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The water energy nexus is a major theme in water management these days but I have not seen it mentioned in the draft Comprehensive Plan or in the S/CAP. I suggest it belongs in both.

California's water sector consumes nearly 20 percent of the state's electricity [and 30% of its natural gas], and its needs are growing. The water sector uses electricity to pump, treat, transport, deliver, and heat water (CEC 2006). And expected increases in groundwater pumping, water treatment, and water recycling mean the energy intensity of water will grow. While there is growing recognition that increased water efficiency is one of the fastest and cheapest ways to conserve electricity, less attention has been paid to the sources of electricity powering the water sector [1]. Heading into the future, climate change is expected to place additional stress on the availability of water for both potable use and energy production. On September 24, 2016, Gov. Brown signed bill [SB-1425 Water-Energy Nexus Registry](#). This bill requires the California Environmental Protection Agency to develop a registry for greenhouse gas emissions produced by water suppliers and water and wastewater treatment plants. This registry will provide information on how much energy is being used to provide energy services and where that energy is coming from. It might also help to establish emissions baselines and encourage voluntary actions to increase energy efficiency and reduce greenhouse gases [2].

Many water utilities are starting to implement renewable energy systems that not only reduce operational costs and carbon emissions, but also provide additional revenue streams [3]. Palo Alto has begun to move in that direction, Strategy 4.5.9 of our Sustainability and Climate Action Plan is: "Convert the RWQCP to a beneficial resource recovery facility". This is a good first step but I believe a more holistic approach regarding the water-energy nexus is needed. "For California (and Palo Alto) to meet its climate goals, we need to rethink the role that water plays as a significant electricity consumer and producer." [1].

Thank you for considering this suggestion,
Esther Nigenda

[1] Clean Energy Opportunities in California's Water Sector, April 2015 www.ucsusa.org/CAwaterenergy

[2] Are California's Utilities Their Own Worst Drought Enemies? <http://www.wateronline.com/doc/are-california-s-utilities-their-own-worst-drought-enemies-0001>

[3] Innovative Utilities Reducing Water-Energy Nexus Pressures <http://www.wateronline.com/doc/innovative-utilities-reducing-water-energy-nexus-pressures-0001>