Rising Gas Rates

The Need for Consumer-Focused Leadership in Light of a Looming Death Spiral

NASUCA

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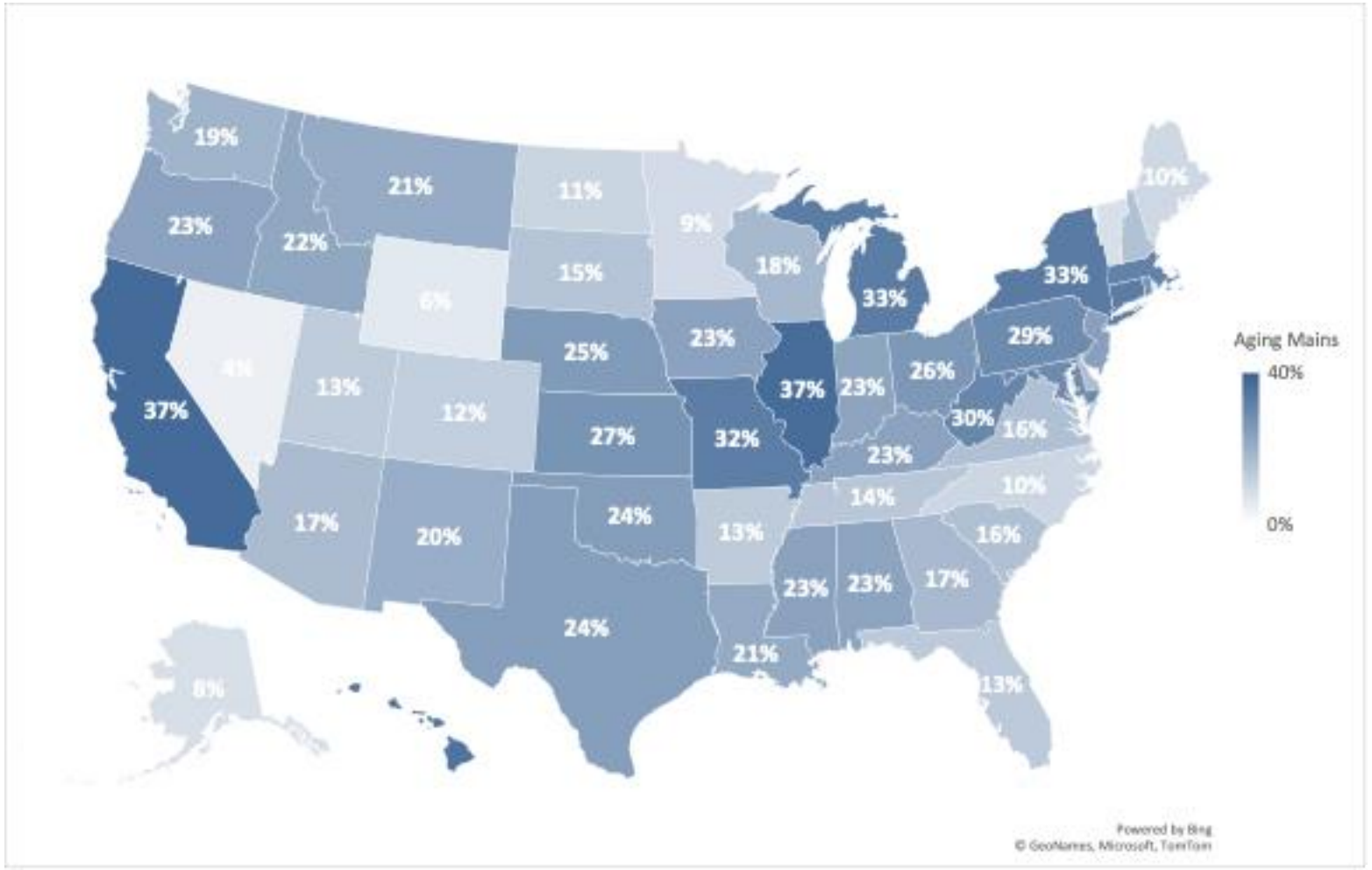
Summary

- The first generation of gas utility assets are getting old
- Replacing them costs a lot more than green-field expansion
- Replacement will drive gas bills up
- Electric alternatives are available at competitive upfront and operating cost
- Gas customer electrification, whether full or partial, will drive gas rates up further
- Gas utilities will have a hard time staying both safe and financially viable while they are competing with electricity
- Gas customers without the means or authority to electrify face the greatest risk

