

The Brattle Group

THE TRANSITION TO DYNAMIC PRICING

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Demand Response and Smart Grid
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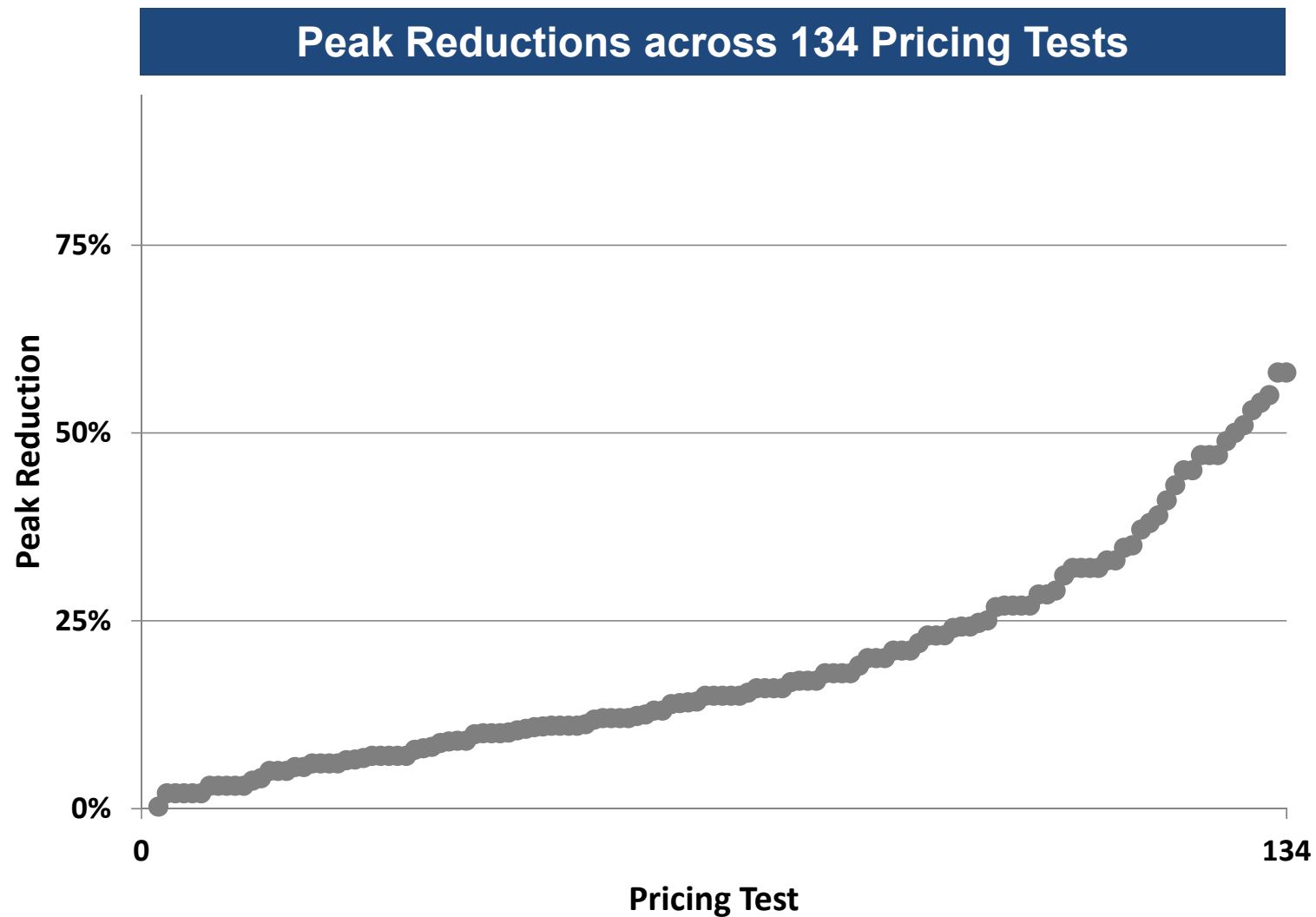
We lose \$10 billion each year due to flat rate pricing

- 33% of the nation's 114 million households are on smart meters
- But only 1% are on time-based rates
 - And only 1% of these are on dynamic pricing rates
- That prevents us from harnessing the benefits of universal dynamic pricing
 - \$7B/year in lower energy costs
 - \$3B/year in reduced cross-subsidies

