



Clean Energy from Sea-Waves

with Brandl Generator[®]

Introduction

72 percent of the earth is covered by water and the greatest areas of water are the oceans. Winds blow almost continuously over these vast areas, causing waves that can reach several metres in height. It isn't hard to imagine someone experiencing this might and considering the inherent energy.

Engineers and scientists, long excited by the idea of tapping into this energy, have been developing new technologies to harvest it.

India and China's dramatically increasing demands for energy, urgently increases the need for development in the field of renewable energy.

Climatic and ecological changes, the depletion of all oil, gas and coal, and the threat of wars, plus the dangers of atomic waste disposal, must make us consider alternatives.

Our methods of energy production from carbon, oil or gas aid to the climatically changes and global warming. In the point of view from emissions, atomic energy is an advantage, but the digging of uranium and its disposal is very dangerous for human life and environment. From this argument, the German Minister for environment, Sigmar Gabriel, demands: **"This century must become the age of energy-innovation!"**

Alternative energy innovations are a precondition to a life sustaining ecology, social security and peace.

The technology of the Brandl Generator

The Brandl Generator offers the best means by which the energy in the waves can be converted to low-cost electricity. Module construction, employing tried and tested technologies, minimises risks and costs.



Model

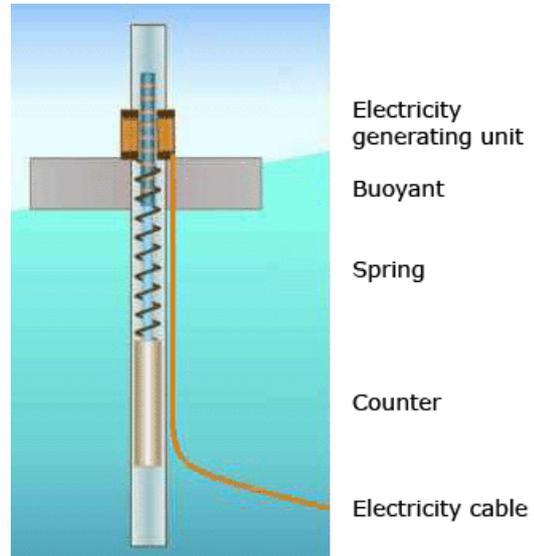
The Brandl Generator buoys are designed to float, so the choice of area for the installation can be very broad. The whole sea could be used, so, it is possible to produce proper and cheap energy en mass with the Brandl Generator.

Electricity generated by one thousand Brandl Generators, each of 1000KW (provisional standard unit), equals the supply from a nuclear power station. The buoy has a diameter of 15 m.

All moving parts are encased in a closed unit, simplifying maintenance and holding service costs down.

The Brandl Generator is made up of four components: the floating body, the spring with its hanging counter weight and the directly connected linear generator.

The motion of the sea-waves induces relative movement in the 'Brandl' generator; the oscillating movement between the floating body and the counterweight is hydraulically transmitted to the linear generator.



The patented Brandl generator is steered via satellite by its own force to its destination point. During high swells, it flows beneath the surface and continues to function under the surface securing it against from damage or loss.

Energy Transmission

The Economic Transition Electronic Network (EURO-MED), is a European integrated network project intending to ensure a trans-national electricity supply network, and who are already active in the areas of the North and Baltic seas.

Development of supplying electricity via the ocean floor is progressing strongly. With modern high voltage DC there is an energy loss of only 10 % over a distance of 3000 k; the costs of energy transmission are favourably low even from vast distances and weather fluctuations are equalized.

The Financial Concept and the Guaranteed Interest Rate

An energy park of Brandl Generators guarantees a yearly return of 8 % and completed repayment within 10 years.

This guarantee is possible in due time, because, since the amendment of the German Renewable Energies Law (Erneuerbare Energien Gesetz) from August of 2004, which assures the purchase of wave-energy from the North and Baltic seas, and at a fixed rate of 6.65 cents per kWh.

This encourages the establishment of renewable energy onto the market. Renewable Energy laws exist in several countries, increasing possibilities for installation of profitable wave-energy parks.

The energy park are ensured against damage and production interruption. Should generators fail or sink, returns and repayments to the investor are not affected. For the assurance the investor will be shareholder of the energy park until the completely return.

Risks

Every technology has its own particular risks.

These risks are:

- locality risks
- transport risks
- operation risks
- business risks

Risks are absorbed by a good planning. Business operation risks are diminished by assurance of quality and insurance. Locality risks are diminished by adequate data and licensing procedures. All operation risks - even production interruption and total loss are covered by insurance.

You contribute to a change to clean-energy use

Long-term developments are considered learning curves; that goes for all technologies. From these curves, it is seen, that power capacity and reliability improves along with increased production. As an example in twenty years, the costs of generating electricity from wind-energy have been reduced per kW installed load by two thirds.

Oil, gas and coal prices have been claiming because of scarcity for a long time, also in the new future wave generated energy will be greatly more favourable.