Aging assets

Aging assets across the country

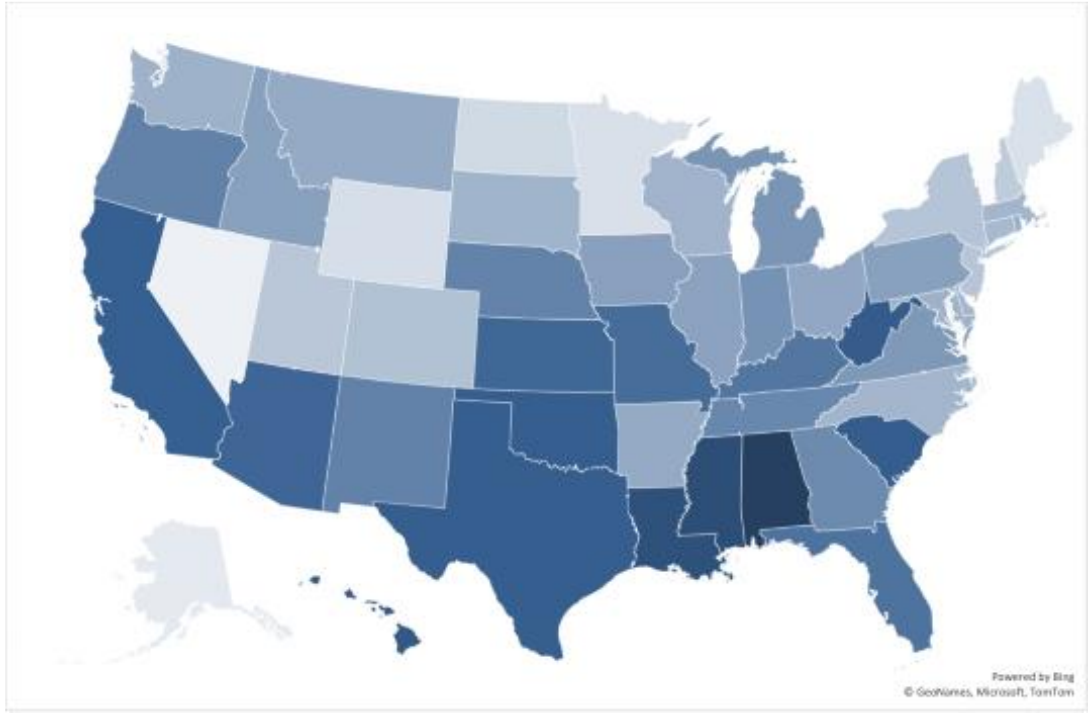
- Mains typically have a depreciation lifetime of 50-70 years
- There are 323,000 miles of mains built before 1970 in the U.S. (24% of all mains)
- By 2030, these mains will be 60+ years old
- 142,000 miles from before 1960 will be more than 70 years old, if not replaced



