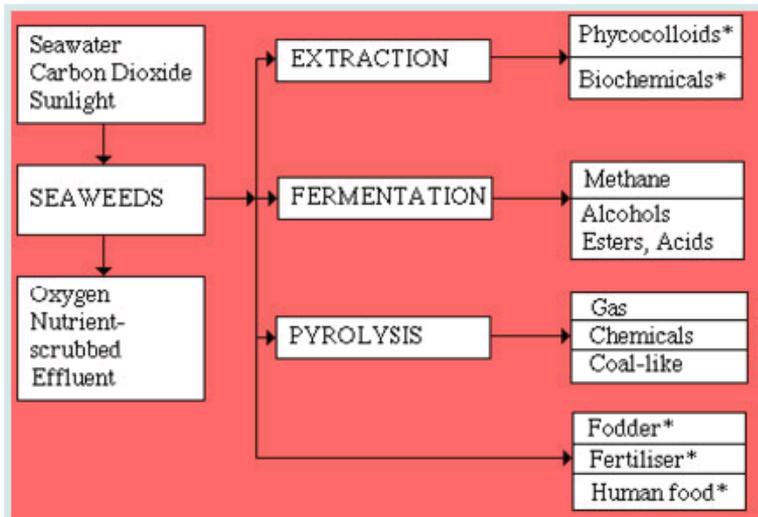
Prevents formation of blood clots and threat of stroke

Helps to protect against Influenza B virus

Caution: Excess intake may raise levels of thyroid-stimulating hormone. Avoid usage during pregnancy and lactation.

\*% Daily Value per 100g. For e.g. 100g of seaweed (laver) provides 65% of daily requirement of vitamin C

## Uses of Seaweeds: Present and Future

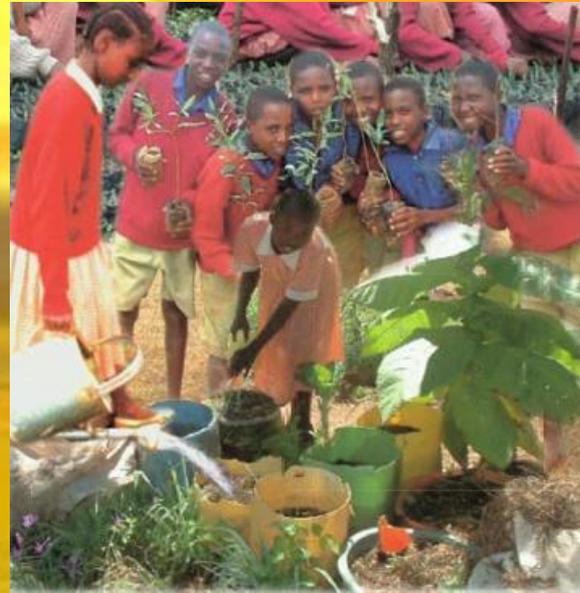


They grow up to 40 cm a day and have amazing usage-options! Perfect in combination with fish-farms!

<https://en.wikipedia.org/wiki/Seaweed>

# The soil is at the heart and soul of our planet. We can't live without it.

One thing Human can't survive is soil degradation. Despite the fact that healthy soil remains crucial for food production, flood defences and our ability to tackle climate change, we don't look after it. "The health of soil, plant, animal and man is one and indivisible."(Lady Eve Balfour)



[www.soilassociation.org](http://www.soilassociation.org)

# Biochar

Converts agricultural waste into a soil enhancer that can hold carbon, boost food security and discourage deforestation. The process creates a fine-grained, highly porous charcoal that helps soils retain nutrients and water.



[www.biochar-international.org](http://www.biochar-international.org)



more amazing information of organic farming at  
[www.organicfarmermagazine.org](http://www.organicfarmermagazine.org) (free download of all magazine from year 2005 on!)

# Make your own Biochar very easy!

Dig your own soil Kon-Tiki: Biochar can be produced with few investment.