Renewable Energy means not only a greater independence from imported energy but a lessening of the thread environmental load and danger potential. There is principally good reason to consider the propagation of renewable energy. This technology should be at the disposal of many people as possible. So much the better will be the chances for a insistent conservation of our environment. Our blue planet is reaching the limits of its capacity to regenerate itself.

The investment in sea-wave energy technology pays off in two ways: financial gain and long-term protection of the world in which we live.

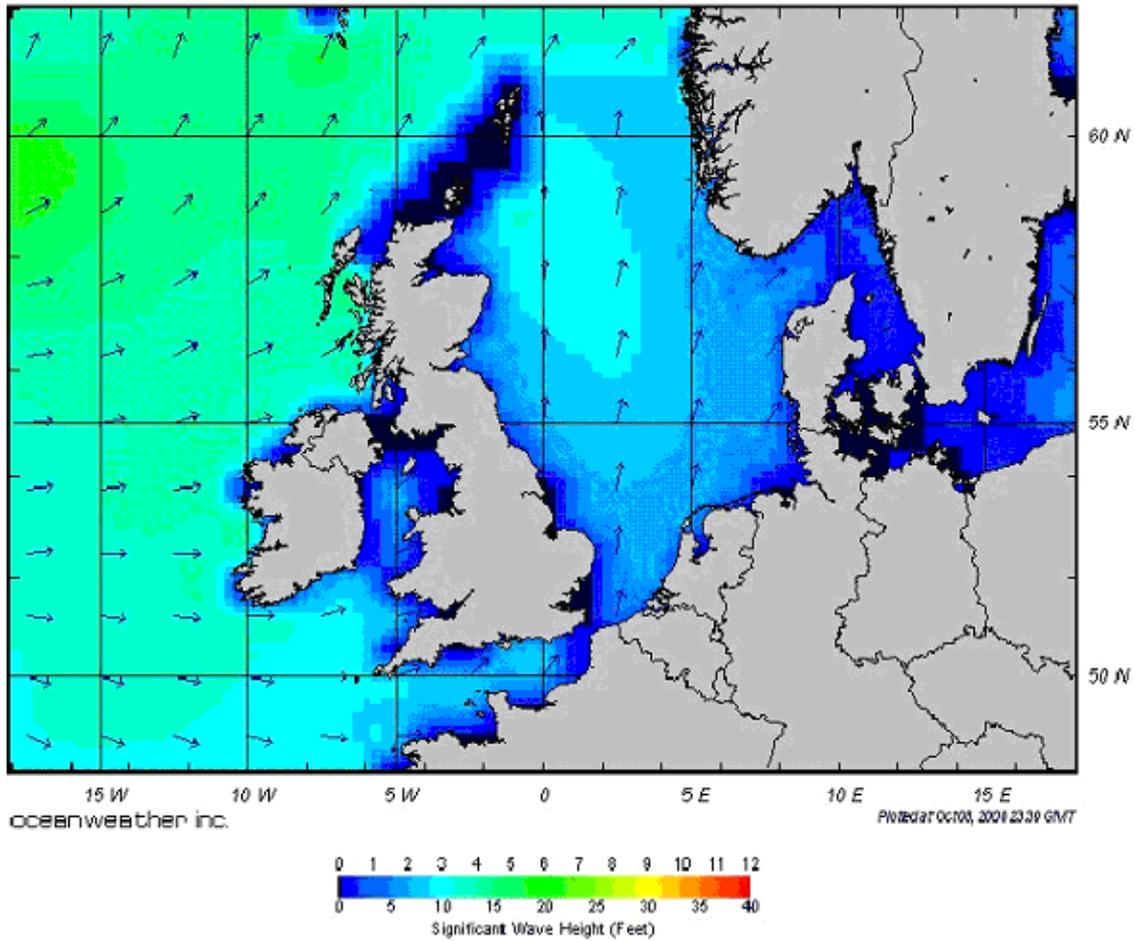
Your decision is important

Your investment expands clean technology and supports the dynamics necessary for extensive and urgent research and development. You are contributing to energy innovation and are participating in a founding of a profitable energy park.

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Wave hight and direction 2006-10-09



Specific energy costs for different energy type and technologies

energy type	technology	investment in Euro/kW	hours of annual operation	general costs Cent/kWh
coal/oil/gas	steam plant	1.200	as necessary	3,5
Uranium	atomic plant	2.200	6500	3,4
solar energy	photovoltaic	5.000	1.000	50
turn of the tide	Sea flow	1.750	3.500	5
Wind power	Wind plants on earth	1.200	2.200	5,5
Wind power	Wind plants on sea	1.900	3.600	5,3
Wave energy	Pelamis	3.000	4.000	7,5
Wave energy	Brandl Generator	1.300	4.000	3,3

Limite energy type

Regenerative energy type

Energy from sea waves is clean and sufficiently available; costs the same as, and can replace that produced by atomic or coal-burning plants.