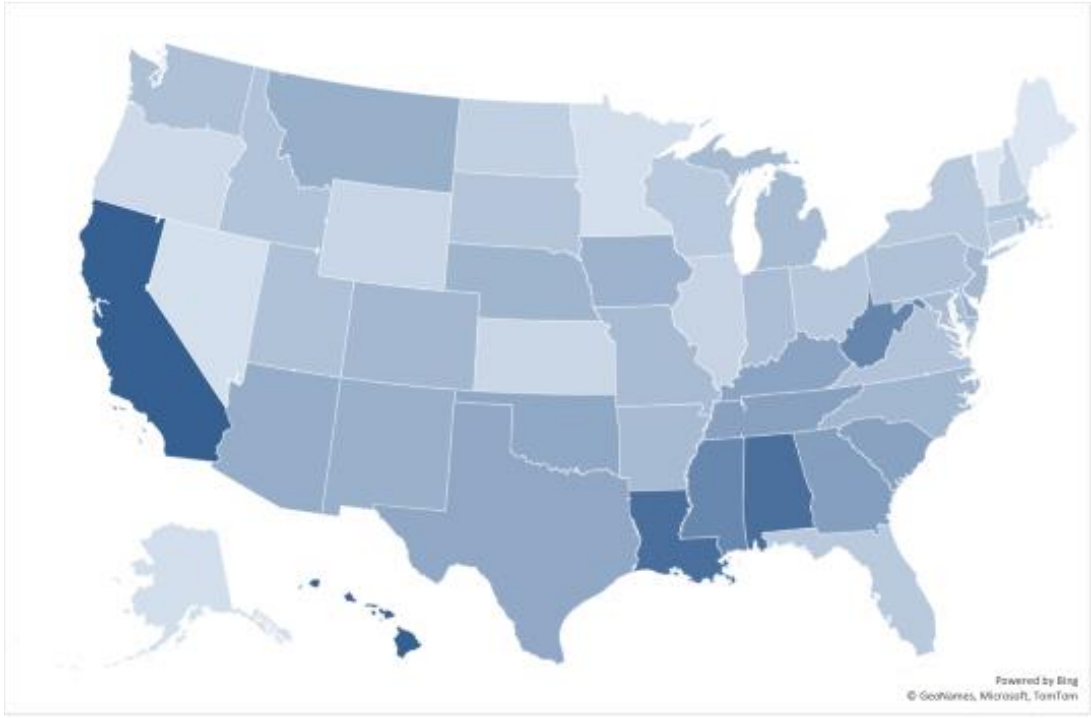
Source: PHMSA, Synapse analysis

Aging assets across the country

Aging mains per unit of gas sales



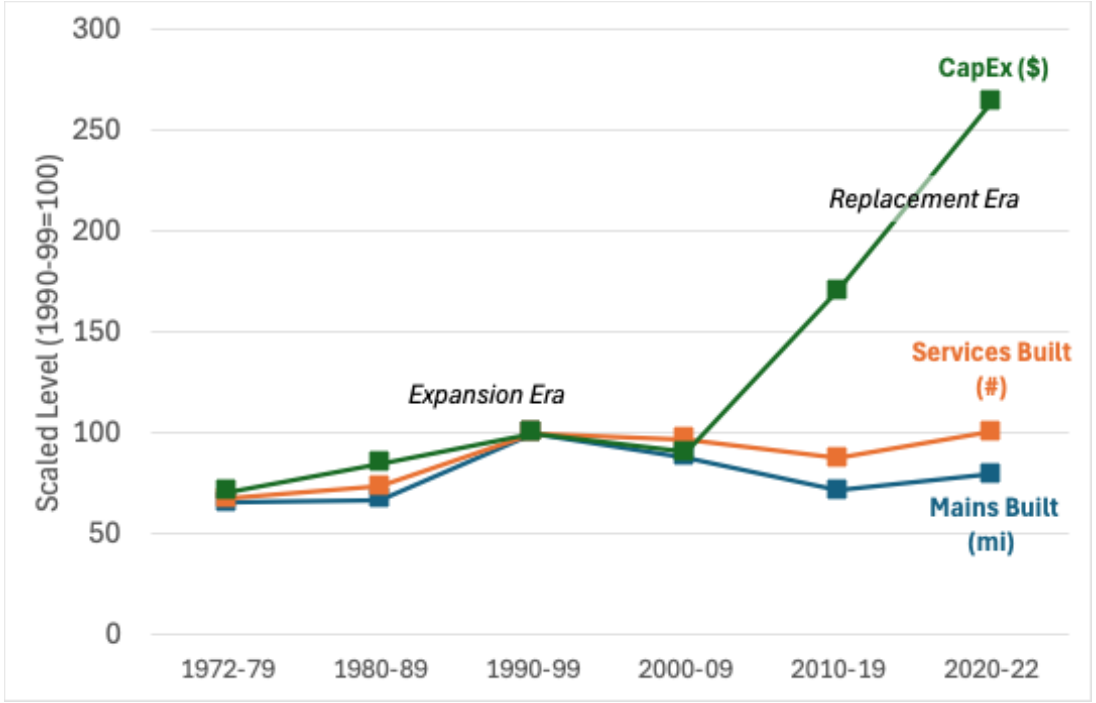
Aging services per unit of gas sales



Source: PHMSA, EIA, Synapse analysis

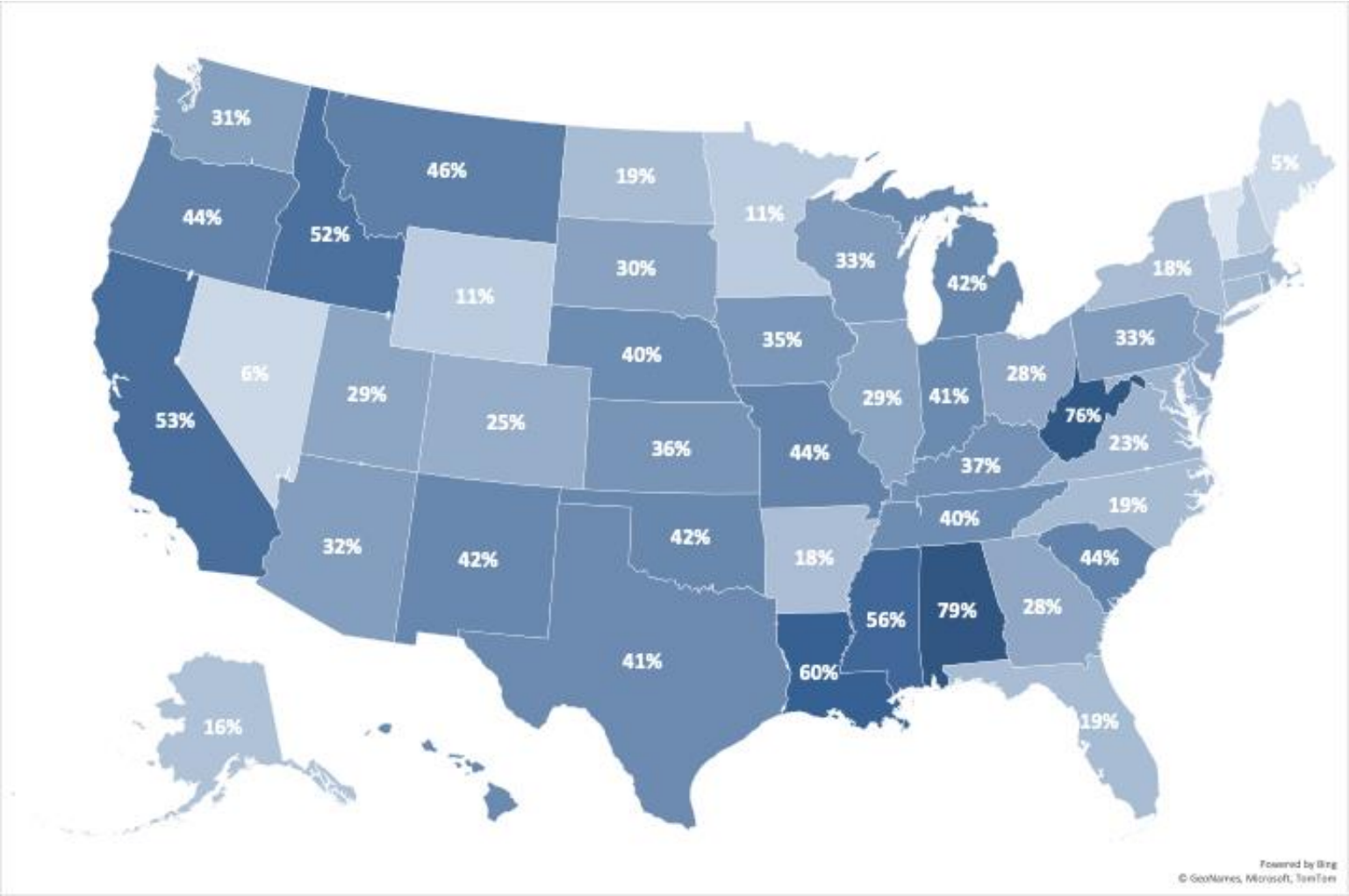
Gas distribution CapEx has skyrocketed

- 2010 is a pivot point
  - San Bruno disaster and the PHMSA Call to Action
  - Fracking lowered commodity prices
- Before 2010….
  - Investments were primarily for green-field or in-fill growth, and gas utility per-unit costs were pretty flat in real terms
- After 2010…
  - Investments increasingly in replacements of aging and leak-prone materials
  - Per-unit costs have skyrocketed



