

# California Energy Commission Awards \$2 Million to Silicon Valley Clean Water and Stanford University Research Team to Demonstrate Water Recovery and Energy Savings Using New Anaerobic Secondary Treatment

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The California Energy Commission announced on Tuesday that Silicon Valley Clean Water (SVCW) in Redwood City and Stanford University will receive a \$2 million award to demonstrate the water recovery and energy savings provided by a Staged Anaerobic Fluidized-bed Membrane Bioreactor or SAF-MBR (“SAFE” MBR), as it is referred. They will implement this demonstration with the assistance of engineering and scientific consultants Kennedy/Jenks and construction management firm Tanner Pacific. “This new secondary wastewater treatment system will eliminate the high energy demands of aeration since it will run without air, or anaerobically”, said Craig Criddle, Professor at Stanford and Project Principal Investigator. Criddle added, “This is a game changer in wastewater treatment and will be a paradigm shift from the way wastewater treatment systems have been designed over the last 100 years; where, land, energy, and water were previously seen as plentiful, well that is no longer the case.”

Dr. Sebastien Tilmans with Stanford’s William and Cloy Codiga Resource Recovery Center and the Project’s Operations Manager explained that “similar facilities in Korea, Singapore, and Taiwan have already demonstrated energy savings and this facility will be the first large scale demonstration in the United States.” Tilmans said, “By adding reverse osmosis, we will evaluate the system for potable water production.” Garnering many accolades from both wastewater and water agencies across the state, “this project will be among many we will see developing integrated water management strategies to create locally sustainable water supplies that will help reduce drought impacts from unpredictable climates”, said Eric Hansen, Project Manager and Senior Civil Engineer at SVCW. Dan Child, General Manager at SVCW, explained that “we are in the planning stages of redesigning our treatment plant and this is a great opportunity to investigate breakthroughs in wastewater treatment technology and incorporate smart ideas to develop a less expensive and more reliable new water supply.”

CEC ranked the project with the highest score and was granted the maximum award of \$2 million. The project will run over 4 years with an overall budget of \$3.2 million, including offerings from Stanford University, Silicon Valley Clean Water, GE Water, Santa Clara Valley Water District, and LG NanoH2O. The research team and Technical Advisory Committee includes leading experts from Stanford University, California’s Division of Drinking Water, and others from across the nation. The project is supported by several prominent water and energy organizations, including ACWA, AWWA, BACWA, BAWSCA, CASA, CWEA, EPA, IEU Agency, PG&E, ReNUWIt, SFPUC, WaterReuse California, WEF, among others.