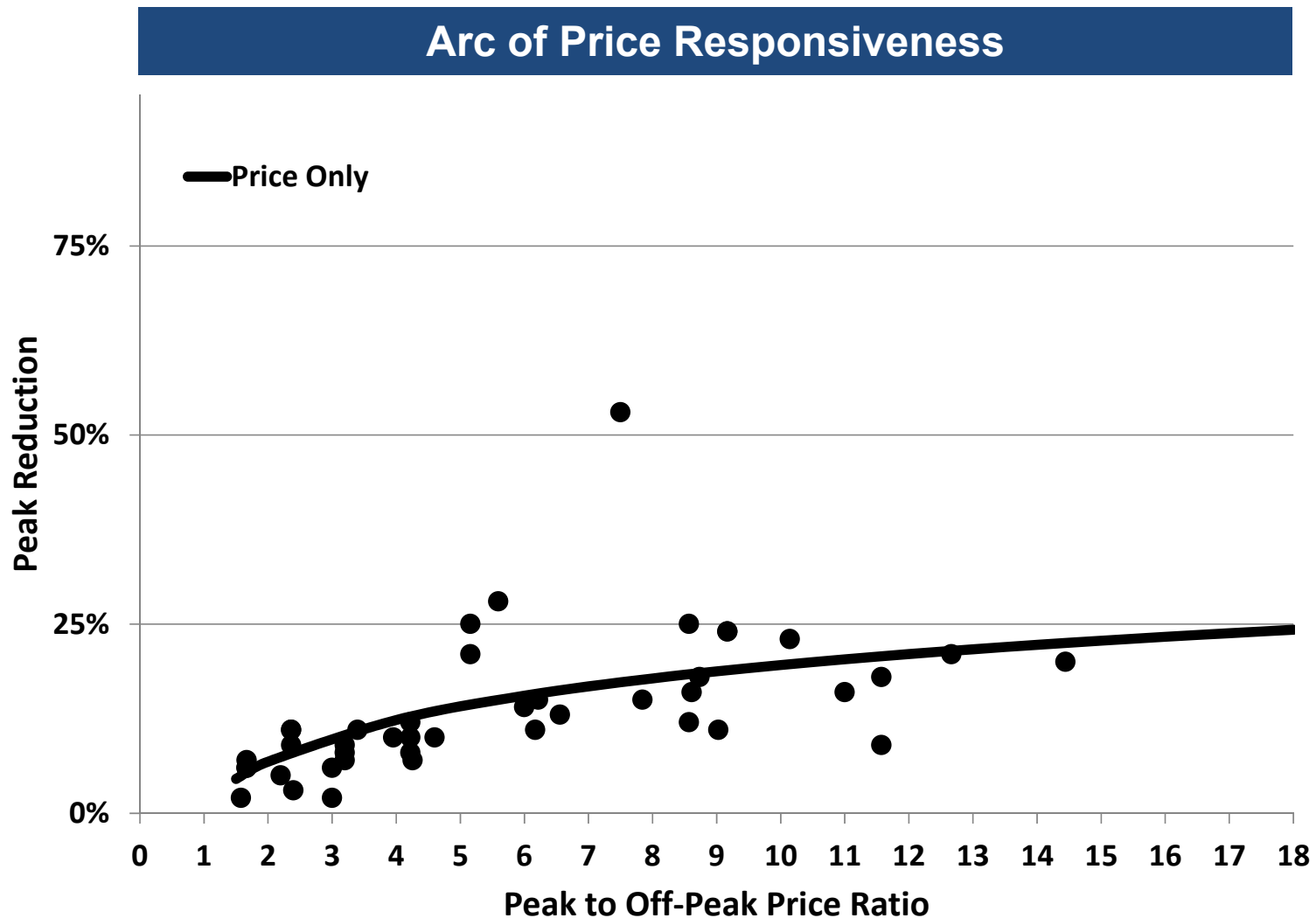
The losses will continue unless we address three underlying fears

1. Fear that customers won't respond to dynamic pricing
2. Fear that customer response to dynamic pricing won't persist
3. Fear that low-income customers will be harmed by dynamic pricing