Source: American Gas Association, PHMSA, Synapse analysis

% Gas Bill Increase from Replacing Pre-1970 Assets



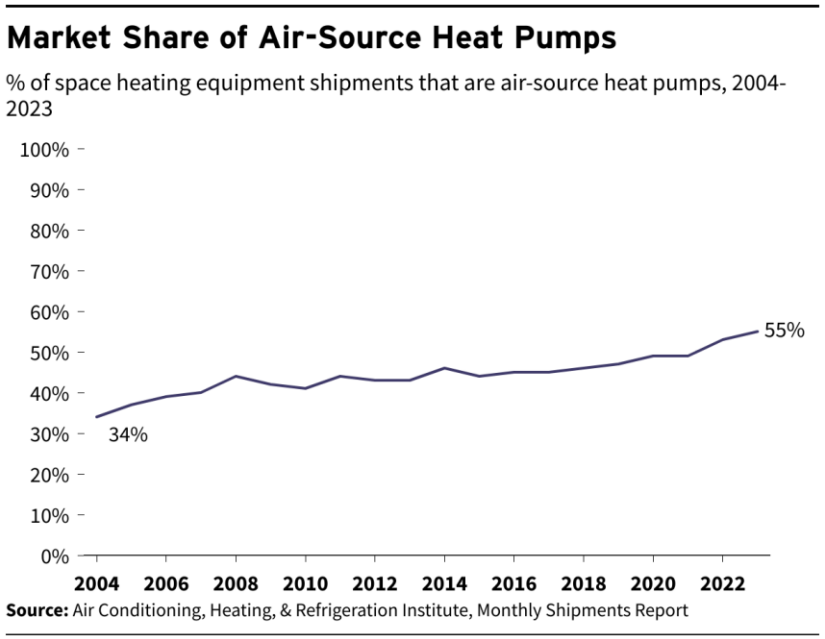
Assumes:

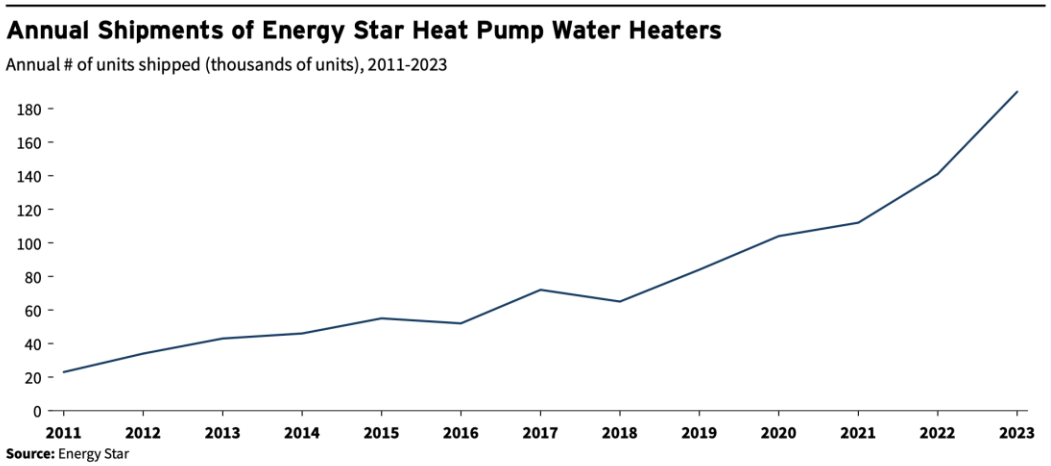
- *No change* in gas consumption or number of customers
- $1.2 million/mile main replacement costs and $10,000/service, adjusted for state construction costs

Source: PHMSA, EIA, Synapse analysis

Competition

Efficient Electric Competitors Available and Growing





Jessica Petrino Ball, editorial director at New York City-based online and expanding East Coast retailer AjMadison reported that induction accounted for 18% of all cooking sales last year, and has been growing in double digits the past three years, outpacing non-induction competitors.

