Southern California Residential Electricity at Crossroads

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Southern California Edison's New Tariffs Could Hurt the Poor and Favor the Rich, but also Favor Solar Even for Moderate and Low Electricity Use Households Two major changes in the electricity landscape set for next year will affect the electricity bills and self-generation options of Southern California households: First, Southern California Edison (SCE) will phase out its tiered rate plans, currently used by 4 million – the vast majority –of their residential customers. They will be switched over to so-called Time of Use (TOU) rates, which are explained below. This can have substantial effects on households' electricity bills, with small electricity consumers likely to be hurt and large consumers benefitting. Moreover, The Federal Government starts to phase out its solar tax credit, with reductions from currently 30% to 26% next year and 22% in 2021. As of today, there will be no solar tax credit anymore after 2021. If price declines follow historical precedents and the federal government does not suddenly reverse the phase out of solar tax credits, the lack of government incentives will overcompensate the expected price declines, effectively *increasing* the costs of solar installations relative to today by about 14% after 2021. This paper provides sample calculations for the effects of SCE's push towards TOU for some typical customer groups, calculates the cost and implied savings of solar installations, analyzes the implied savings from adding a standard home battery system, discusses some pitfalls, and calculates the expected cost of waiting to install solar. The key results are as follows:

1) A switch to Time of Use without behavioral changes will likely hurt low usage households (with current electricity bills smaller than $50 per month on average), such as single households with highest energy usage in the early evening hours. A typical household in this category may see increases in their electricity bill of about 20-40%, with a theoretical maximum increase of almost 100%
2) Very large electricity users (those with electricity bills currently higher than $700 per month) can expect a drop in their electricity bill without changes in behavioral patterns in the range of 10-20%
3) With behavioral changes, such as shifting high energy usage activities (pool pump, electric car charging, washing clothes and dishes) into late night or early morning hours can substantially reduce electricity uses for many. Those options, however, will be more prevalently available to the high energy users.
4) The tariff changes make solar panel installations attractive not only for large energy users, but also for small to medium sized energy users
5) The best time to install solar panels is now. The cost of delaying a solar panel installation is about 7% of the installation cost before tax incentives or 11% after current incentives. For a 6.6 kW System at current market prices, this amounts to $1,500 for an installation cost of about $14,000 after government tax credits.

The full paper is available from apapavero@currentcurrent.com on request.

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Summary

Frequently Asked Questions

The full paper is available from apapavero@currentcurrent.com on request.