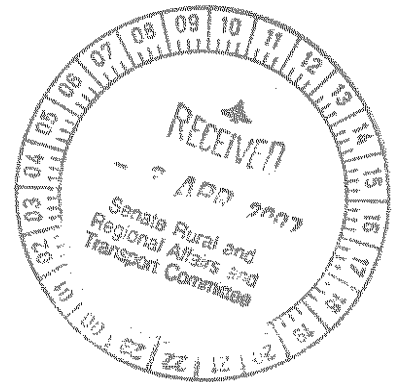


McMahon, Rosalind (SEN)

From: neil couldrey [aquaticprod@yahoo.com.au]
Sent: Monday, 2 April 2007 7:27 PM
To: RRAT, Committee (SEN)
Subject: Alternative development for traveston Dam

You can see my site here: <http://greenideas.net.au/>
The web site outlines a different way of providing Water and Electricity which would be Carbon neutral. By combining with Hot Rock technology the ability to provide an alternative that would be sustainable into the future. because Most of the concept is below ground it has minimal impact at ground level. With the cost to the community and government this would reduce the impact to the community while the government still develops infrastrucure for the future. For further information contact Neil Couldrey, po box 8636, Mt Pleasant, Mackay, 4740, Qld, ph 0749420954, 0407733860



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With the current shortage of water and Temperature rising through Global Warming this is 1 proposal

By developing a desalination complex using pressure from sea water instead of applying it. Locating desalination filters 660metres below sea level. Using refracted light from the sun to generate heat. Evaporated water used to generate electricity. The steam then cooled back into water retrieved after generating electricity.

With the current problem of potable water shortage around the world, a different approach needs to be adopted for future sustainable supply. By harvesting potable water from the ocean and developing a system that is using the forces in nature. Present desalination using reverse osmosis requires a pressure of above 60 bar to produce potable water. Presently the negative aspect towards present desalination is the high electricity consumption for production.

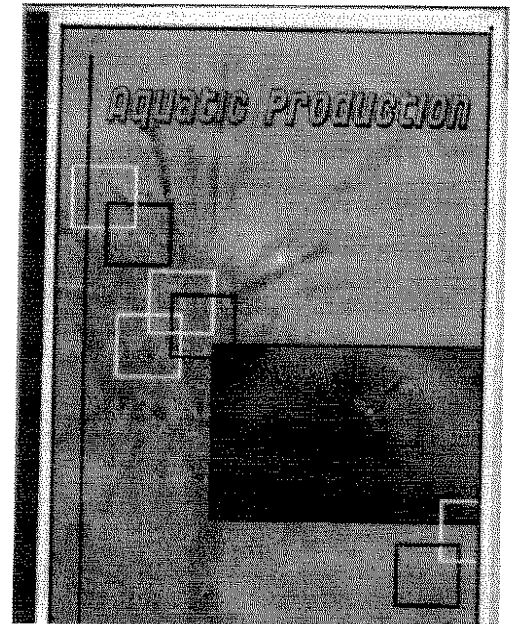
By using the engineering involved in constructing tunnels under rivers, a tunnel could be constructed from land out under the sea gradually lowering to a depth of 660 metres below sea level. At this depth the water pressure is 60 bar, which is above the pressure required for potable water to pass through present membranes used in desalination. By constructing 2 pipes from this point gradually rising till they emerge above the sea floor and rise into a current flow, this would achieve the same as present desalination with potable water passing through the membranes at this depth. The membranes would be located at the bottom of main tunnel.

From this point the potable water would travel through pipes back up the tunnel till it meets up with first vertical shaft. This area would consist of a honeycomb design of glass tubing with wire impregnated into glass. This shaft would go to the surface where a telescope would be situated, tracking the sun's movement. Using convex lenses it is possible to concentrate light into a narrower beam. Using this principle the light from the sun is transferred down the shaft where a concave lens would allow this light to spread back out over glass tubing to provide heat to evaporate the water. Because the objective is to concentrate light rather than view an object in space the level of refinement of lens does not have to match a telescope, and by lining the shaft with reflective material it will assist in reflecting the light down the shaft.

As the water evaporates it passes out of glass tubing and flows up tunnel till it meets electrical turbines which it powers to produce electricity. This is located under ground and close to glass tubing for greatest pressure. The turbines are located at the bottom of second vertical shaft. From here the steam would still rise to the surface where a series of cooling towers would be over top of shaft. The objective is to cool the steam back into water. By having 1 cooling tower inside the other, the inner towers temperature will be lower than outside 1 as they are

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shielded from the sun by outer tower.

By building a tunnel back to the sea this shaft can use sea water to help cool the steam down, increasing the amount of potable water that can be retrieved from cooling towers and then added to town supply. The level of treatment for consumption by consumers would be less than what is required for present supply as this principle is mirroring how water comes to us in rain.