Devon Coleman, head appliance merchant at Southern California chain Pirch, reported a 10% conversion from gas to induction ranges in recent years.

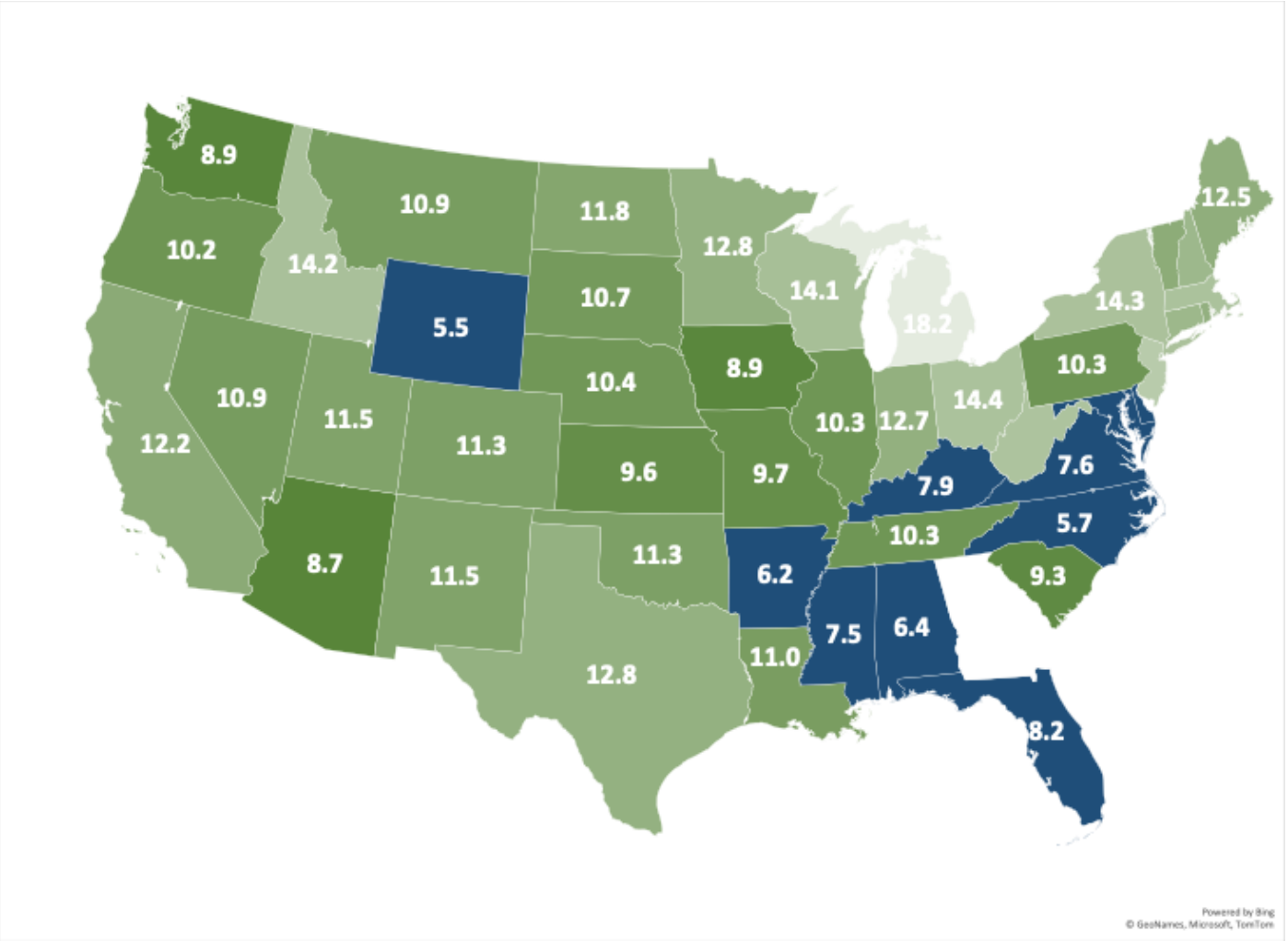
-- Forbes, March 2024

Electric dryers dominate the category with an 80 percent market share, according to TraQline, a market research company that tracks retail appliance sales.