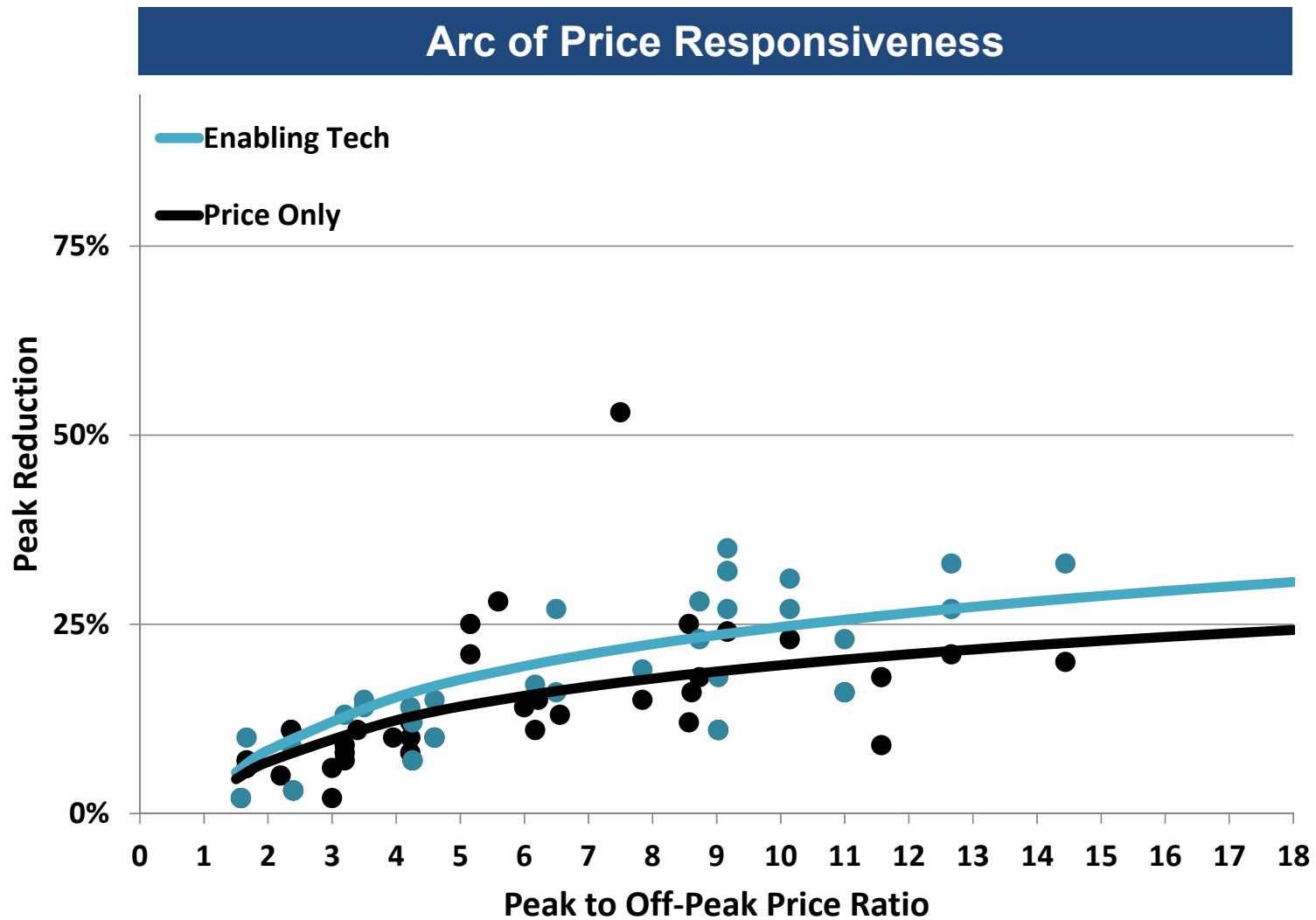
1. Because results vary widely, some conclude that we have learned nothing from the pilots



