

Rate Design for Zero Emissions Vehicles

Economics Perspective

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Cutting Edge Teaching and Research on Energy and Climate



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THE PRICE IS (NOT) RIGHT

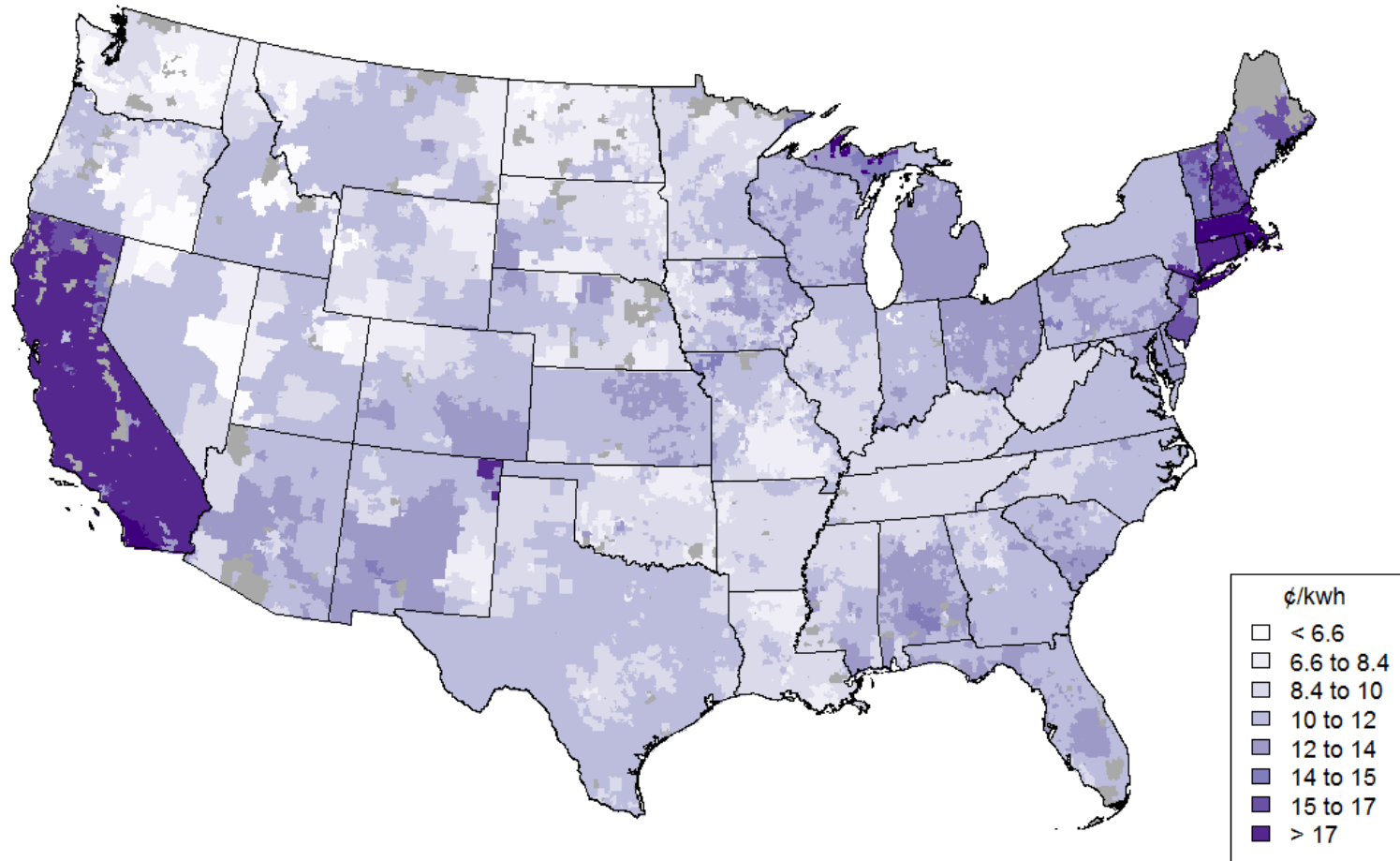


Residential rates well above social marginal cost in California.

