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PRESS RELEASE

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WHY NEW TECHNOLOGY IS NEEDED TO SOLVE THE CALIFORNIA WATER CRISIS: HINT - IT'S NOT THE DELTA TUNNELS

Portland, OR - In the midst of widespread news about California's water shortages, few sustainable solutions have been publicly discussed. However, there is a project concept that would be key to addressing California's long term water shortages. The project uses a new technology to power a large scale Desalination Plant in the Los Angeles area. It would generate new water that would benefit the entire state, including Central Valley agriculture, which is vital to our food supply. The technology that would be the primary power supply for this project is called Transformed Hydraulic Power (THP). THP is clean, renewable hydraulic power. Desalination Plants require a dedicated source of energy in order to produce fresh water. This project is unique, because it has its' own energy supply, making it a truly renewable energy project. Attached is a draft of the concept, called "the Los Angeles Desalination Project."

It's appropriate to compare the Los Angeles Desalination Project to Governor Brown's Delta Tunnels project to analyze the benefits and costs. The Delta Tunnels project is designed to convey water directly from the Sacramento River to the Clifton Court Forebay and is estimated to cost between \$25 and \$67 billion. The LA Desalination Project is a viable alternative with an estimated cost of \$31 billion. The Delta Tunnels is plagued with hidden costs not accounted for in the estimated \$67 billion price tag. Mitigation costs involving utilities, businesses, homes, farms, and wildlife near the Delta Tunnels construction site will be very expensive. Many will have their lives impacted due to the expected 10 year construction period, and they will expect to be compensated. The LA Desalination Project, in contrast, is expected to have minor mitigation costs because 80% of the construction would occur in the Mojave Desert and the remainder would be underground.

The Delta Tunnels project came out of the Bay Delta Conservation Plan. The Bay Delta Conservation Plan was written to achieve two co-equal goals; 1) maintain a reliable water source for California and 2) restore the Delta ecosystem. The original Delta Tunnel Pump(s) capacity was proposed to be 15,000 cu ft/sec before it came under fire because that was actually more water that flows in the Sacramento River! It has since been revised to a capacity of 9,000 cu ft/sec or 6,515,700 Acre*ft/yr. In 2001, the total water exported from the Clifton Court Forebay was 5,131,601 Acre*ft. ¹ Even if the exports from the Clifton Court Forebay are limited to 6,515,700 Acre*ft/yr, (remembering that the forebay is also fed by surrounding waters) it is still a net increase in water

¹ Department of Water Resources, Division of Operations and Maintenance. State Water Project Annual Report of Operations 2001, California: April, 2005. Retrieved from:
http://www.water.ca.gov/pubs/operations/state_water_project_annual_report_of_operations_2001/annual01.pdf#2001, (Tracy total volume + Banks total volume)

being pumped south. It is hard to imagine that taking even more water from the Delta will do anything but harm the environment, the fish and wildlife, and the people who depend on the Delta for their livelihood. In comparison, the Los Angeles Desalination Project would generate up to 1 billion gallons per day (1,120,000 Acre*ft/yr) of new water.

Unlike the Delta Tunnels project, the LA Desalination Project is fish & wildlife friendly and combats climate change by utilizing Transformed Hydraulic Power (THP) as an energy source. THP is a different way of thinking about hydraulic power because its end purpose is to pump water, not to generate electricity. This new innovation in energy technology will use highly efficient water-to-water energy conversion. Water has an extremely high density. This fact enables it to have the capacity to generate great amounts of power. Likewise, pumping water consumes great amounts of power. Transformed Hydraulic Power takes the power from falling water and uses it directly to pump water from a second source, like the sea. By eliminating electricity as a conversion step, a greater Overall System Efficiency can be achieved.

The LA Desalination Project would not be harmful to the environment. Beach wells will use the sand and earth to pre-filter organic particulates from the incoming seawater, including living creatures. The Beach wells will be capped and covered so that the entire system will be underground, meaning no industrial eyesores on the coastline. High elevation reservoirs used for the power supply, will be located above fish spawning grounds and will also serve to increase water storage lost due to declining snowpack. At the lower elevations near the city, Stormwater Capture can easily be incorporated into the system because the pump station will be located underground. Not only will Stormwater Capture tame the raging waters of an intense storm, but this previously lost water will become part of the water supply. California has mandates to increase the use of renewable energy for water, and to focus on developing local water resources. The LA Desalination Project does all of the above. The Delta Tunnels project does none.

This year, Doug Obegi of the NRDC said that of a sample of state voters, 40% of voters prefer building no new infrastructure projects to move water from the Delta; and only 10% support the Governor's 2 tunnel project.² Since state voters will be asked to approve a water bond to pay for parts of Governor Brown's Delta Tunnels this November, the voters should be aware that there is an alternative.

The LA Desalination Project needs to be on the table and warrants the serious consideration of the California voters and decision makers. That is why a Feasibility Study for the Los Angeles Desalination Project should be conducted so the people of California will have the facts about their choices. The Feasibility Study would be conducted by a third party to examine the viability and costs of building an underground state-of-the-art desalination plant in LA with built-in renewable energy. The State has spent over \$200 million writing the Bay Delta Conservation Plan. Shouldn't an alternative be reviewed when so much is at stake?

The LA Desalination Project could demonstrate how we can change our energy infrastructure to be more friendly to our planet. The inventor of Transformed Hydraulic Power and author of The LA Desalination Project proposal, Brian Nissen, is available by e-mail or phone to answer any questions. He can be reached at brian@bellamachines.com or at (503) 486-5757.

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² Herdt, Tim. "Poll finds few in favor of Delta tunnel project aimed at bolstering water imports to Southern California.", San Francisco Examiner 28 Feb 2014