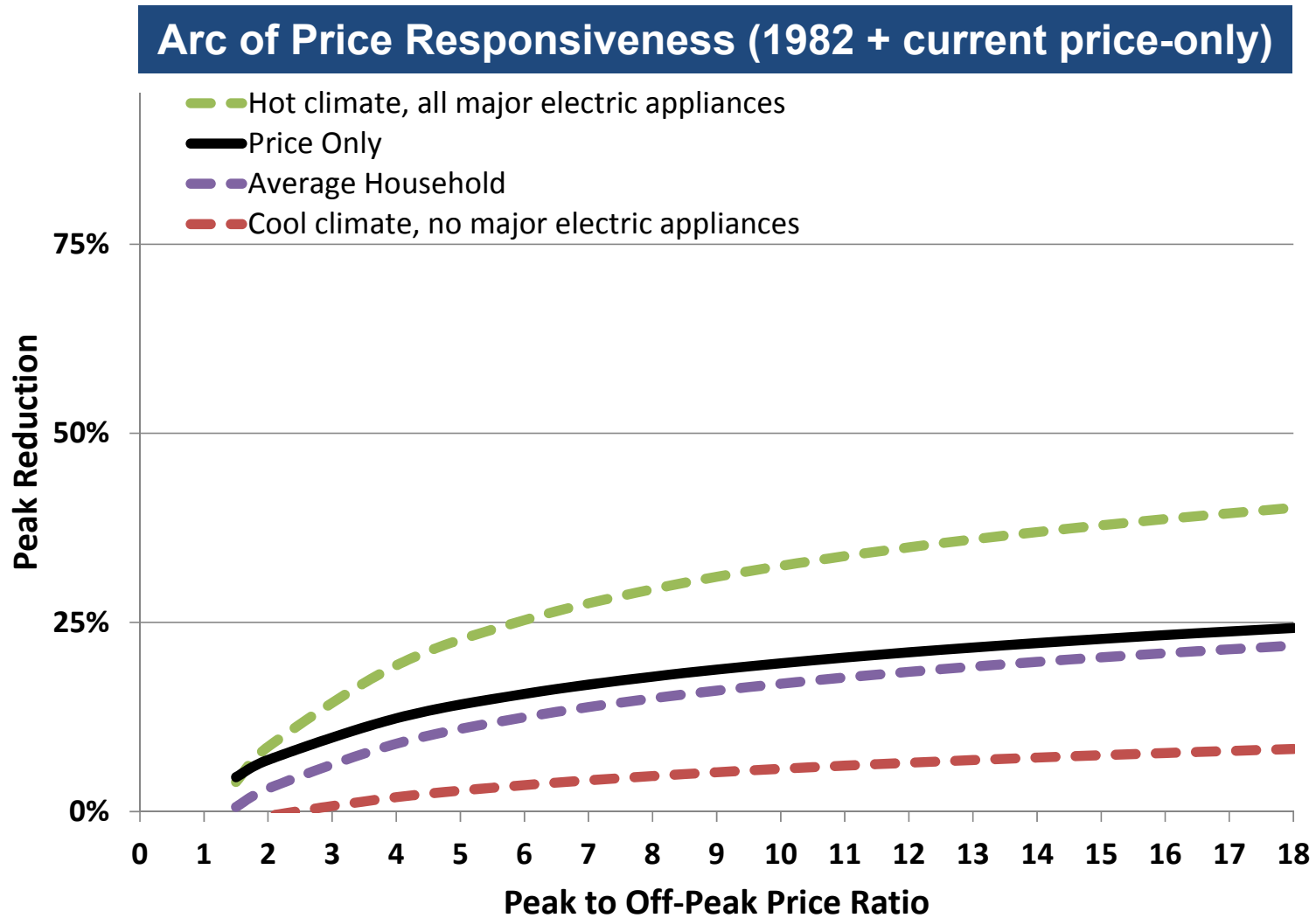
But we have learned a lot – we just have to plot demand response against price



The pilots have also shown that enabling technology leads to higher price responsiveness