Economic Efficiency of Pricing

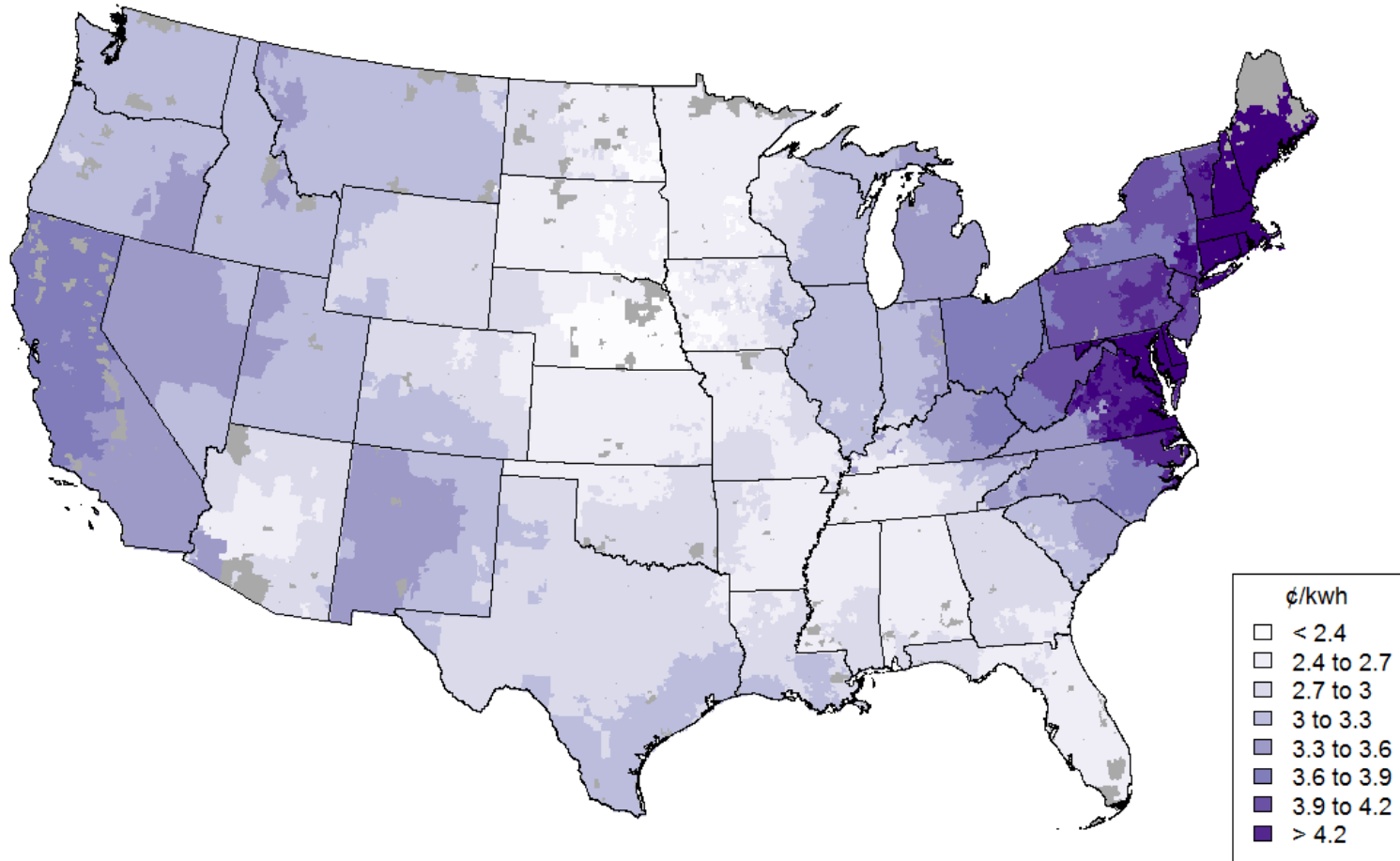
- Producing a good requires inputs, and those inputs have alternative uses (marginal cost)
- Inputs should only be brought together to produce the good if the value to consumer exceeds the cost of the inputs
- Thus, price should be set equal to marginal cost to create the incentive to consume an incremental unit only if the value to the consumer exceeds the cost of production

