



CALIFORNIA

Column: Want to conserve water and make clean energy? Build more solar farms in San Joaquin Valley



Donn Case of BEI Construction runs a line at the site of Westlands Solar Park in Lemoore, Calif., in June 2021. When completed, it will be one of the largest solar farms in the nation. (Gary Kazanjian / For The Times)

BY GEORGE SKELTON | CAPITOL JOURNAL COLUMNIST

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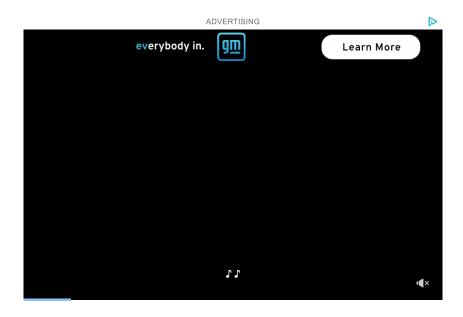


SACRAMENTO — One surefire formula for making clean energy is lots of sun and less hay.

Or fewer tomatoes and - heaven forbid - a reduction in almonds.

Plow over some San Joaquin Valley croplands and plant solar panels. Turn alfalfa fields and nut orchards into solar farms.

That would have a double benefit. Besides producing carbon-free electricity, it would save lots of scarce irrigation water. And it would keep the valley's abused aquifers from dropping further, drying up wells and sinking land while cracking canals and bridges.



Agriculture uses 80% of our developed water in California. And the lifeblood of food production has become less reliable as carbon-induced climate change alters storm patterns and reduces the Sierra snowpack.

But we need all that agriculture to feed ourselves and much of the nation, right? No, not entirely. A lot of that food — especially the almonds and pistachios — gets shipped to foreign countries, mainly in Asia. So, that means we're also exporting our scarce water.



CLIMATE & ENVIRONMENT

California farmers are planting solar panels as water supplies dry up

July 31, 2019

The nonpartisan <u>Public Policy Institute of California published a blog post</u> last week that tied the concepts of clean energy and water conservation neatly together.

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"The San Joaquin Valley is facing a monumental shift in land use over the next two decades," wrote PPIC water experts Andrew Ayres and Curtis Seymour.

"Promoting solar expansion on fallowed farmland ... could support two major objectives at once: the state's clean energy goals while easing the economic pain of transitioning some land away from agriculture."

"Two important but seemingly unrelated [state] laws are driving the change," they noted.

One is the 2014 Sustainable Groundwater Management Act aimed at bringing groundwater basins into balance by the early 2040s. For decades, farmers have been pumping out a lot more water than could be naturally replenished.

Farmers "who think they're going to get more [aquifer] recharge from surface water that no one else is using are overly optimistic," Ayres told me.



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Column: There's a battle brewing over changes to California solar incentives. Newsom is in the middle Jan. 31, 2022

"Some farmers have been irrigating crops entirely with groundwater. In the future, many will not be able to do that."

It's estimated that at least 500,000 acres of San Joaquin Valley farmland will be fallowed to comply with the groundwater law.

"Land is coming out of production," Ayres says. "The next question is, 'What do you do with it then?' Just allow that land to become unproductive? Kicking up dust or growing weeds and not contributing to the economic vitality of the valley? Solar could cover up to 40% of the land.

"And solar is very profitable. As a crop, it has a very good return — on a par with some high-value tree crops. If not more profitable."

The second law driving the land use change requires California electricity to be generated 100% by renewable energy by 2045. Solar, wind, geothermal, hydro — not natural gas.

"California has set itself a Herculean task," the PPIC blog post noted. "We're going to need a sustained, unprecedented build-out of renewables. Solar will be an important part."

There already is some solar farming in the valley — producing three gigawatts, PPIC reported. An additional 20 gigawatts — or 20,000 megawatts — have been proposed.



OPINION

Editorial: California can't enact a 'solar tax' and still be a climate leader

Feb. 6, 2022

But there's a very big hitch. There isn't enough electric grid capacity to transmit much more solar to consumers.

"The problem is just going to get worse unless there are big investments to bring transmission capacity to the valley," Ayres says.

"Ultimately, we're going to require ... a huge investment in the grid to get that solar out around the state.... There's a real question whether that's going to be possible."

Big investments mean many billions of dollars.