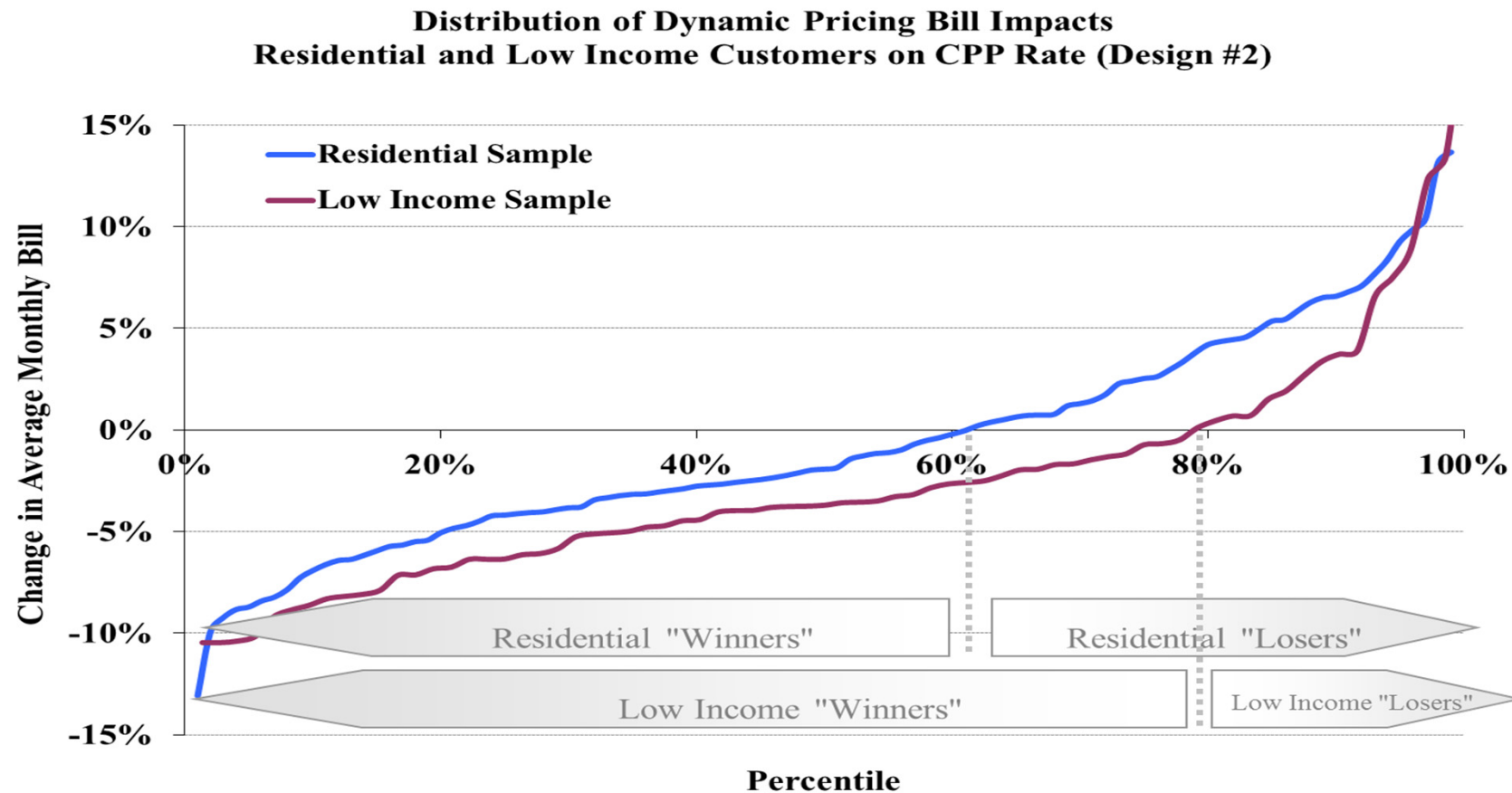
What is less well known — price responsiveness has stood the test of time between 1982 and 2012