-- Consumer Reports, April 2024

Breakeven Heat Pump Performance

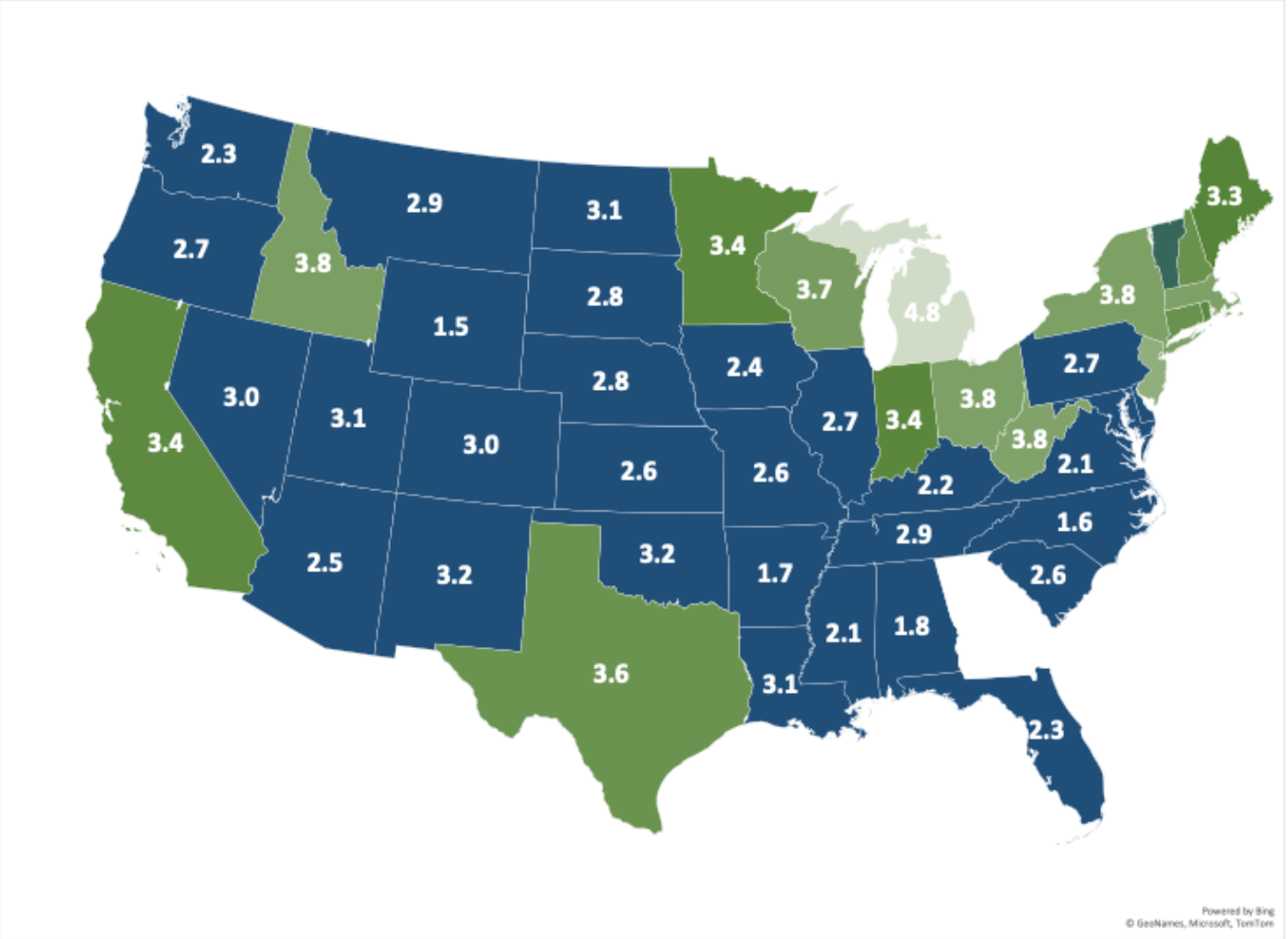
- Map shows minimum HSPF for an electric HP to be cheaper to operate than Energy Star gas furnace (on average)
- Many ASHPs have HSPF over 8.5
- HSPF 8.5 heat pumps are lower cost to operate in at least 10 states



Thanks to Mohit Chhabra @ NRDC for electric and gas marginal rate data

Breakeven HPWH performance vs. Energy Star Gas WH

- Map shows minimum UEF for an electric HPWH to be cheaper to operate than Energy Star gas storage WH (on average)
- Many HPWHs have UEFs over 3.3
- UEF 3.3 HPWHs are lower cost to operate in at least 31 states