It's a handy coincidence that the federal government has billions to help if California can get on the ball and make a pitch for it. The \$1-trillion infrastructure bill signed in November by President Biden includes multibillion-dollar matching grants for states, local governments and utilities to upgrade power grids.

So, Gov. Gavin Newsom should lead the charge for that federal money — if he and others can first figure out how to spend it.

The state could also set aside some of its budget surplus to help modernize the grid and offer tax incentives for growing solar in the valley.



CLIMATE & ENVIRONMENT

How solar panels on farmland could help California fix its water and power crises July 8, 2021

To meet its climate change goals, it's estimated that California will need to triple energy generation from each of these renewable sources: wind, solar farms and rooftop solar.

Newsom and the Public Utilities Commission are <u>fretting over how to handle rooftop solar</u>, used by 1.3 million consumers who spent thousands of dollars installing panels.

The PUC agreed with private utilities that they're paying way too much for unused solar electricity generated at home. Non-solar consumers — many of them poor — are making up for the utilities' lost revenue by paying higher electricity rates than they should, the PUC maintained.

So, the regulatory agency proposed a dramatic reduction in rooftop solar subsidies and a fee - a tax - for connecting to the grid.

Rooftop solar installers and owners howled. And the <u>PUC backed down</u>. It's trying to find a compromise.

My solution: Cut the subsidies in half — not by quadruple, as proposed. Forget the dumb, tone-deaf tax.

And the state should offer tax credits for panel installation, as the federal government does. For storage batteries too.

If Newsom is as worried about climate change as he says, he'll use the state budget to encourage rooftop and farm solar. And neither one uses a drop of water.

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Political columnist George Skelton has covered government and politics for 60 years and for The Times since 1974.





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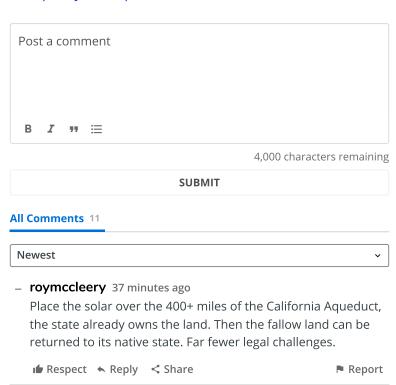
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- richard4520 50 minutes ago

Solar panels are an eyesore and likely dangerous to wild life, perhaps even human life in the long run. Not to mention a poor use of the land. Newly engineered nuclear power is the answer,



C L Who 2 hours ago

When agriculture -- a low value added activity -- uses 80% of the developed water in the state, it's easy to see that much land will need to be fallowed. A 12.5% reduction in agriculture use means a 50% increase for all other uses.

Axe the bullet train and spend the money improving the transmission grid, and let's move on Skelton's ideas.



dvsun00000 3 hours ago

Converting farmlands back to the original native grasslands would serve as a crucial carbon sink and also be profitable in the state's cap-and-trade market:

https://climatechange.ucdavis.edu/climate/news/grasslandsmore-reliable-carbon-sink-than-trees



- Tricoteuse 3 hours ago (Edited)

Let's cover thousands of acres of prime ag land with solar panels - an eyesore to be sure. Yea, no. If we're trending to be

on board with killing the state's agriculture industry, let's at least use the land for something that people *really* need. Housing.

♠ Respect ♠ Reply < Share</p>

■ Report

BrianfromtheRanch 3 hours ago

♠ In reply to Tricoteuse

That you believe housing is an issue demonstrates that you don't understand the issue.

We have plenty of housing, we just need fewer people.

It's like musical chairs. If you find a chair you're in. If not, then move on.

♠ Respect 2 ♠ Reply < Share</p>

■ Report

- clarenceunruh 3 hours ago

Sure, the San Joaquin Valley exports almonds and pistachios to Asia. And we import cashews and shrimp from Asia It's called trade

★ Respect ★ Reply < Share

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ScandyAndy 3 hours ago

♠ In reply to clarenceunruh

Right, but if we're mortgaging our future water resources to be able to export those almonds and pistachios, then is that smart? At some point water will become too expensive to make that trade make sense. Or at least, if certain subsidies become unavailable.

♠ Respect 1 ♠ Reply < Share</p>

■ Report

rclostinttheLC 4 hours ago

Not a wise choice. Takes out grasslands that help fuel the water cycle, and creates a desert. Much better choice is on roofs of buildings, and over parking lots.



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