

September 4, 2011 Surfrider Interview with Kurt Grossman

Intro:

As part of the Surfrider Foundation's Renewable Ocean Energy policy we state that we will strive to support clean, renewable, low-impact sources of energy. In support of that effort, we are sharing stories about Surfrider Foundation members who are actively working to develop low impact renewable ocean energy projects. This is the first interview in what hopefully will become a series of articles by activists, members and supporters actively working in this field.

It is important to note that while we support the idea of generating low impact renewable energy, we do not endorse any particular technology and may not support every project.



Interview with Kurt Grossman from Genergy

Technologies

Surfrider: Kurt, tell us a little about yourself. You are a surfer and someone who has a passion for developing low-impact energy solutions. Can you describe how these interests developed, why you contacted the Surfrider, and how these issues intersect?

Kurt: | have always lived near the beach and been an avid bodysurfer and surfer. | surf Newport, Laguna, Trestles & The (Huntington) Cliffs,

and have done several trips to Costa Rica, North Shore (Sunset Beach, Hawaii) and BAJA (39.5 km).

As a young boy | spent years getting to know the trainers at Marineland (The first Sea World that used to be in Palos Verdes) I was allowed to feed the killer whales and go into the laboratories behind the tanks.

The water is powerful, refreshing, and alive.

I had a problem that needed to be solved: "How can | get energy without polluting inexpensively?" As I studied the power and principles of Hoover Dam | came up with the idea. When | read about the negative environmental impact that large dams have and then later the negative impact blades have (on marine life) | made up my mind to come up with something that;

- 1) Is clean; uses no oil; burns nothing;
- 2) Takes the ecosystems into consideration;
 - a) Does it harm any animals?
 - b) Does it impede flow or take up space that will kill off life?
 - c) Could it hurt the environment if an accident occurred?
 - d) Is it visible? (| have a pet peeve about ruining my ocean view!)
- 3) Will it mess with my surf or fishermen fishing?
- 4) Does it cost the same or less as energy that already exists?
- 5) Can it make a big difference like Hoover Dam?

Surfrider is an organization that is very visible! When I walk from my car to Trestles almost every car has a Surfrider sticker.

Surfrider is local and has been monitoring water quality for a long time. I surfed a lot at River Jetty in Newport Beach. My buddies would always tell me what the water quality was. They learned it from Surfrider.

Surfrider has a great policy on wave energy and alternative energy. When I read the statement, I saw that our mission is the same.

Surfrider: Tell us a bit more about your technology and why you see this as an important energy resource?

“AIRPAC”

AVAILABLE: 24/7/365 “Just add water”

INVISIBLE: It is submerged so that it will not interfere with our view, surf, or ships

RELIABLE —24/7/365 gravity powered energy never stops

POWERFUL - Our technology uses gravity and water just like waves and dams

AFFORDABLE - There is no fuel and no land. It is much less than any power.

CLEAN - Our technology does not pollute! It is the cleanest technology.

Surfrider: Can you tell us about what parts of the world are particularly suited for this type of power? What are the key characteristics that make your technology viable?

Kurt: Our first target site is off San Onofre 5 miles in a charted area that is 700 feet deep. We can easily drop down 100 to 150 feet below the surface and hook up to San Onofre electric substation to send the electricity to California.

Oceans, seas and deep lakes are a start. Anywhere in the world where you have deep water deep enough to have about 300 feet of space that is 100 feet below the surface. In California the visibility is rarely 100 feet except off lee side of islands. But in Lake Tahoe it is about 100 feet visibility. With a depth of 30 meters we don't have to worry about large commercial vessels running into us. 100 feet below the surface the waves are not causing as much disturbance. We want to stay at least 100 feet off the sea floor and 100 feet below the surface.

We are not limited to deep water but the height of our structure gives us more power. If we let something fall 50 feet we are not as efficient if we let it fall 300 feet.

Surfrider: As we have recently witnessed in the Gulf, there can be serious consequences from our dependence on fossil fuels. What are your thoughts about transitioning to cleaner, more renewable energy sources? What do you think needs to happen in the US to more completely make this transition?

