

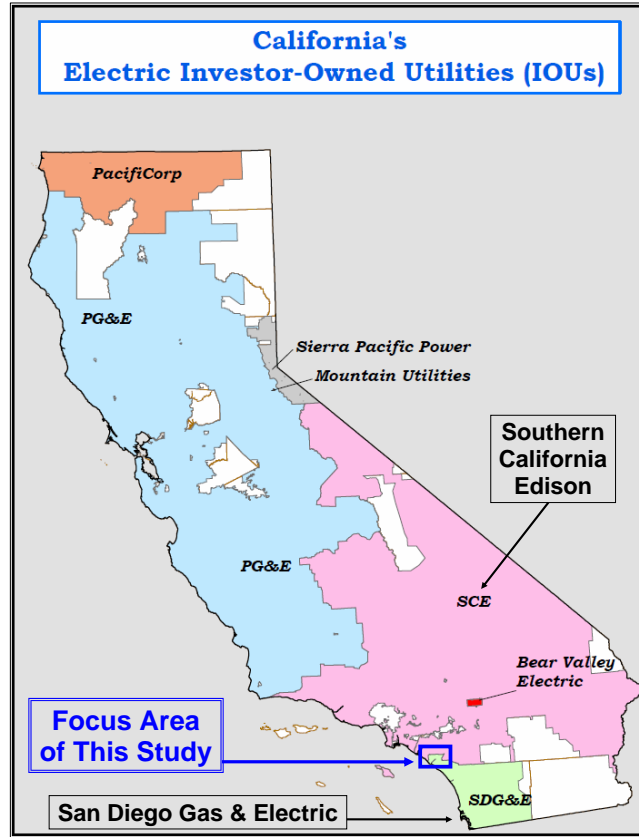
Online Appendix for
Do Consumers Respond to Marginal or Average Price?
Evidence from Nonlinear Electricity Pricing

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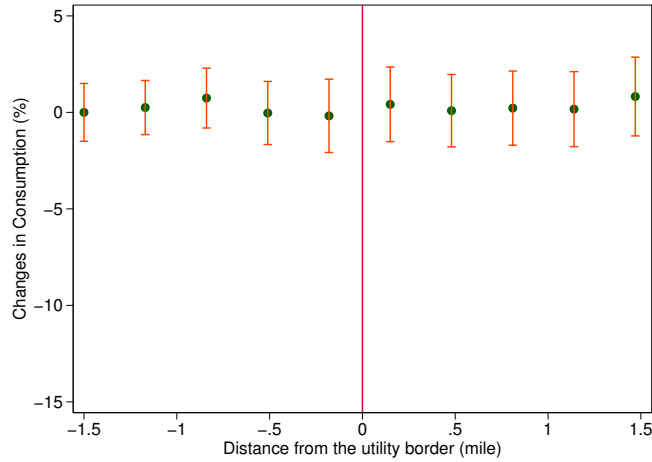
Figure A.1: Service Territories of California's Investor-Owned Electric Utilities



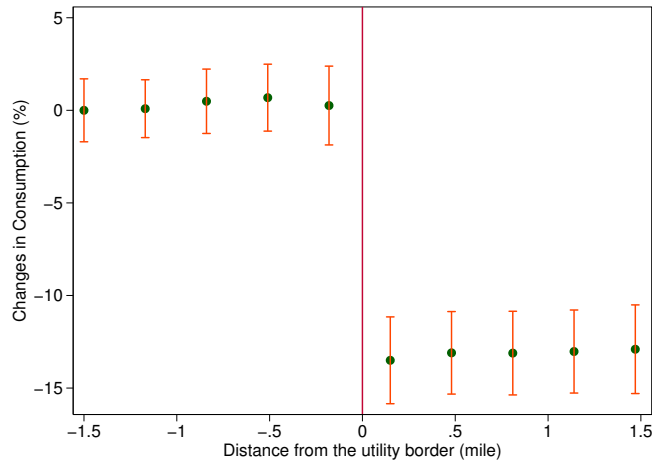
Notes: This figure shows a service territory map of California's investor-owned electric utilities. The original map is provided by the California Energy Commission. Blank areas indicate areas served by electric utilities that are not investor-owned. In this study, I use two electric utilities: Southern California Edison (SCE) and San Diego Gas & Electric (SDG&E). SCE provides electricity for a large part of southern California, whereas SDG&E covers a major part of San Diego County and the southern part of Orange County. This study focuses on the territory border of SCE and SDG&E in Orange County.

Figure A.2: Changes in Consumption from 1999 to 2000 by Distance from the Utility Border

Panel A. Changes in Consumption from July 1999 to July 2000



Panel B. Changes in Consumption from August 1999 to August 2000



Notes: The figure provides evidence of the validity of the spatial regression discontinuity design and suggests that using samples closer to the utility border does not affect my estimation results (shown in Table A.1). The horizontal axis shows miles from the border using negative values for SCE territory and positive values for SDG&E territory. The left-hand side of the vertical line represents the distance from the border for SCE customers and the right-hand side, the distance from the border for SDG&E customers. The dots show the mean percent change in consumption from a billing month in 1999 to the same billing month in 2000 in a 0.25 mile bandwidth. City-by-time fixed effects and billing-cycle-by-time fixed effects are subtracted to control for weather and other factors. The range bars show the 95% confidence intervals. Consumption is not statistically different between SCE and SDG&E customers before the utility companies had different price changes in the summer of 2000. However, it is systematically different after the price change.

Table A.1: Robustness Checks

	Main Result		Unbalanced Panel		Samples in 1 mile of the border	
	(1)	(2)	(3)	(4)	(5)	(6)
$\Delta \ln(\text{Marginal Price}_{t-1})$		0.006 (0.011)		0.006 (0.009)		-0.010 (0.019)
$\Delta \ln(\text{Average Price}_{t-1})$	-0.075 (0.005)	-0.082 (0.015)	-0.077 (0.004)	-0.086 (0.012)	-0.076 (0.008)	-0.064 (0.025)
N	3,752,378	3,752,378	6,876,201	6,876,201	1,395,433	1,395,433

Notes: This table shows the results of the IV regression in equation (3) with fixed effects and control variables specified in the equation for different samples and alternative instruments. See notes in Table 2. Columns 1 to 2 show the main result that are presented in Table 2. Columns 3 to 4 use unbalanced panel data that include all households who opened and closed their electricity account during my sample period (from January 1999 to December 2007). Columns 5 to 6 limit the sample to households in 1 mile of the territory border of SCE and SDG&E. Standard errors in parentheses are clustered at the household level to adjust for serial correlation.