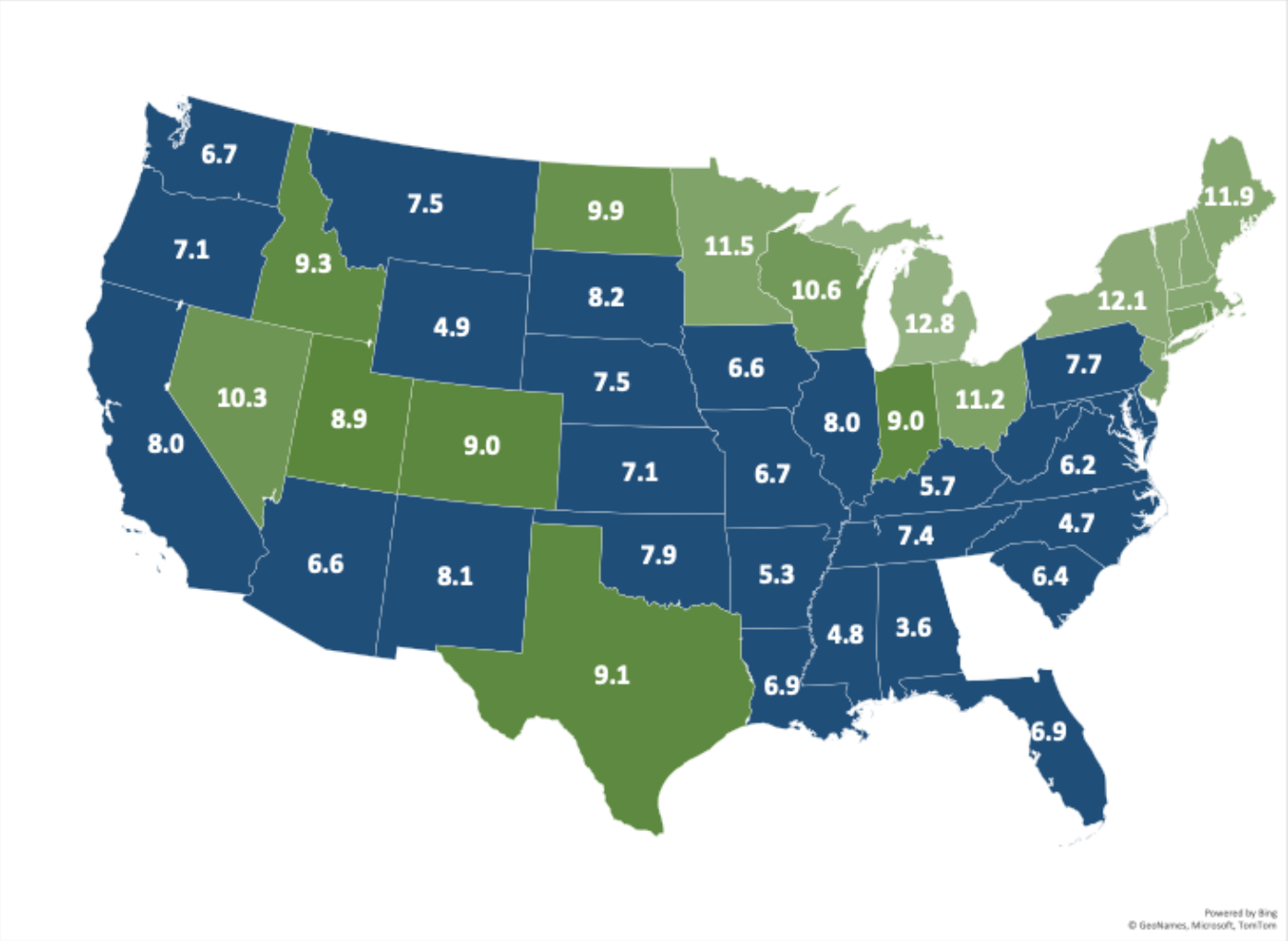


Thanks to Mohit Chhabra @ NRDC for electric and gas marginal rate data

Threats Combine

Breakeven HP Performance vs. Energy Star Gas Furnace

- Economics of electrification noticeably improve once costs of replacing pre-1970 assets are included
- ASHPs have lower operating costs, on average, in 28 states (up from 10)



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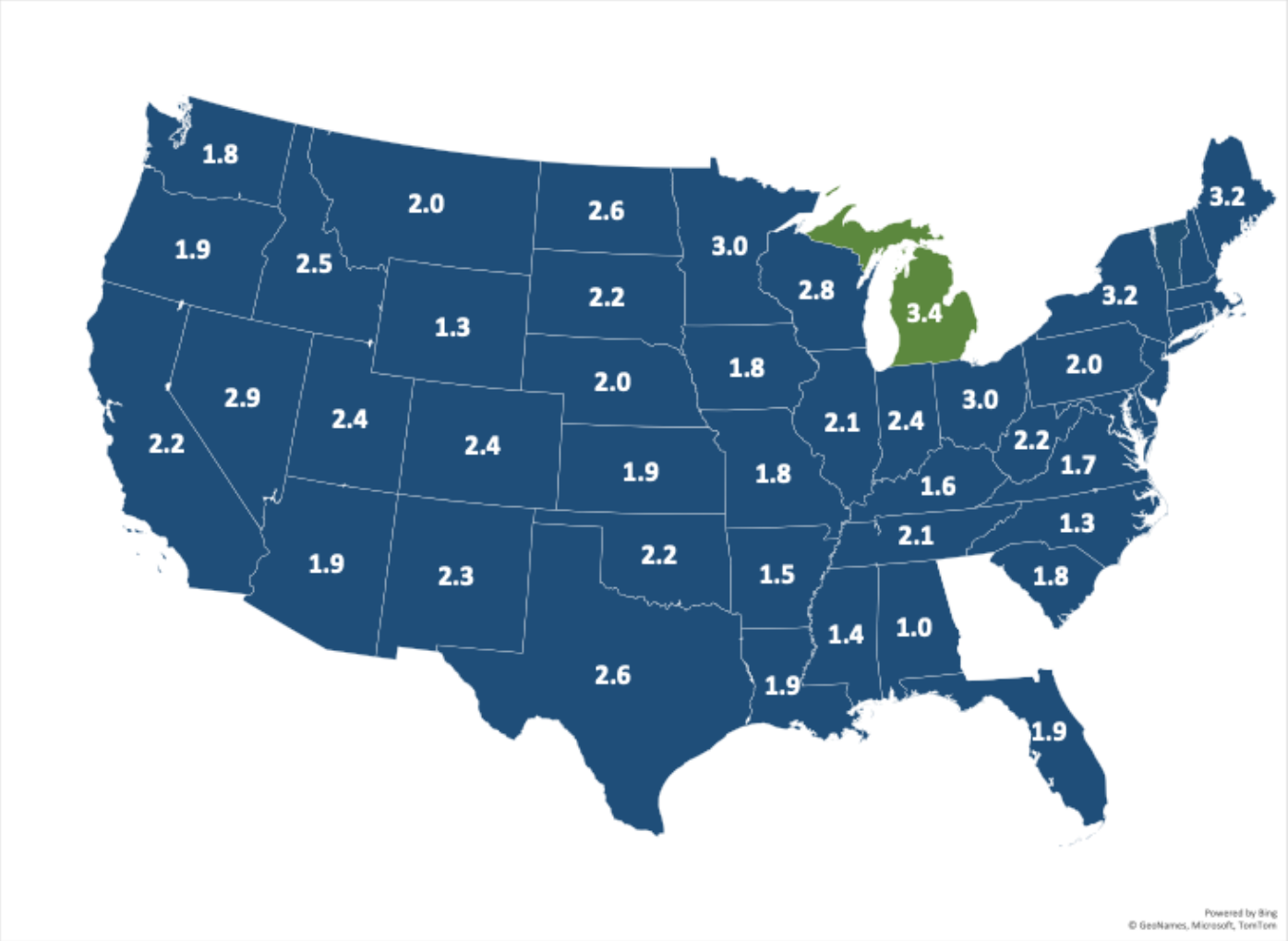
Breakeven HPWH performance vs. Energy Star Gas WH

