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# *The Brattle Group*

## THE FUTURE OF DYNAMIC PRICING IN THE US

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NYISO SYMPOSIUM

Albany, New York

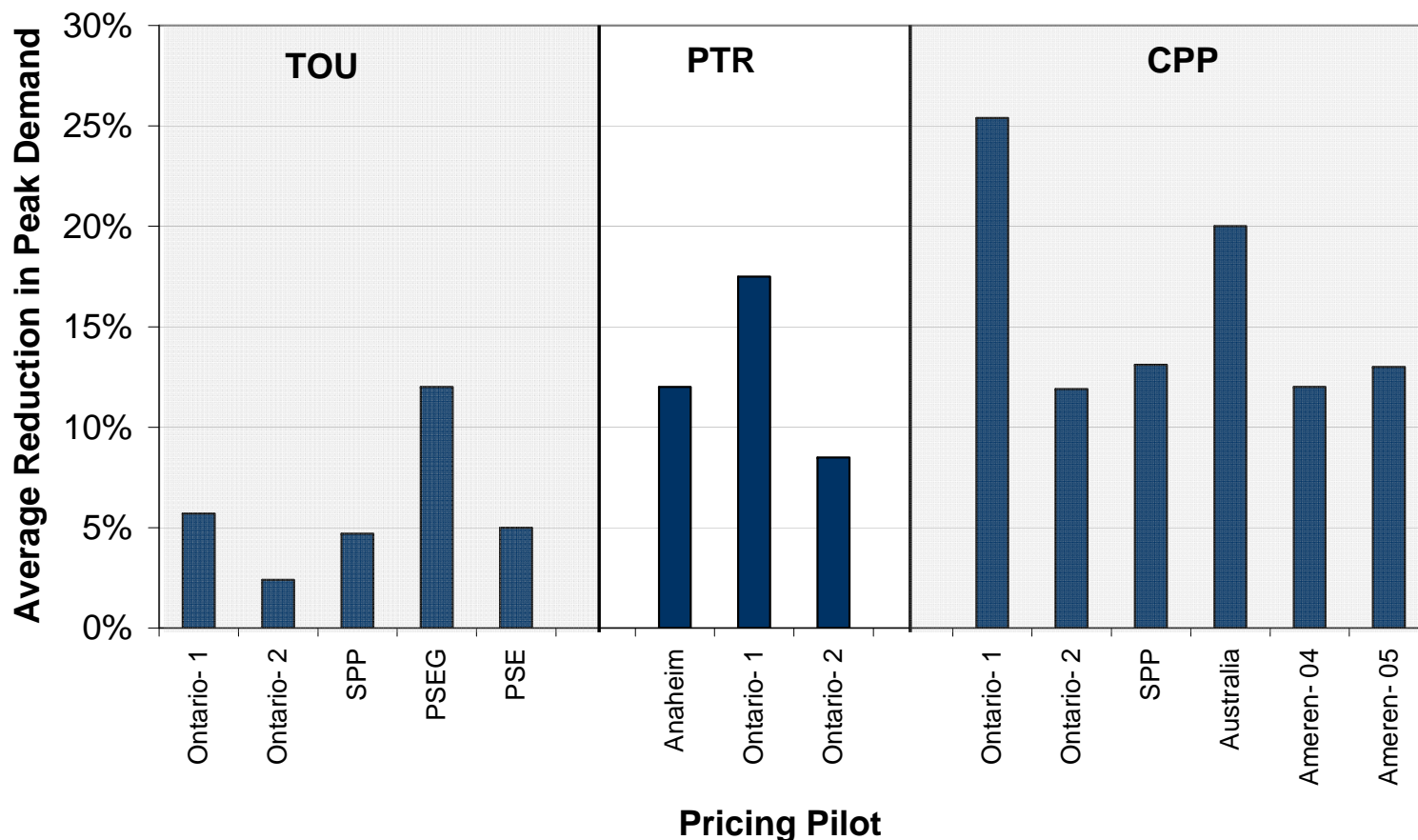
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# “The best way to predict the future is to create it” – Peter Drucker

1. What is the likely impact of dynamic pricing on peak demand?
2. What is the value of this demand response (DR)?
3. How much does customer price responsiveness vary by customer and region?
4. How can we make dynamic pricing more attractive to customers?
5. What is the best way forward?