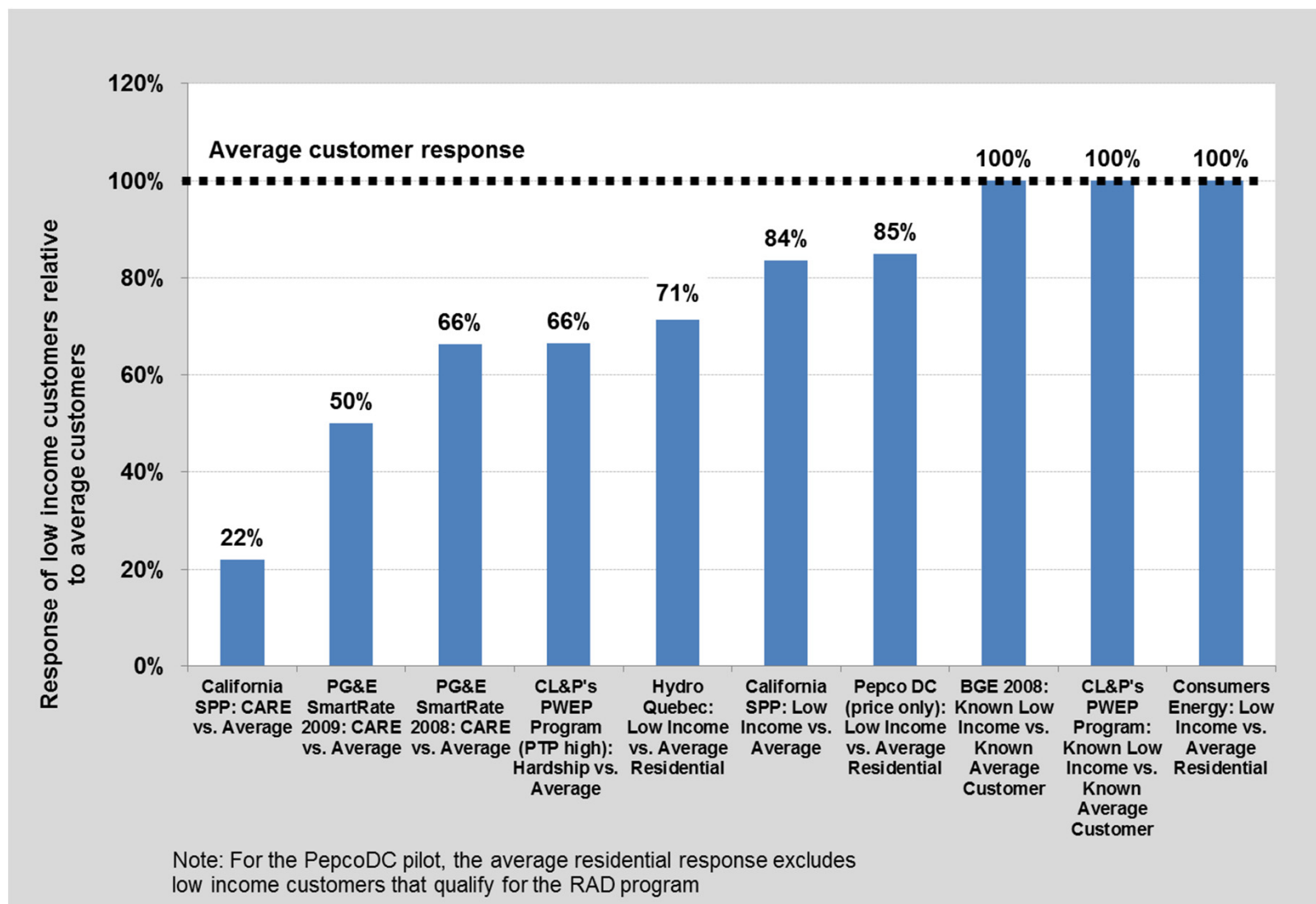
2. Customer response persists

- It has persisted in long-lived pilots
 - California, D.C., Oklahoma for 2 years
 - Maryland for 4 years
- TOU programs have been in place for decades
 - The French *tempo* tariff goes back to 1965
 - Arizona's TOU rates go back to 1980