Residential Retail Variable Price



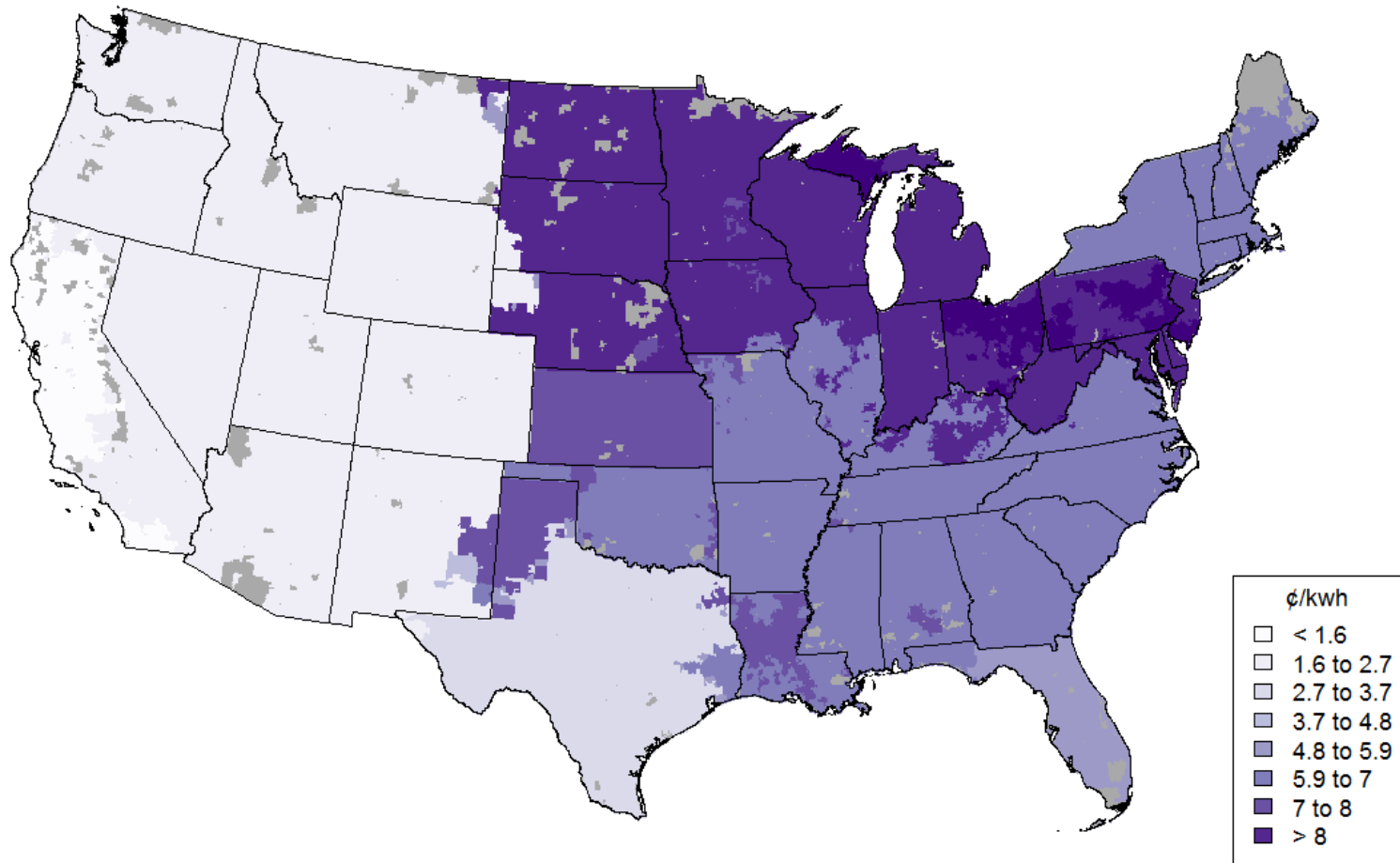
SOURCE: Borenstein and Bushnell

Average Private Marginal Cost



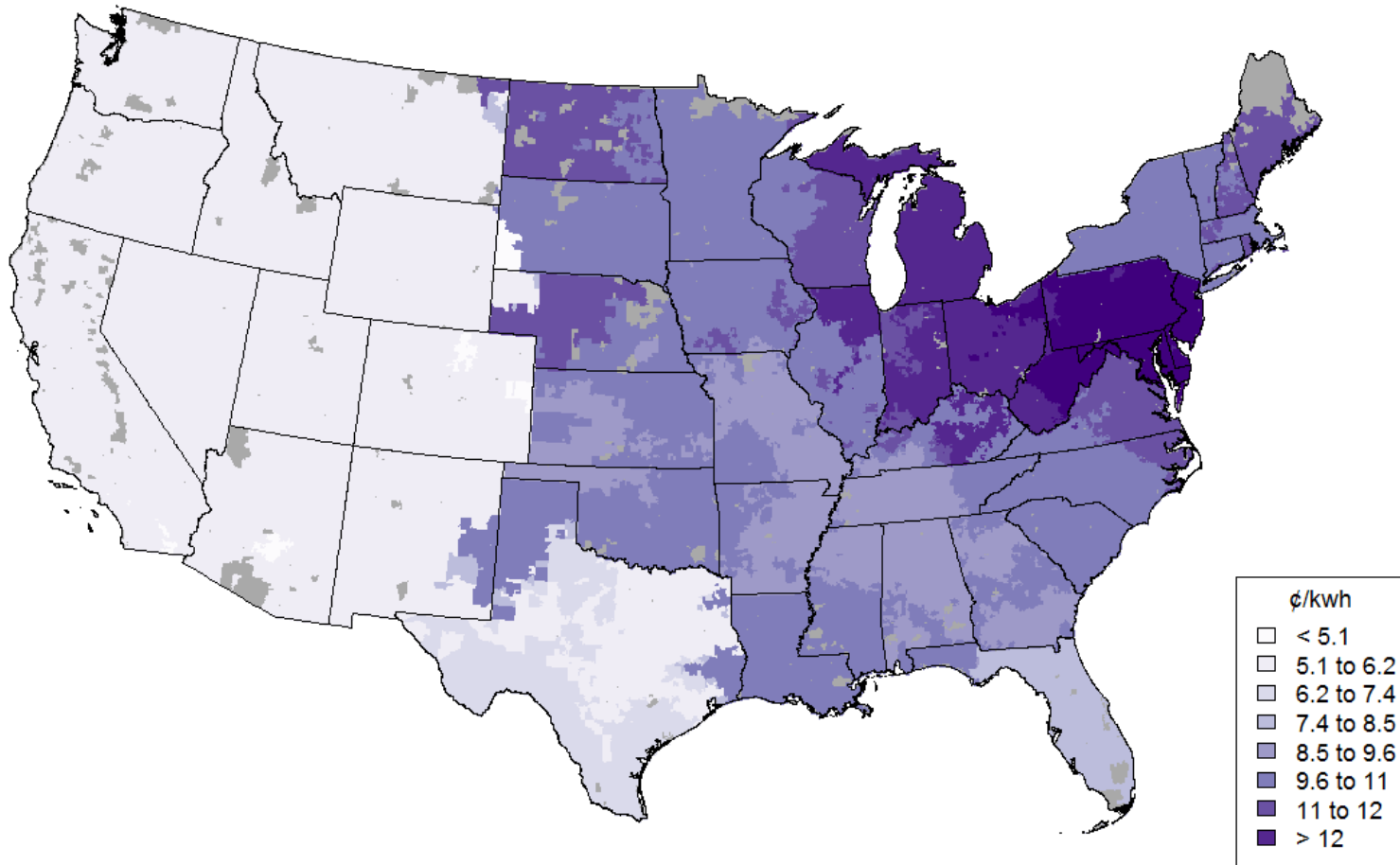