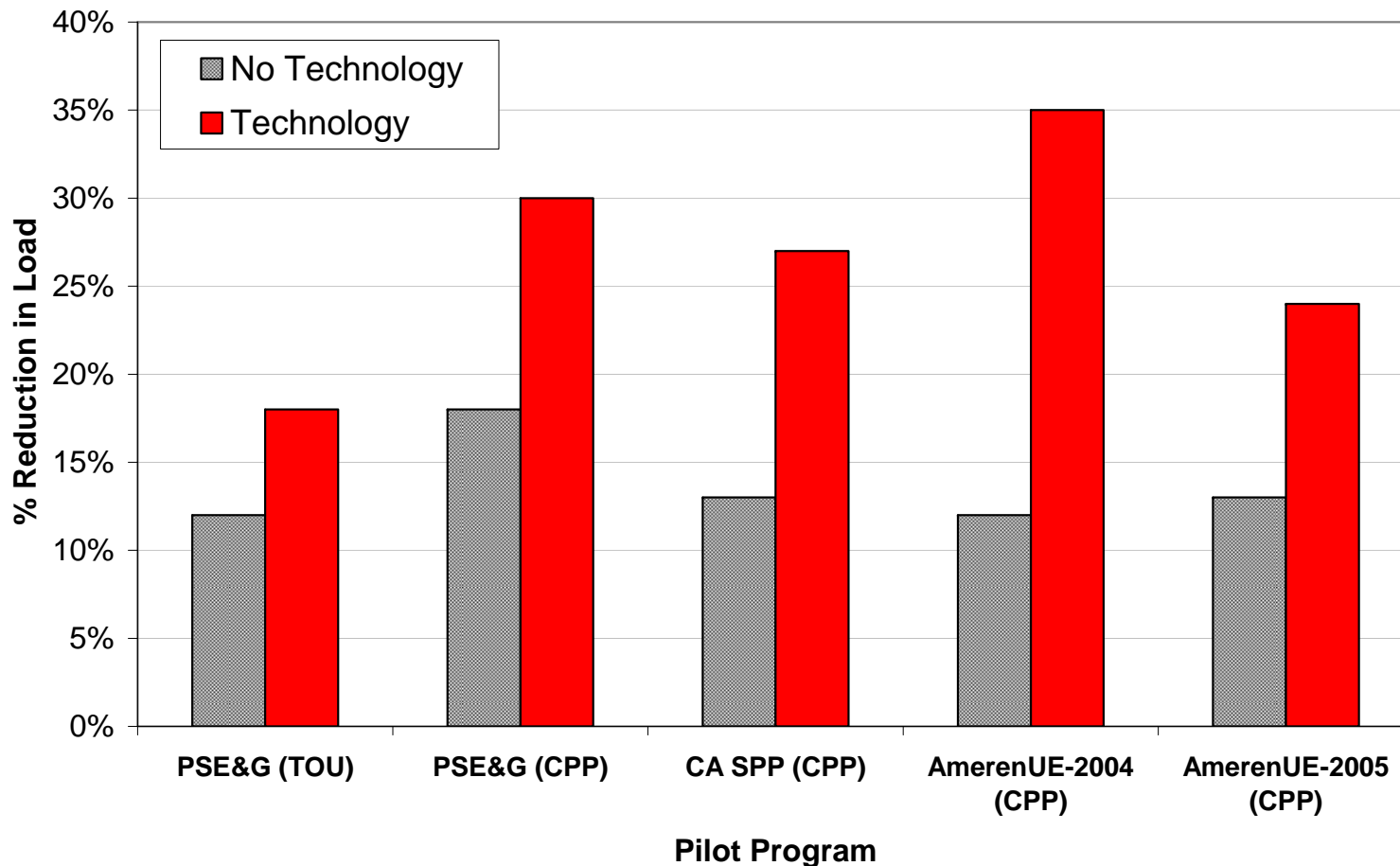
# A1. Customers respond to dynamic pricing