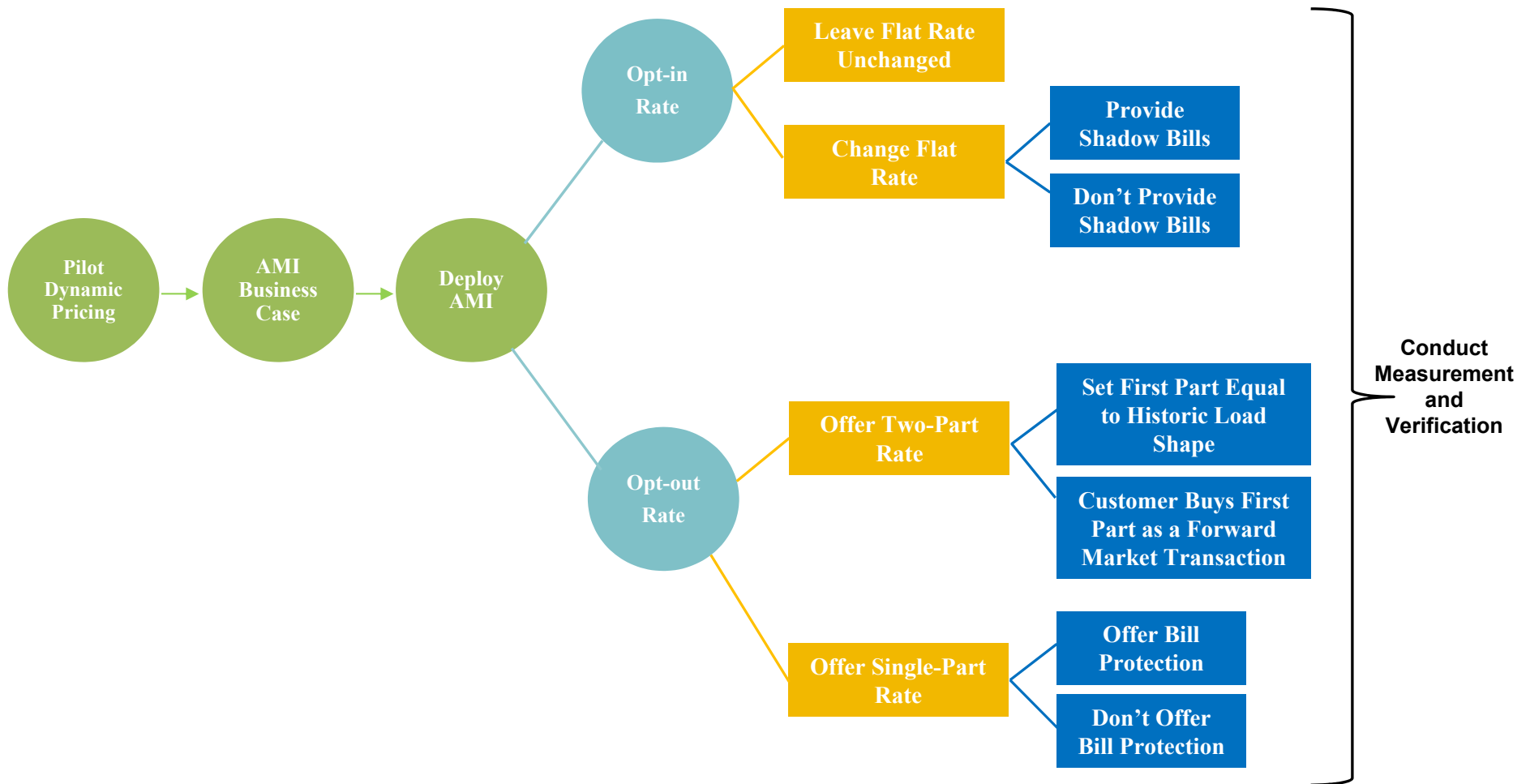
3. Nearly 80% of *low income* customers are paying more under flat rates



Since low income customers are price responsive, they will save even more with dynamic pricing



Architecting the future of dynamic pricing



Understand
Customer
Preferences

Segment the
Market

Create
Segment-
Specific
Messages

Get the Word
Out

Educate and
Answer
Questions

Source documents

(Dynamic pricing bibliography available on request)

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Biography – Ahmad Faruqui



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Ahmad Faruqui is a principal with *The Brattle Group* who specializes in the analysis, design and evaluation of smart grid strategies involving the consumer. He has consulted with more than 50 utilities and transmission system operators around the globe and testified or appeared before a dozen state and provincial commissions and legislative bodies in the United States and Canada. He has also advised the Alberta Utilities Commission, the Edison Electric Institute, the Electric Power Research Institute, the Federal Energy Regulatory Commission, the Institute for Electric Efficiency, the Ontario Energy Board, the Saudi Electricity and Co-Generation Regulatory Authority, and the World Bank. His work has been cited in publications such as *The Economist*, *The New York Times*, and *USA Today* and he has appeared on Fox News and National Public Radio. The author, co-author or editor of four books and more than 150 articles, papers and reports on efficient energy use, he holds a Ph.D. in economics and an M.A. in agricultural economics from The University of California at Davis, where he was a Regents Fellow, and B.A. and M.A. degrees in economics from The University of Karachi with the highest honors.

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