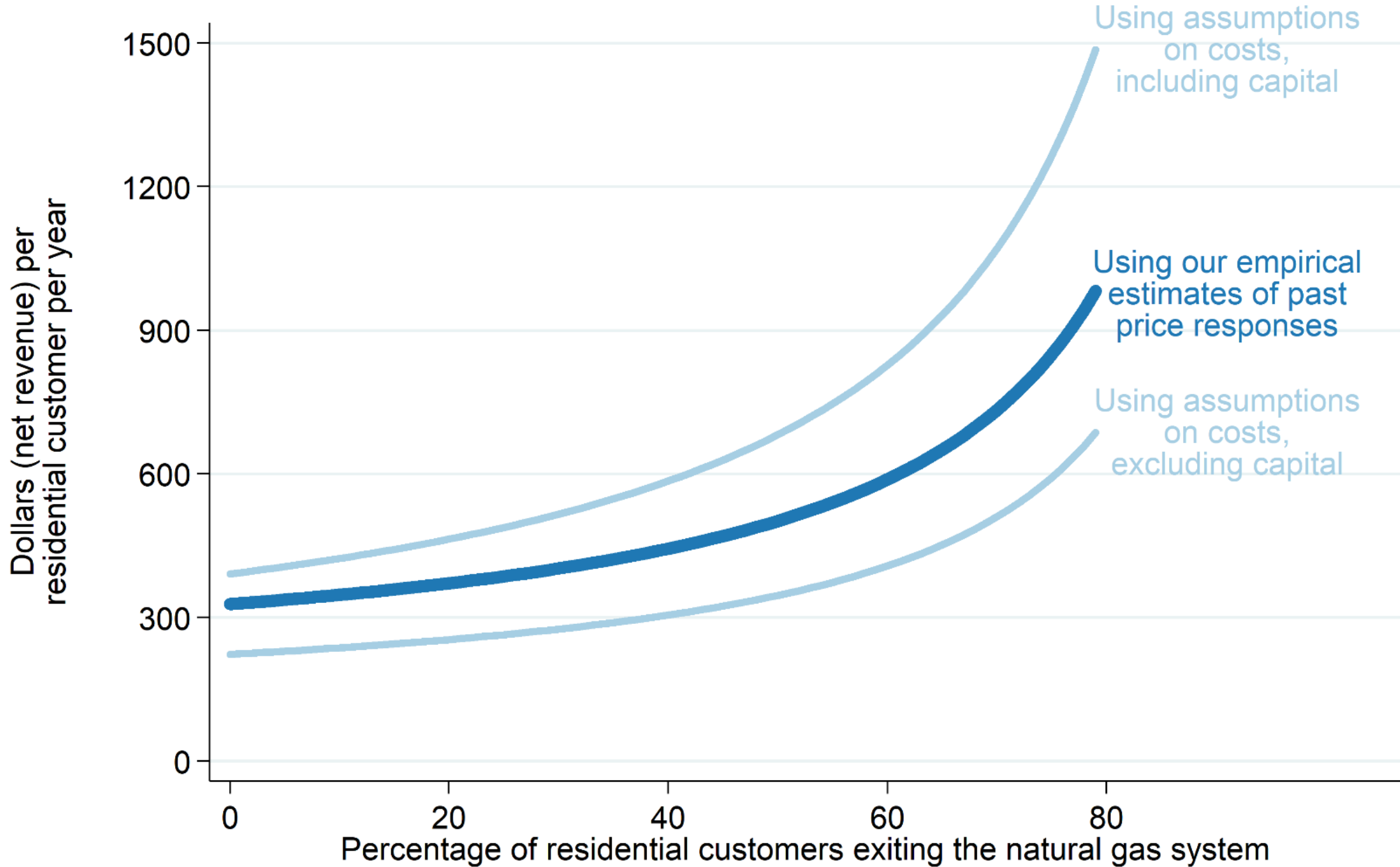


In our research:

- We study the recent (20 years) experience of over 1,000 natural gas utilities in the US
- Shrinking customer bases:
 - Surbanization, migration
- When a customer leaves:
 - Pipeline miles don't go away!
 - But fewer customers to pay for fixed costs



Category	Examples	Average \$ per customer, annually	Assumed portion leaving with customer
Gas cost	Cost of purchasing natural gas	\$312	1.0
Capital-related expenditures:			
Depreciation	Annual write-down of past capital expenditures	\$63	0.0
Return on net utility plant	Return for investors on past capital expenditures	\$105	0.0
Operations-related expenditures:			
Administrative	Admin salaries, outside services, pensions, injuries, customer assistance, advertising	\$85	0.5
Distribution O & M	Maintenance of distribution mains, service lines, and meters	\$66	0.1
Accounts	Meter reading, customer records, uncollectibles	\$25	0.9
Taxes	Sales, income, property, etc.	\$47	0.6

The challenges:

- Decarbonization
- Not leaving low-income customers behind
- Serving remaining gas customers during the transition
- Protecting safety and preventing methane leaks

May need to combine policies:

- Subsidizing low-income electrification
- Accelerated depreciation
- Geographically targeted electrification
- Exit fees
- Recover fixed gas costs on electric bills
- Recover via the general tax base
- Shareholder returns fall