

# Air HES - reincarnation of Hydro Power

[AirHES.com](http://AirHES.com)

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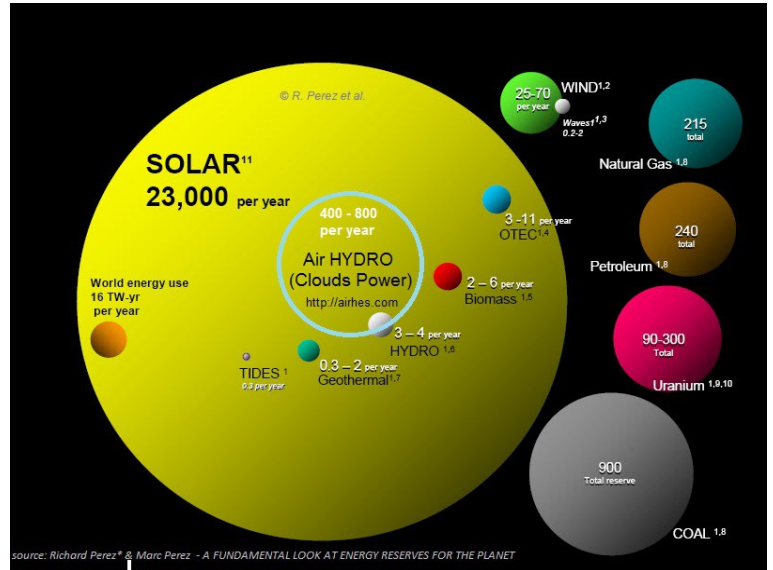
There are the following global challenges:

- lack of energy
- lack of fresh water
- environmental problem
- saving the climate and life on the planet

The existing technology does not allow to avoid the potential disaster in 2050-2100. Suggested technology (Air Hydro Electric Station, Artificial Hydro Power) is perhaps the only one way that allows to avoid this.

## Water Cycle is the most powerful process in Nature

– about 1/4 of Sun's Energy. Since the annual precipitation is about 1 m of rainfall, it matches a huge power ~ 800 TW that is more than 60 times greater than all the current needs of humanity and more than 400 times greater than all electrical power stations.



**Why the usual Hydro power gives so little from Water Cycle power?** Because the flow of all rivers is 11 times less than all precipitation and all rivers power is 200 times less than Cloud Power.

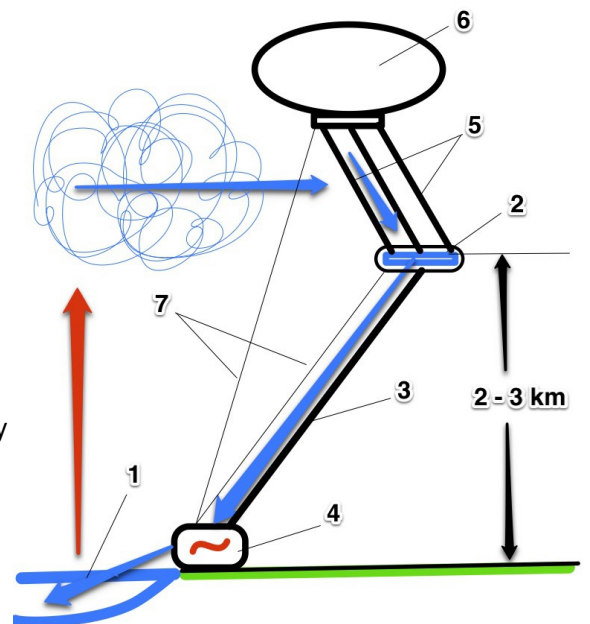
## How to avoid this power loss?

- Collect water in place where it condenses really, i.e. directly in clouds
- Use all possible hydro power head in any place of land or ocean

We suggest the technology for realization this idea – **Air HES**, that allows to get water directly from clouds (by using a fog collector technology) in order to create artificial Hydro Power anywhere worldwide.

Major trend is the transition to renewable energy sources. It then becomes clear that resources are only sufficient for sun and (possibly) wind. Traditional hydro power does not have enough resources. However, the use of cloud energy changes this assessment.

Principally it results from economics. All three methods of conversion (PV, wind, clouds) are the same order of magnitude of the energy density (~ 100 W/m<sup>2</sup>), but only for Air HES all this energy with virtually no loss can be merged into one point (pipe/turbine), making part of the proportional m<sup>2</sup> far cheaper than other alternatives. This implies ROI > 1000% that allows quickly rebuild the energetics and successfully pass the collapse of energy & climate in 2050.



## Main advantages

- Huge potential that is much more than all human needs
- Almost world-wide use where there are clouds with water drops
- Can be Used as pumped storage and simultaneously as H2 storage
- Output is electricity, H2, and fresh water, Simultaneously
- The possibility to reduce energy costs by 1-2 orders of magnitude
- Absolute ecological security from any pollution and CO2
- Saving the climate and ecological balance of the planet
- Technological simplicity, it is not high-tech and can be reproduced easily
- At last, it is amazing beautiful!

## Business Needs

1. cheap freshwater - worldwide easy access to ideal drinking water (distillate)
2. cheap hydro power - worldwide easy access to huge resource of renewable energy (second after Solar power)
3. cheap Eco fuel - generating hydrogen by using the distillate & hydro power close to equator, and transporting it by using aerostats to northern industrial areas
4. solution of global warming - decreasing CO2, saving climate and environment

## Business Markets

1. cheap freshwater ~ 1 bln people, especially in 3rd world countries
2. cheap hydro power ~ 5 bln people, especially close to equator and trade wind area, and to zones of intense precipitation in the climate map (Europe, USA, Latin America, Central Africa, India, China, Japan, Indochina)
3. cheap Eco fuel ~ "golden" 1 bln people (Eco cars, etc.)
4. solution of global warming ~ 7 bln people worldwide

## Business Products & Services

1. cheap freshwater - wide accessibility, cool temperature, high pressure, ideal quality, low cost (~ 1.5 cent/m3)
2. cheap hydro power - wide accessibility, unlimited resource, green energy, low cost (~ 0.3 cent/kWh)
3. Air HES is compact on ground, modular and mobile, and also used for WiFi, telecommunication, video surveillance, advertising, lightning protection, regulation of climate, AD, shade, etc

## Business Plan

<b>R &amp; D stage</b>  <b>-10k USD</b> <b>0.5 - 1 year</b>	R & D - calculation simulation and practical tests for different types of meshes and kites (ideally, in mountains by using orographic clouds)
<b>Water supply prototype</b>  <b>-30k USD</b> <b>0.5 - 1 year</b>	Creating the kytoon technical prototype for getting fresh water in any place where there are clouds (if success, it can be produced already as business of water supply with profit, itself)
<b>Air HES technical prototype</b>  <b>-100k USD</b> <b>0.5 - 1 year</b>	Creating the energy & water technical prototype (~20-50kW) with kite / mesh / aerostat / kytoon for working long time (~10 years)
<b>Air HES modules (profit)</b>  <b>+50M USD/year (per one module)</b> <b>5 - 10 year (lifetime of module)</b>	Creating the big units (~20-50 MW) – Air HES modules - with a big profit already (ROI > 1000%, payback ~ a month) - break-even point (see Feasibility Study)

**Air HES is a global solution of energy – water – climate problems!**

**It is a future of world energetics!**