Presently desalination plants have to bring feed water ashore then extract potable water, the remaining sea water is then piped back into the ocean.

As the steam is produced it creates a positive flow of water on membranes as pressure differs, this would create a positive flow through out the system.

By constructing the inlet and outlet pipes to emerge in a water current there is the ability to use the force from the current to power fans at both ends, one helping water flow into and the other to help extract. By doing this it would assist in creating a constant flow through effect and the water around the membranes would be constantly changing. As the potable water is harvested from the sea water even though there is a difference of salinity this should be less harmful to marine life compared to present method as location and prefilters would prevent most marine life being in location. By the time the water exited percentage should be negated by incorporating another feature using sea water from tidal flow.

By developing this way there is the ability to provide sustainable water and electricity, which does not require oxygen to be burned and produce carbon dioxide. There is the ability to use the rise and fall, current flow from the ocean plus wind to provide electricity to heat the water when the sun is not available, by incorporation wire in the glass tubing the electricity from these other sources would provide heating to maintain the process.

There is new membrane technology that is not commercially available as yet. That if utilised would provide a higher flow rate at 660 metres or would reduce the depth that project would have to be constructed.

This technology has the potential to reduce the depth by half once commercially available.

The engineering required is already utilised in the mining industry, infrastructure development under rivers and telescope manufacturing.

With the push for more nuclear power stations and associated cost and by product which will remain for generations that follow. The western world is the greatest producers of carbon dioxide, but as the emerging nations develop the problem is only going to accelerate through their vast populations adopting western lifestyle and greater use of electricity. With predictions in the future for the temperature to rise and oceans to rise, both would increase efficiency of this system. In the western world we don't want to reduce our quality of life therefore we need to develop alternative approaches for the

future.

Mankind has the greatest ability to alter life on earth compared with any other creature and the solutions we adopt today will be the legacy we leave future generations. With present engineering all potential problems can be overcome and addressed. But the operating cost would be greatly reduced compared to anything presently available with no by product but sustainable Water and Electricity.

The present idea of constructing more dams is flawed on the basis that present dams are not receiving rainfall or run off to maintain capacity and as the climate temperature increases, evaporation will increase. Present dams were constructed in locations that used information to determine the best location so if we use the same basis for future dams there is no assurance that they will be any better positioned.

The present way of placing water restrictions on usage is compounding the global warming through the fact that the first area to be reduced is plant life, yet it is the most efficient way of reducing carbon dioxide and producing oxygen, by developing along this method, water restrictions would not exist. Presently many initiatives are being promoted to reduce electricity use, the problem is that at the end of the day unless an alternative way of producing electricity is used all that is achieved is extending the time frame, but not really fixing the problem. With escalating water restrictions the impact on society will increase as it impacts on businesses that have little ability to reduce consumption or the cost would be prohibitive. By developing infrastructure that can provide sustainable supply is less intrusive on all society.

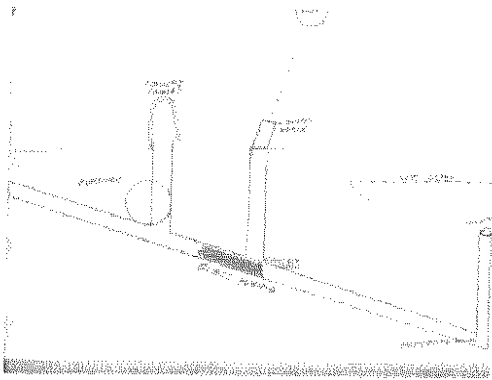
The problem with all initiatives presently promoted is that unless they are adopted on a global scale, the people who take up the initiatives efforts will be ineffective due to the fact that developing nations need to be encouraged to utilise the same way of thinking as developed nations. The overriding factor here is cost. By the developed nations assisting these emerging countries with projects like this, the construction costs would be cheaper compared with in developed countries and everyone benefits anyway because the problem is global.

With carbon trading being looked at in the future, this proposal allows for a trading partnership to develop with organisations that are high carbon producers, to offset their production against a system that does not produce carbon.

This model can be developed anywhere in the world where water is available. This process replicates what happens in nature, as at sea, water evaporates into clouds to provide rain. The size of project is determined by Tunnel, depth and sun intensity, these 3 determine the amount of water that can pass through, how much steam can be produced and flow rate. Due to the cost of developing a tunnel of this length, the development cost would be similar to developing a nuclear power plant. The difference being that a nuclear plant has a operating life of 40-60 years, this project could be operating decades into the future.

The Chinese developed the 3 dams project because they saw in the past that they needed something revolutionary to address

how to provide for thier population in the future.Canal systems were developed in countries around the world as an efficient means of transportation and they are still utilised today.



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