## Non-Technology Enabled Impacts of Pricing Pilots

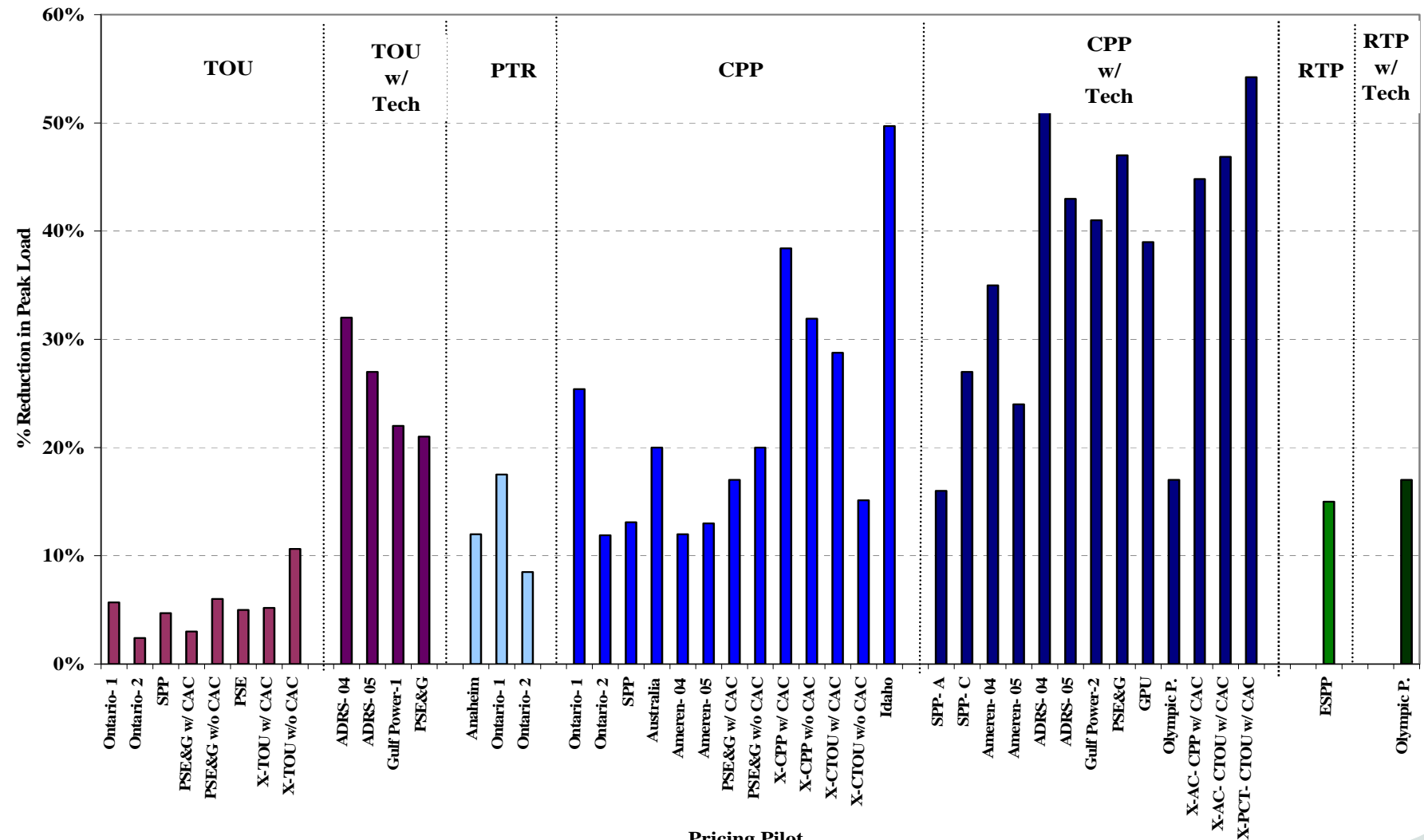


# Enabling technologies facilitate even greater demand response

## Role of Technology on Pilot Program Impacts



