scalable small hydro unit

the most pure and constant natural energy source

Suitable from river hydropower to tidal lagoon / Barrage applications
Geo Power Group
Directors & mediators of New Energy projects

Geo Power Group is a Dutch company with the aim to develop, finance, realize and manage new energy and waste to energy projects for the generation and large scale supply of green electricity, heat, oil, gas and organic fertilizers.

Climate change, dwindling resources, the growth of the world population and the increase of our prosperity make greater demands on finding new and renewable sources of energy for our daily energy need and the protection or our environment.

Organisation
Our experienced project management team(s), with many years of experience in various complementary disciplines, has a broad and large international network. All have a passion for creating sustainable energy from renewable sources in conjunction with well organized projects.

Our Focus
Our focus is on Thermolysis, Waste to Energy, Solar, Biomass & biofuels, Hydro, Wind and Deep geothermal in co-operation with professional international management -, production - and operational partners. In the base using proven techniques, but with an eye for new innovative applications.
the Scalable Small Hydro Unit
the power of nature

After more than 5 years of development by European water engineers, long tested and installed into rivers can be determined that the scalable small hydro unit has proven itself to high electricity production from water streams with a workflow of 1 meter per second and more.

This scalable small hydro unit is a modular hydropower plant adapted to the local water situation. The basic components: the vertical axis turbine with casing, a control unit and online monitoring software. A 100% natural friendly construction.

Geo Power Group & partners realize these scalable small hydro units so as to maximize renewable energy from constantly flowing water streams, even if it is dark or windless, at a low production price. A substantial contribution to the sustainable greening of our planet.

Prices and conditions in this presentation are indicative. Final pricing and conditions will be confirmed per small hydro unit and location and can be dependent of water speed, water quantity, other local conditions, individual needs etc.
scalable small hydro unit

general highlights

Complete developed, tested and in production

- environmental friendly – no effect to underwater flora and fauna
- applicable in rivers, tidal currents, forced currents (damms, stuws, etc.), irrigation channals and many more waterflows from 1 meter per second and more
- competing with off shore wind and wind on land
- a higher quality of green energy (high load factor)
- IP protected design compliant with the new EU Waterframe Work Directive
- for central, decentral and isolated locations – local & national
- developed and produced by European water engineering

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scalable small hydro unit
Environmental friendly

- Environmental friendly – no effect to underwater flora and fauna
- low speed and compactness
- no landscape pollution or noise
- 100% fish friendly and protecting design - independent research -
- compliant with the new EU Waterframe Work Directive
scalable small hydro unit

Electricity production

- 24/7 and 365 days per year continuous electricity production
- scalable from 50 KW till 10 MW and more per hour
- electricity delivery possible to all grids (national-, regional-, mini grids, direct to industry etc.)
scalable small hydro unit
preparation, installation, exploitation

site survey ensures right settings and energy yield

- custom made small hydro unit per location
- complete under water or floating solutions
- complete construction and installation within 1 year
- permanent realtime, online monitoring and check on efficiency
- low maintenance costs
- certified technical partners

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some possible locations

behind natural water barriers

in all waterflows from 1 meter per second

behind water stuws

in run of river waterstreams

In water outlets

In tidal currents
scalable small hydro unit
onsite control power unit

- heavy duty components
- suitable for operating temperatures up to 50 degrees celsius
- easily expandable (100, 250, 500KW ...UP TO 2,5 MW)
- connection for other power suppliers
scalable small hydro unit

turbine & plant control

internet monitoring

generator

site inverter

Brake

copper & resistor

grid

site inverter

harmonics

filter

EMC

filter

grid protection

Geo Power Group
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