



COMMENTARY

## Commentary: My monthly electric bill in Texas would be \$250. In California, it is \$1,000. Here's why.



Solar energy powers the Otay Mesa Water Treatment Facility. (K.C. Alfred)

By PETER CRAMTON

SEP. 1, 2020 | 8:11 AM



Rolling outages may appear to be a symptom of climate change. Extreme heat and intermittent renewables certainly challenge electricity markets. But these challenges can be met with good market design. The California market has flaws that make California electricity more expensive and less reliable than it should be. Fixing these flaws should be a priority.

This spring I moved to California. With delight, I replaced our two gas cars with a single electric vehicle. I researched electricity rates for our home in San Diego and found EV-TOU-5 was our best plan: \$16 a month plus a per-kilowatt-hour charge that depends on the time of use — 50¢ from 4 to 9 p.m., 9¢ from midnight to 6 a.m., and 29¢ at other times. This is best because I can schedule our car to charge after midnight. We pay about 36 cents per kilowatt-hour for our electricity, ignoring the car.

Suppose instead we had moved to Texas — as many Californians are doing. Texas has retail choice so I would see a long list of choices. My best plan would be an innovative plan offered by two providers: \$10/month plus the wholesale cost, which averages less than 9 cents per kilowatt-hour. I would charge my car at night when the cost is below 9 cents, but for the rest of my electricity I would pay 9 cents.

My monthly bill in Texas would be \$250; in California, it is \$1,000. This is a remarkable difference. Is this because the California energy is green, and the Texas energy is dirty? Just the opposite: the 9 cents price in Texas is 100% green energy; the 36 cents price in California is fueled partly from gas. The main sources of the difference are two poor decisions of a well-intentioned regulator.

First, the substantial fixed cost of delivering reliable electricity is allocated through a per-kilowatt-hour charge. To make matters worse, California follows a net-metering policy: If you put solar panels on your roof, all the electricity you produce is subtracted before the per-kilowatt charge is applied to your consumption. Thanks to abundant sunshine, this means that homes with solar panels can largely avoid the fixed cost of providing electricity service.

Unfortunately, these costs must be paid, so the utility raises the per-kilowatt-hour price. The solar customers free ride on everyone else. This would not be so bad if solar-panel owners were primarily poor. However, the opposite is true. It is the rich who have an advantage in installing high-fixed-cost solar panels. This seemingly green policy

transfers wealth from the poor to the rich. Further it harms the incentives for electrification, which is an essential element of the climate solution.

The second flaw is the absence of retail choice. Innovative and competitive rate plans are unavailable to consumers. In San Diego, my choices are limited to those offered by the monopoly utility. Fortunately, San Diego Gas & Electric offers one plan that works reasonably well, but the plan in Texas is superior: \$10 a month plus the wholesale cost without markup. This plan exposes me to the real-time price swings needed to balance supply and demand. That is a good thing. It means I am motivated to take advantage of these swings and purchase readily available devices, such as smart thermostats. I can use a free AI-powered app to manage both my spend and my comfort. The price variation provides an opportunity for me to save money during heat waves. I am rewarded for providing the flexibility the system needs.

These two flaws create an electricity market that is unsustainable. Each problem reinforces the other and both get worse as the transition to green energy progresses. This gives me confidence the regulator will fix these problems.

The first flaw is easy to fix. Allocate the fixed cost of providing reliable electricity based on home or rental value (Zillow has an accurate model). Home value is highly correlated with the ability and willingness to pay. This is an efficient and just way to allocate fixed costs.

The second flaw is addressed by requiring the monopoly utility to offer a “\$10/month + wholesale cost” plan. Who could object to adding one new plan to the menu? Consumers still select the plan they prefer. Why not give them an option of a plan well-suited to the energy transition?

California illustrates that good intentions do not necessarily produce good policy. Good policy is designed from what we know about markets and human behavior. Good policy is the only way to provide reliable electricity at least cost.

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