[www.ithaka-institut.org/en/ct/111](http://www.ithaka-institut.org/en/ct/111); [info@ithaka-institut.org](mailto:info@ithaka-institut.org)

En francais: <http://www.kon-tiki8303.ch/index.php/fr/>

Kon-Tiki – the democratization of biochar production

<http://www.ithaka-journal.net/kon-tiki-die-demokratisierung-der-pflanzenkohleproduktion?lang=en>

# Sustainable agriculture by Permaculture

- The World has lost ONE THIRD of all fertile soils between 1950 and 1990 (UN Millenium Ecosystem Assessment Report). Currently per earth-dweller 2 tons of soil gets lost every year!
- The soil, our basis for live, is seriously in danger due to over usage and not sustainable solutions.
- Care for the earth, Care for the people: Without a healthy earth, humans cannot flourish.



Suburban permaculture garden in Sheffield, UK with different layers of vegetation

- Permaculture uses observation of nature to create regenerative systems,
- Permaculture is a agricultural system utilizing the patterns and features observed in natural ecosystems.
- It ensures regenerative and self-maintained habitat and agricultural systems
- Working with, rather than against nature.
- Looking at plants and animals in all their functions, rather than treating any area as a single product system.
- returning waste back into the system to recycle into usefulness
- Permaculture maximizes useful connections between components and synergy of the final design. The whole becomes greater than the sum of its parts.

# Amazing growth of plants by simulation of the original conditions

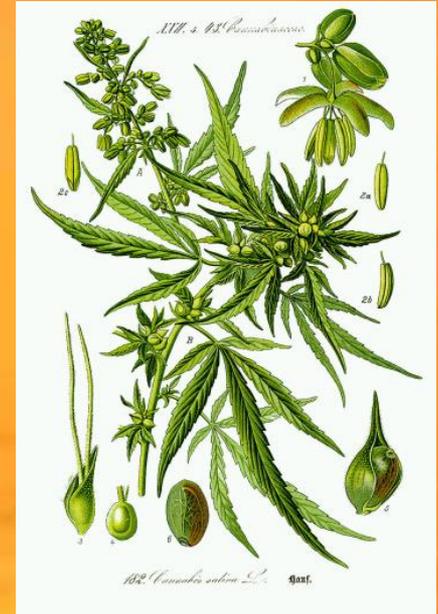


Mound phenomenon at bio-resonance conditions

It works (see right side!)  
I made two similar sample,  
one with Aluminum-Shield

- When seeds are now exposed to a fake primordial environment, they grow back to their original form. The reason is to be found in the changed magnetic field of the earth. Dr. Fritz Florian has a technique to implement that.
- How plants thrive depends largely on the environmental factors. In addition to light, fertilizer, water and ambient temperature many other factors play a role. Seeds and plants react differently to the size of the peel and the resulting vibration from the shell. Only with the correct diameter of the coaster (bio-resonance), plants develop rapidly.
- More (in German): [http://www.borderlands.de/net\\_pdf/NET0315S36-38.pdf](http://www.borderlands.de/net_pdf/NET0315S36-38.pdf);

# Industrial hemp, no other plant can be used more widely



•Hemp (*Cannabis sativa*) is not only one of the oldest crops of humanity, but also one of the most lucrative. No other plant can be used more widely: hemp seeds provide protein-rich foods, hemp fibers the most durable textiles, paper and construction materials, and hemp flowers a medicine used for millennia. Italian farmers grow hemp to cleanse contaminated soil. But leached and poisoned soils can be made usable again and fertile by hemp.

