

Ferguson: Energy Matters

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Time for a California Solar Contract

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To respond to global warming, the state's electricity system must undergo fundamental change to accommodate non-fossil-fueled supplies. If California is indeed serious about reaching the greenhouse gas emissions reduction mandate under AB 32, it is going to have to rapidly expand the use of solar power.

The familiar photovoltaic (PV) panels are one way to capture sunlight and turn it into electricity. California launched a \$3 billion subsidy program to help defray the cost of installing PV in hopes that costs will come down. Less familiar are the large solar power projects in the high desert around Mojave. These projects were built in the 1980s and continue to supply most of the solar power generated in California.

These industrial-strength solar arrays use long curved mirrors to focus sunlight onto a pipe containing oil. The hot oil is used to make steam that runs a generator. The bottom line is that wholesale quantities of solar power are available at about half the cost of electricity from PV.

The state will have to start building large-scale solar power plants again to reach the AB 32 goals. The question is how to make this happen.

In the current process that utilities use to acquire electricity from renewable energy resources, renewable power competes against natural gas. A surcharge on electricity bills provides a small amount of money for purchases that exceed the proxy price ("price referent") of gas-fired power.

The higher cost of solar ensures that in the current system it will never be chosen.

An alternative would be to admit that solar is more expensive and allow utilities to buy it through competitive solicitations at prices not tied to gas. However, this is unlikely to result in significant new solar development because utilities understandably worry about their rates. It is unreasonable to expect individual utilities to stick their necks out.

The better option is for California to abandon the utility-centric competitive solicitation, decide what solar power is worth in today's warming world, and make a standing offer to buy it at that price. The California Solar Contract would be available to any generator willing to put solar power into the grid. Germany and Spain have adopted such a "feed-in tariff" approach with considerable success.

Under the Solar Contract, generators would be paid different prices depending on whether they generate on- or off-peak. Power received would be distributed to all utilities in the state, and funds would be collected from all consumers according to their electricity use.

There are two major objections to the California Solar Contract approach. How do we know what price to offer for solar power? If the price is set too low, we get none. If it's too high, unwarranted windfall profits will result. The correct price would result in rapid solar development without sending too much excess cash to Wall Street.

The second objection is perhaps more fundamental. We are all shoppers at heart, and the notion that the state might not shop around for the cheapest solar power rubs us the wrong way. However, no one thinks the state should try to run an auction to buy solar power at the lowest

cost. California tried to do this during the recent energy "crisis," and the results were less than optimal, to put it gently.

But many of us, at least us guys, don't really like to shop. If we want something and find it at a price we can afford, we buy it even though we might find it cheaper somewhere else.

The California Solar Contract would suit my shopping style just fine. Wonks like me have been musing about the Solar Contract approach to AB 32 for several months. It's time to elevate this discussion to the Legislature and the agencies that matter.

AB 32 - the new state law that mandates greenhouse gas reductions - requires a bold new approach to our energy system. The existing utility procurement system simply isn't up to the task. If California is serious about global warming, it's time to figure out what electricity from the sun is worth to us and offer a standard California Solar Contract to anyone willing to supply it.

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