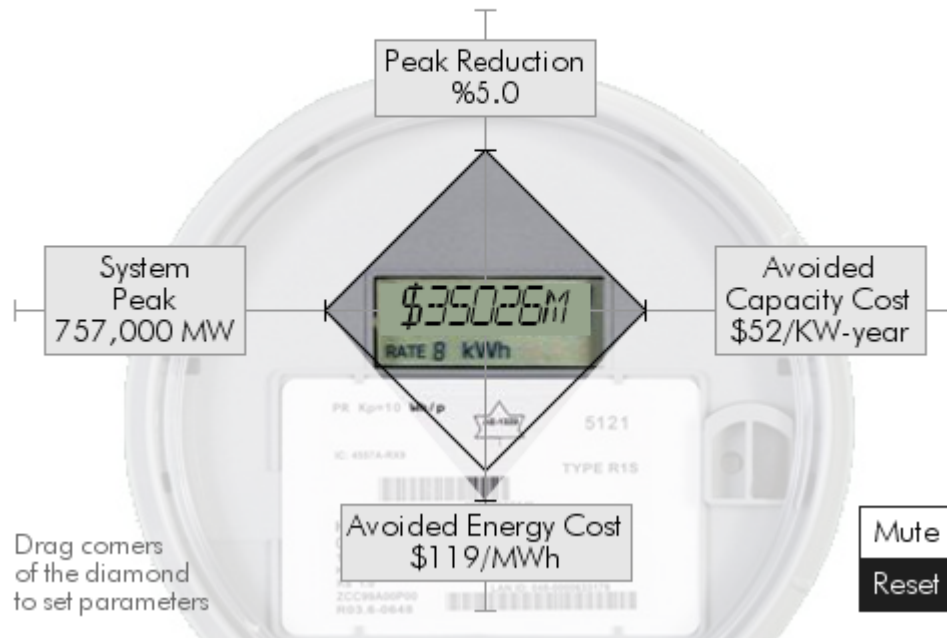
# The Manhattan skyline



Pricing Pilot

# A2. Even at five percent, demand response is worth \$35 billion

## THE DR DIAMOND

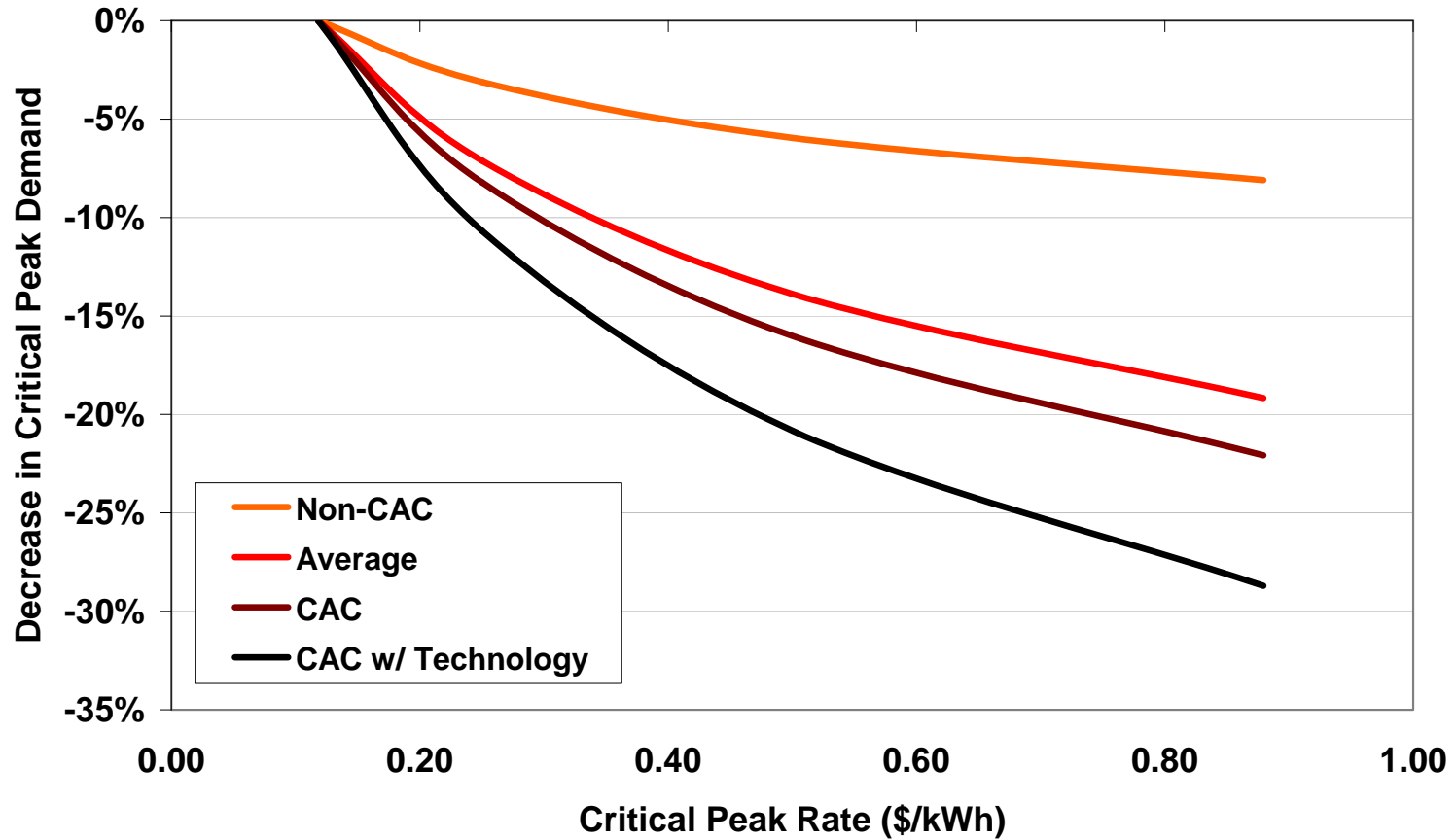


# The benefits might be even higher

- If capacity prices double, the benefits rise to \$66.2 billion
- Even higher benefits would accrue if dynamic pricing leads to a 10% or 15% drop in peak demand