SOURCE: Borenstein and Bushnell

Average External Marginal Cost



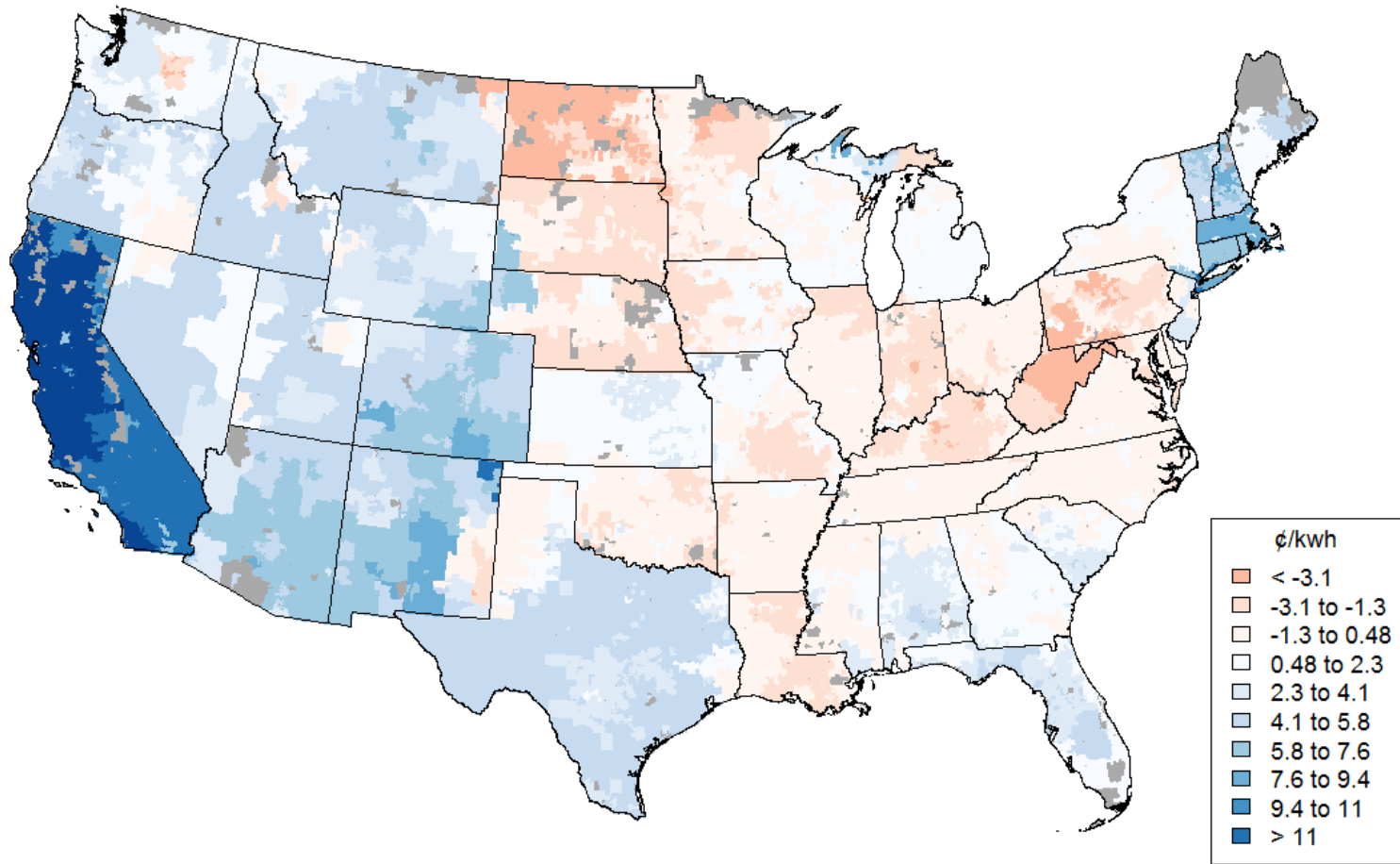
SOURCE: Borenstein and Bushnell

Average Social Marginal Cost



SOURCE: Borenstein and Bushnell

Price minus Average Social Marginal Cost



SOURCE: Borenstein and Bushnell

ECONOMICS OF FIXED COST RECOVERY

*Set Variable Price = Social Marginal Cost,
collect the rest through fixed charges.*