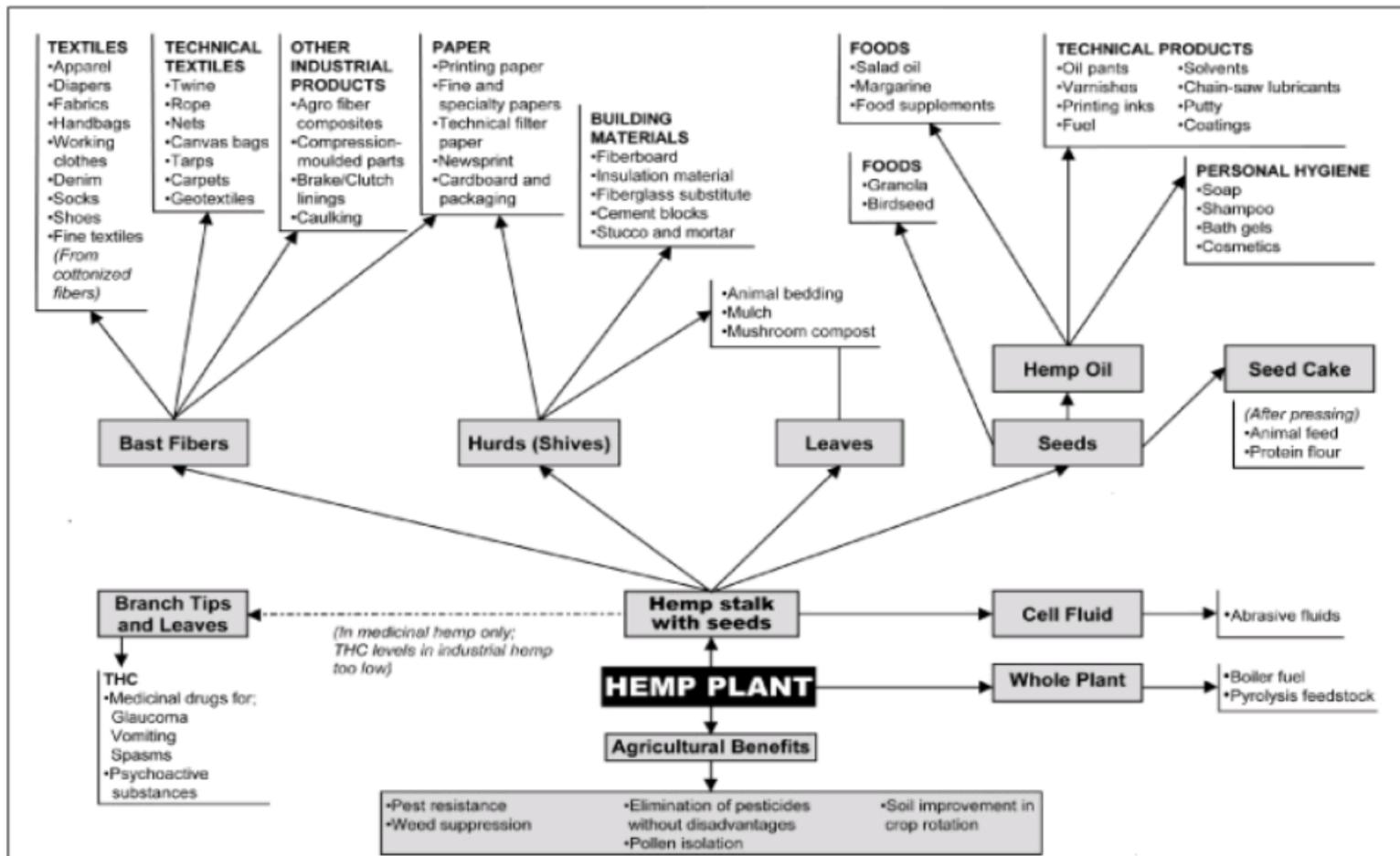
•**Industrial use:** As fiber ranging from paper, cordage, construction material and textiles in general, to clothing. Hemp is stronger and longer-lasting than cotton. It also is a useful source of foodstuffs (hemp milk, hemp seed, hemp oil) and biofuels.

•**Medical aspects:** can be used to cure Nausea and vomiting; loss of appetite and emaciation; spasticity; movement disorders; pain; glaucoma; epilepsy; asthma; Dependence and withdrawal symptoms; Psychiatric symptoms; autoimmune diseases and inflammation; itching, hiccups, attention deficit syndrome (ADD), high blood pressure, tinnitus, chronic fatigue syndrome, restless leg syndrome.

For sure, hemp can be used as a drug as well! But that can be controlled and regulated in another way (dealing is forbidden etc.). Alcohol can threaten human as well.

More: <https://en.wikipedia.org/wiki/Cannabis>

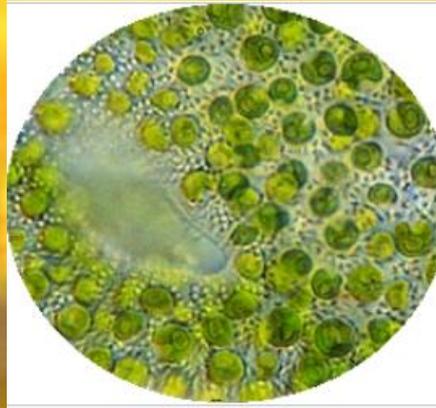
# Uses of industrial hemp



**Source:** Industrial Hemp Association of Tasmania, <http://www.ihat.org.au/>.

**Notes:** Other hemp product charts include D. G. Kraenzel et al., "Industrial Hemp as an Alternative Crop in North Dakota," AER-402, North Dakota State University, July 23, 1998; and National Hemp Association, <http://nationalhempassociation.org/>.

