



# Keeping California a clean energy leader with time-of-use pricing

Lawrence Berkeley National Laboratory found that by 2025 Californians could save \$700 million each year by shifting 20 percent of the state's energy demand to align with solar generation using tools like time-of-use pricing.<sup>7</sup>

While California is clearly a clean energy leader, the state let over 300,000 megawatt hours<sup>1</sup> of clean, affordable energy go unused last year alone. That's almost enough to power the city of San Luis Obispo – over 45,000 homes – for an entire year.<sup>2</sup> We wouldn't have to waste our extra solar or wind energy if we had a tool that helped us see when cheap, renewable energy was available. Businesses already enjoy a tool like this and, by 2019, residential energy users will too. Time-of-use pricing shows customers when energy is cheapest and cleanest. Typically, these electricity rates are low from the early morning to mid-afternoon and on the weekend. Each utility is a little different, but in general peak, or high, pricing goes into effect on summer weekdays from 4:00pm-9:00pm when demand is usually higher, and the system relies more on fossil fuels. To remain a clean energy leader and protect public health and the environment, California must power our economy with as much clean, affordable energy as possible. Well-designed time-of-use rates are critical to bringing this vision to life because they offer customers cheaper electricity rates when energy demand is low and the energy available on the grid is from renewable sources, like solar and wind.

## Greater control of your energy bill

Paired with outreach and education, time-of-use pricing makes our energy system cleaner and cheaper for everyone. It provides people with predictable, low-priced times to use energy and rewards them – with utility bill savings – for adopting tools that help shift energy use away from times when electricity is more expensive and dirtier. Even in these peak times, customers

will still be able to use the energy they need without breaking the bank.

Across the country, customers with time-of-use pricing have shown a willingness and ability to change the way they use electricity to lower their overall energy bills.<sup>3</sup> Early studies of residential time-of-use in California show people (including low-wage earners) appreciate how these rates provide new choices and

As of 2015, a total of 7.5 million customers, including residential, commercial and industrial, from 546 utilities in all 50 states were on TOU rates.<sup>8</sup>

**TIME-OF-USE ELECTRICITY PRICING**  
Save money, cut pollution

Run major appliances during off-peak hours when electricity prices are lower.

- Save money**  
See significant savings on your electricity bill.
- Cut pollution**  
Run fewer power plants during the peak hours and cut harmful emissions.
- Don't waste solar**  
Use energy when it is powered by solar so it doesn't go to waste.

greater control over their bills.<sup>4</sup>

This transparency and predictability means customers can choose to use electricity when it's powered by clean resources instead of fossil fuels. Shifting our energy use to these cleaner sources reduces the need for polluting power plants, often located in underserved communities already suffering from health impacts from energy production.

**Protecting peak customers**

Time-of-use pricing can be transformational, but only if done right. Most people's bills will balance out or go down over the course of a year, but for some "peak customers," or people who use a lot of energy during high-priced times, monthly bills could go up.<sup>5</sup> That's why it is critical California's utilities educate their customers, particularly the most economically and environmentally vulnerable. Utilities should provide customers access to easy tips and tools to help shift some of their energy use, including energy efficiency, improved access to energy data, bill protections where necessary, and easy options to opt-out at any time.

California's major utilities are moving their residential customers to time-of-use rates in 2019, with pilots continuing in summer 2018. Unfortunately, utilities are not yet planning to take the steps necessary to set their customers up for success. During this testing phase, it is critical for utilities to focus on educating all customers on the benefits of time-of-use rates

and ways to save money and use more renewable energy.

**Stop the waste of clean energy**

As of September 2017, California has curtailed, or turned off, more solar alone in 2017 than all of the renewables curtailed in 2016.<sup>6</sup> Why? Solar is abundant during the middle of the day, when people are using the least amount of energy. By making electricity cheaper in the middle of the day to reflect the low cost of solar, time-of-use pricing will help balance the supply-demand equation so utilities can bring on more renewables, keep our grid stable, and allow customers to lower their energy bills.

In doing so, time-of-use pricing can maximize the use of clean energy resources otherwise being wasted. This will make our grid more efficient, representing a low-cost pathway as California continues to meet its renewable and climate goals, while creating jobs, growing our economy, and continuing to lead in the fight against climate change.

But we must hold utilities accountable to ensure time-of-use rates are done well. Utility pilot programs must focus on outreach and education leading up to 2019. Done right, time-of-use pricing can bolster California's position as a clean energy leader by helping the state rely on more clean energy while keeping the costs of the overall energy system low. What's more, it can support all citizens in using the cheapest, cleanest energy available.

<sup>1</sup> CAISO (May 2017)  
<sup>2</sup> U.S. EIA (Jan. 2017)  
<sup>3</sup> Glbl. Ergy. Pnrs. (Feb. 2012)  
<sup>4</sup> SMUD (Sep. 2014)  
<sup>5</sup> CPUC (April 2017)  
<sup>6</sup> CAISO (Sep. 2017)  
<sup>7</sup> LBNL (Nov. 2016)  
<sup>8</sup> U.S. EIA (Oct. 2016)

PHOTO: San Francisco skyline / Aniket

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