

California Solar Canals
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Interdisciplinary Article Summary
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The interdisciplinary article “Solar Canals: A boost For Calif. Renewables” by reporter Camille Bond delves into California's new idea of generating solar energy over its water canals. This groundbreaking idea is to be “the first of its kind in the U.S.”(Bond). This idea is combatting California's water issue as “California faces yet another year of drought”(Bond). Effectively, the project works to create renewable energy through solar arrays and also protect vital water resources for the state of California.

California relies heavily on its canal system to provide for the farm industry and its bigger metropolitan cities and surrounding suburbs. One of the main issues for these systems is that they lose a lot of water to evaporation. To combat this problem the Solar company Called Aquagrid worked with The University of California Merced. Their findings detailed that with California's “4,000 miles of canals, they could reduce evaporation by up to 82 percent, preventing about 63 billion gallons of water from being lost each year”(Bond). An astonishing amount of water is being saved by Installing these Solar Canals. Beyond that, energy is being produced in a renewable manner through solar arrays without the use of fossil fuels. This design is revolutionary for its dual purpose of saving water and also combating issues of global warming and the climate crisis. The benefits do not stop there either, the article details a plethora of savings.

One of the major issues with on-land solar energy for California is that solar grids take up space for agricultural land. With the installation of solar canals, the study found that they would

save “5,300 per megawatt of installed solar capacity”(bond) due to the reduction of herbicide treatment and “land costs could be even higher — around \$30,000 in savings per megawatt”(Bond). Savings also come from the reduction of herbicide treatment for aquatic weeds growing in the canal. Taking into account the added cost of installation, the study still found that the return investment is 20 to 50 percent better than land solar installations. As the research proves, California is saving a ton of money on solar array projects by coming up with creative and sustainable solutions to their energy and water resources.

That being said, the project is set to start this fall in two locations in California and will not come without engineering challenges. Some of these are design and construction considerations to ensure that the canal delivers water safely. Other design considerations involve how to maintain the solar panels over the canals.

This new energy venture sparked my interest because it is pretty innovative and has multiple purposes. I thought the idea super creative and am a big proponent of renewable energy and sustaining water resources. One of the doubts I have is that the project design is not well tested yet and is in an experimental stage in the United States, but I believe the benefits outweigh any doubt and it is very effective in a state such as California. It may also be efficient in places like Arizona where they need to protect their water from evaporation and have a plethora of sunlight. In the past when I have thought outside the box and taken a bit of a risk I benefitted quite well. That only happened if I executed the plan that was built upon research and analysis of the topic and its drawbacks and gains. The article cites multiple California studies and highlights their finding. That is why I believe the project will be a major boost to renewable energy generation and also water resource protection.

References

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