# Chlorella, a healthy Superfood with many positive effects



Chlorella can serve as a potential source of food and energy because its photosynthetic efficiency can, in theory, reach 8%,[2] which exceeds that of other highly efficient crops such as sugar cane.

Chlorella is a potential food source because it is high in protein and other essential nutrients; when dried, it is about 45% protein, 20% fat, 20% carbohydrate, 5% fiber, and 10% minerals and vitamins. And helping for weight control, cancer prevention, and immune system support.

Links: <https://en.wikipedia.org/wiki/Chlorella>

# Coconut revival: new possibilities for the 'tree of life'



Coconut oil, or copra oil, is an edible oil extracted from the kernel or meat of mature coconuts harvested from the coconut palm (*Cocos nucifera*). It has various applications. Because of its high saturated fat content, it is slow to oxidize and, thus, resistant to rancidification, lasting up to six months at 24 °C (75 °F) without spoiling

Despite its high saturated fat content, coconut oil is commonly used in baked goods, pastries, and sautés, having a "haunting, nutty", flavor with a touch of sweetness.

Coconut oil has been used for hair grooming.

As biodiesel to use as a diesel engine fuel

Coconut oil has been tested for use as an engine lubricant and as a transformer oil.

Acids derived from coconut oil can be used as herbicides

Can be used for the manufacture of soap

[https://en.wikipedia.org/wiki/Coconut\\_oil](https://en.wikipedia.org/wiki/Coconut_oil)