Collecting the Revenue Shortfall



Volumetric Pricing



BLUE BOTTLE
COFFEE



Fixed Charges



Demand Charges

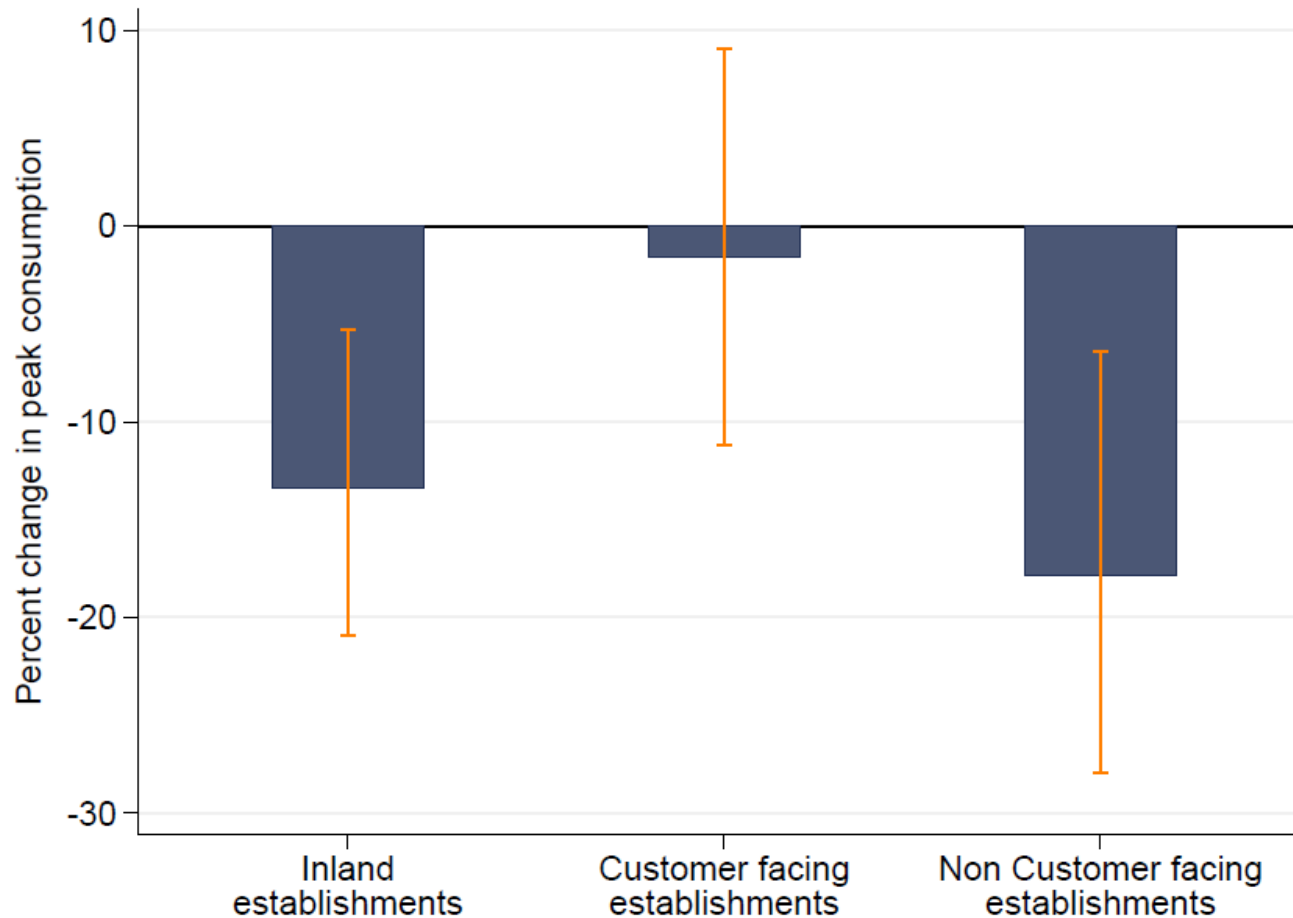


HOW CONSUMERS RESPOND



Expect a diversity of consumer responses to prices.

Not All Customers Respond the Same



SOURCE: Joshua A. Blonz

Estimating the Impact of Charging

Research in Progress



SOURCE: insideevs.com

THANK YOU

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