# A3. Customer response varies by end-use and enabling technologies

Peak Demand Reduction by Customer Type

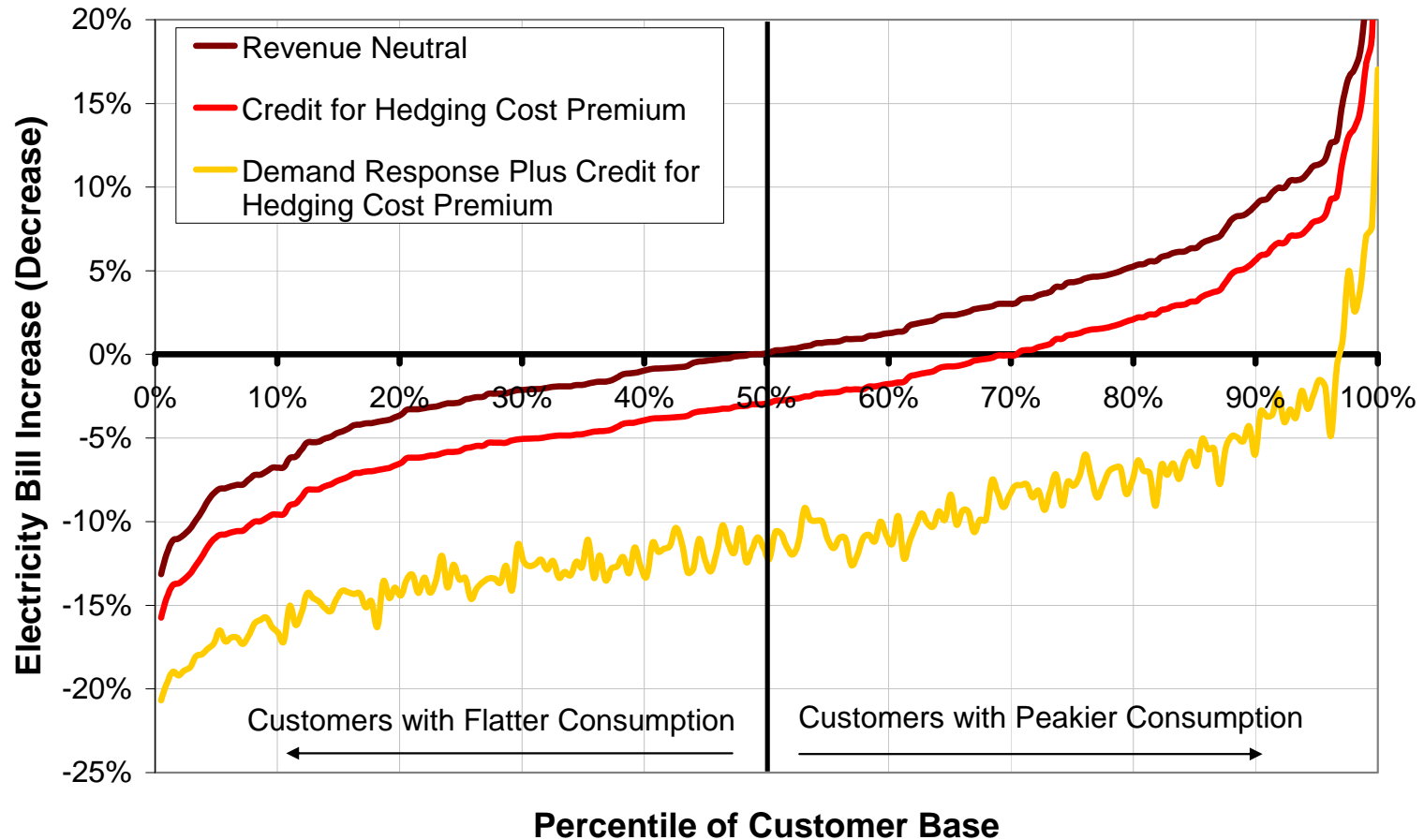


## A4. The insurance premium ranges from 3 to 13 percent

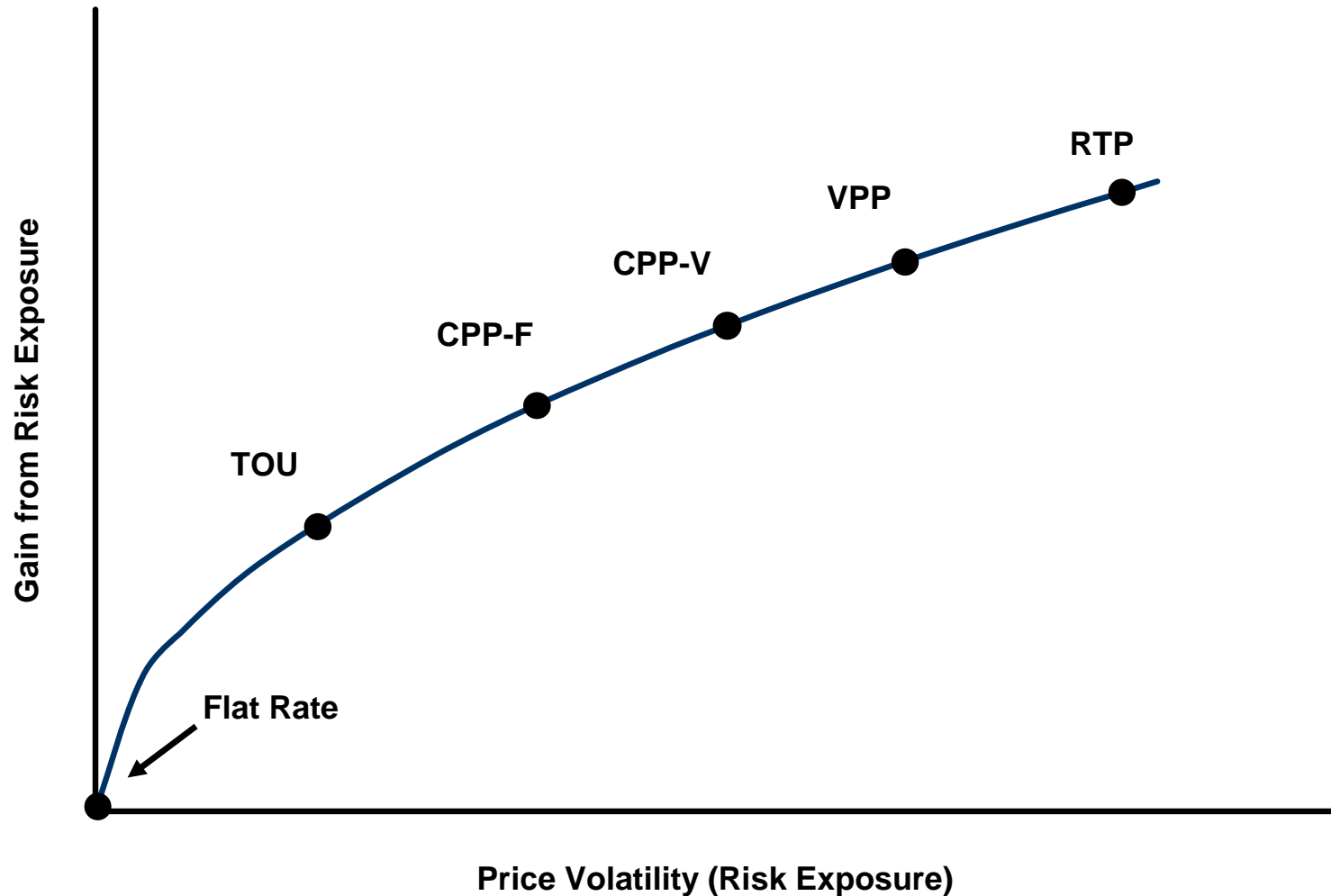
- Illinois used a value of 10 percent in its RTP pilot for residential customers
- Monte Carlo simulations with a standard financial equation suggest a mean value of 11 percent
- A very conservative estimate is 3 percent

# Even applying a 3 percent credit vastly expands the appeal of dynamic pricing

## Distribution of Bill Impacts



# A5. Offer customers a menu of dynamic pricing options



# References

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# Biographical information

Ahmad Faruqui is a principal with *The Brattle Group*. He is currently leading a state-by-state assessment of the potential for demand response for the Federal Energy Regulatory Commission. Last year, he performed a national assessment of the potential for energy efficiency for the Electric Power Research Institute and wrote a whitepaper on quantifying the benefits of dynamic pricing for the Edison Electric Institute.

Dr. Faruqui has worked on fostering economic demand response for a variety of ISOs/RTOs and on load management standards for the California Energy Commission. Since the year 2000, he has been assisting utilities and commissions assess the economics of dynamic pricing, demand response and advanced metering. This has often involved the design and evaluation of innovative pilot programs.

Dr. Faruqui's early work on time-of-use pricing is cited in Bonbright's canon. The author of several books and more than a hundred papers, he holds a doctoral degree in economics from the University of California at Davis. He can be reached via email at [ahmad.faruqui@brattle.com](mailto:ahmad.faruqui@brattle.com) or by phone at (925) 408-0149.