# Stevia, much better than industrial sugar

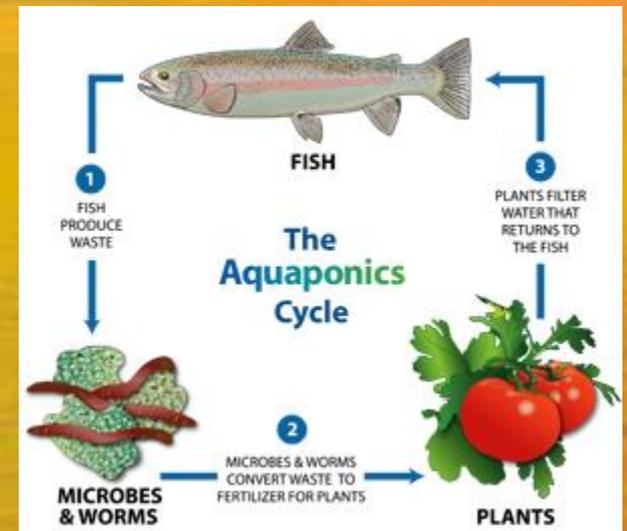
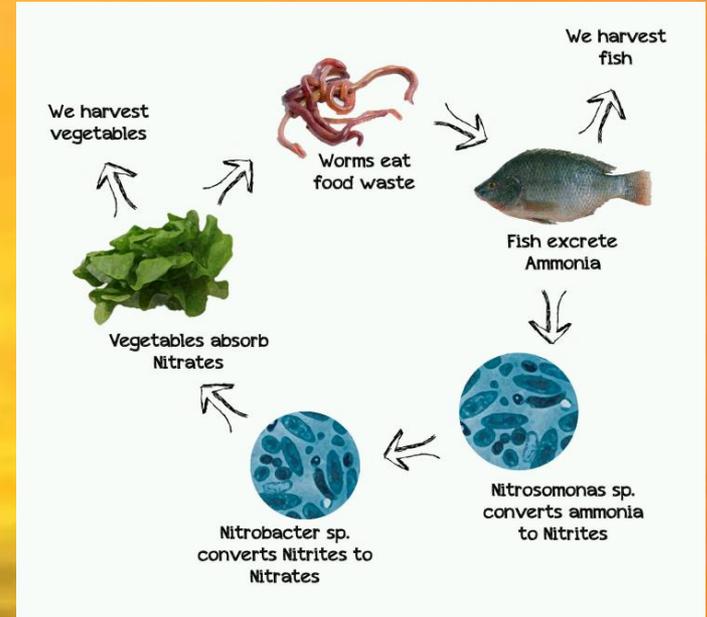
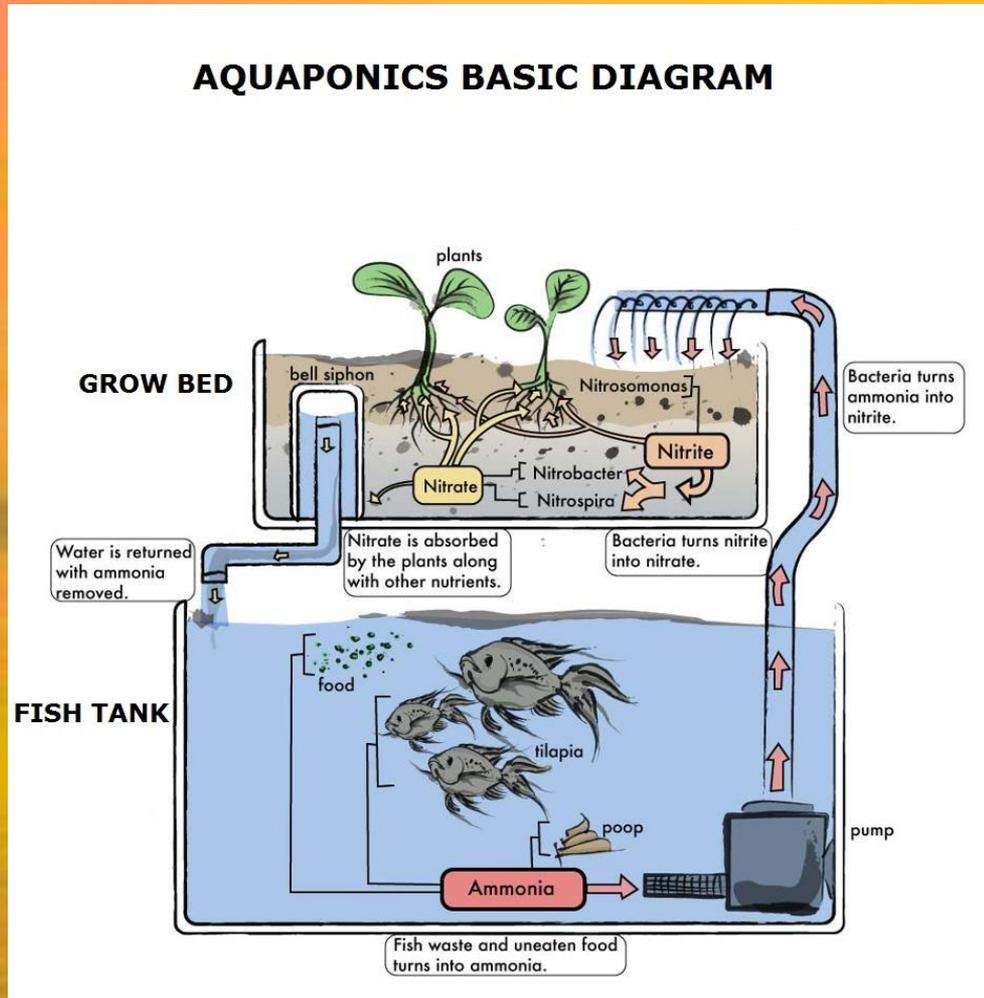


Stevia is a natural sweetener and sugar substitute derived from the leaves of the plant Stevia. It has 30 to 150 times the sweetness of sugar, is heat-stable, pH-stable, and not fermentable.

It contains zero calories. Stevia's taste has a slower onset and longer duration than that of sugar.