Kurt: There needs to be a transition to cleaner energy.

Business people are pretty simple. If we lower the price so that they can sell it the same as they sell the other electricity we use then they will change.

We: inventors need to develop technology that is simple and cost effective. I am disappointed with the "You" and "Us" bickering that occurs because we are trying to force people to change the way they live rather than offer people good reasons to want to change.

Recycling is a great example of nudging people into change. If someone drops their beer can on the beach another person picks it up and recycles it. The easiest way to get people to want to change is to give them good reasons and motivation. Asking someone to spend more money for their electricity or to go back to walking in the dark is not as good a solution as lowering the price of renewable energy so that everyone wants an electric car.

We have a global push unlike any other for clean energy!

The USA is among the most aggressive in researching clean energy. Because of this emphasis I have invented Genergy. Others will do the same.

If we (inventors) offer AIRPAC energy at \$.04 a kWh (a half cent lower than utilities pay now) the executives in business and the leadership in politics will make it happen this decade. If we keep plugging along it will still happen in 2030.

Surfrider: As a supporter of the Surfrider Foundation, you are obviously sensitive to the balance between installing energy infrastructure in sensitive coastal environments and also seeking renewable energy sources that do not contribute to global warming. Can you share your thoughts on this?

Kurt: Ecosystems are wonderfully complex adaptive resources. The balance of energy infrastructure and aquatic life is simple.

WE have to adapt to aquatic life.

Genergy mediates the issue very carefully with submersion, filtration, insulation, and buoyancy so that we encroach as little as is humanly possible. Another powerful proactive reason that Genergy was invented is to enable the expansion of undersea research.

Genergy intends to encourage marine biology programs to use our undersea power plants as arms of their marine research. Remote Operated Vehicles (ROV's) constantly need to be recharged. With our undersea power plants, we will have compressed air and electricity available 24/7/365 underwater for marine research.

It is unclear how much of an impact we can make but intuitively you can extrapolate the positive benefits of sensitively colonizing the undersea domain with marine researchers.

In addition to being an undersea power plant each Genergy site will be an undersea laboratory similar to the one we have in Monterey, CA

Surfrider: Many Surfrider members and supporters are interested in alternative sources of energy. What do you think is the best way for them to get involved, learn more about these types of energy, and support appropriate projects?

Kurt: There are 3 levels of involvement.

Level 1 is to get educated. There are a number of websites that go through the science of energy; renewable energy; and alternative energy. By far the best website to go to is the United States, Department of Energy. <http://www.eia.doe.gov/>

Editor's note: Surfrider also has a great resource on ocean energy on Beachapedia.

Level 2 is to look at alternatives to the energy supply that a person is using. Once you take a look at how you use energy you can find ways to save without really cramping your lifestyle

Level 3 is to invest in alternative energy. You can choose to invest money or time. When choosing how you will invest your money use your normal criteria but begin by comparing investments in Green, Cleantech, or Alternative Energy. You can invest time volunteering or invent a new green product.

Surfrider: Any additional thoughts you'd like to share with us?

Kurt: NASA has much more visibility than NOAA. We need to focus on alternative energy immediately. We need to be proactive about hydropower that is adaptive to the environment. Gravity and Water are plentiful. There is more potential for harvesting energy from gravity powered water than any other form of alternative energy. Now that we know the proper constraints we have to be relentless in pursuing a drastic reduction in dependence on fossil fuels and even more aggressive about protecting our landscapes and seascapes!

We have seen a huge increase in the use of water based renewable energy. The UK plans on investing 50 Billion Pounds in undersea cabling to use offshore wind and wave energy.

Denmark, Sweden, and Oregon are using linear wave generators in demonstration projects.

I hope that other technologies will be less visible in the future.

Genergy strives to be AIRPAC (available, invisible, reliable, powerful, affordable & clean) source of renewable energy on the planet.

Surfrider: Thanks Kurt for sharing your thoughts on your work and on renewable ocean energy.