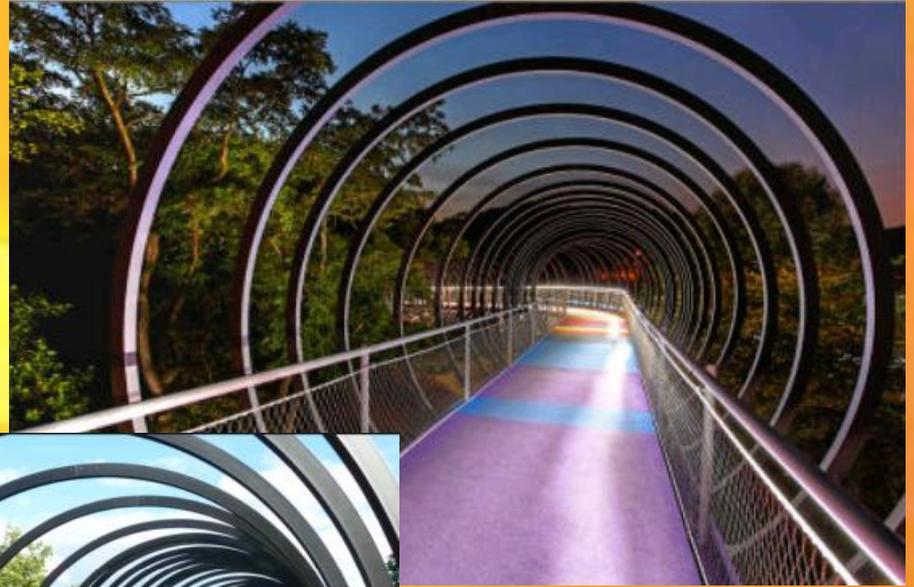
<https://en.wikipedia.org/wiki/Stevia>

# Aquaponic



Combine fish farming and agriculture  
<http://bristolfish.org/aquaponics/>

# Urban mobility



Bicycle and walking „highways“

Public transportation has a big impact on the worlds resources, climate, pollution in the cities and could be more efficient and fast. Stop and go in the cities is highly inefficient and wastes the performance and time of people. We have to keep in mind that in 90 % of the times the private cars are standing and not used. **Car sharing** could increase the usage-times a lot. In Germany and other countries more and more people are using electro-bicycles (“Pedelecs”) in the cities.

# More impulses and solutions

Presenting solutions, discuss it and share experience:

[www.appropedia.org](http://www.appropedia.org) good Information about Appropriate Technologies!

<https://peswiki.com/>

<http://www.borderlands.de/index1n.php3>

<https://ingenieure-ohne-grenzen.org/en>

<http://www.alternative-technology.de/>

Free clean energy [www.slimlife.eu/](http://www.slimlife.eu/)

<https://human-connection.org/en/>

<http://www.inhabitat.com>

[www.alternative-technology.de](http://www.alternative-technology.de)

# Finance

There are different organisations, where it is possible to get money for Projects

<http://www.forseo.eu/english/home.html>: forseo is a capital procurement and investment company for environmental technologies

[www.kfw.de](http://www.kfw.de): Kreditanstalt für Wiederaufbau KfW

[www.ahk.de](http://www.ahk.de): Contacts

[www.dbu.de](http://www.dbu.de): Deutsche Bundesstiftung Umwelt

[www.eib.org](http://www.eib.org): Europäische Entwicklungsbank (EIB), for Energy: <http://www.eib.org/products/elena/index.htm>

[www.worldbank.com](http://www.worldbank.com): The World Bank

[www.gefweb.org](http://www.gefweb.org): Global Environmental Facility GEF

all Organisations in a Data-Base: [www.foerderdatenbank.de](http://www.foerderdatenbank.de)

The Good Planet Foundation finances “clean development”: [www.goodplanet.org](http://www.goodplanet.org)

## **Micro-Credit**

There are quite a number of organisations, who provide Micro-Credits for good conditions

Getting Micro-Credits look at:

<http://www.oikocredit.org/site/en>

[www.grameen-info.org](http://www.grameen-info.org)

[www.banmujer.gob.ve](http://www.banmujer.gob.ve)

[www.microenergy-international.com](http://www.microenergy-international.com)

**China announced that they will support by China Development Bank, CDB medium and big size projects:** [www.cdb.com.cn/english/](http://www.cdb.com.cn/english/)

# Protecting human and water: Alternative ways of medicine

Alternative ways of medicine like traditional medicine, Acupuncture and Homeopathie can be alternatives to clinical medicine. They use more the ability of the body to heal itself and the side-effects are reduces.



# Thank you!



**With material of**  
[www.inhabitat.com](http://www.inhabitat.com)

[www.sonnenseite.com/en](http://www.sonnenseite.com/en)

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[www.appropedia.org](http://www.appropedia.org)

[www.solarcooking.org](http://www.solarcooking.org)

Thank you!