- Economics of electrification noticeably improve once costs of replacing pre-1970 assets are included
- HPWHs have lower operating costs, on average, in at least 46 states (up from 31)



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Implications of those threats

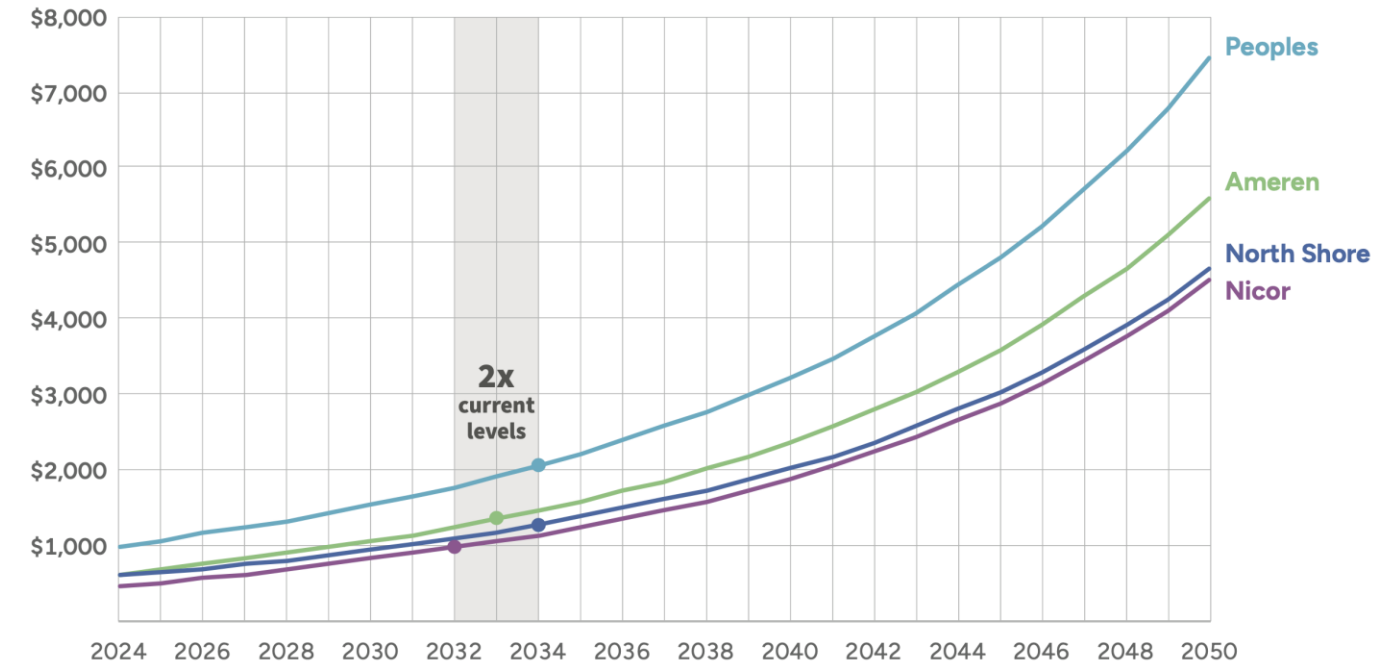
- Cost of service regulation for a utility with long-lived and wide-ranging assets is unstable in the event of sufficient departing load + close competition
  - Most of residential gas bill $s pay for the assets, rather than the gas commodity
- **Risks**:
  - **Financial:** Potential cost of stranded assets to utility investors and/or ratepayers/taxpayers
  - **Safety**: Financial health of the gas utility impacts its ability to maintain the cash flow and workforce required to safely maintain and operate the system
  - **Equity**: Low-income customers and renters have less ability to adopt alternatives, so they are more likely to stay on gas—and bear an unfair portion of system costs

Example Gas Bill Impact

- Details of the challenge vary by location, usage, and utility costs
- Modeling commonly shows gas bills doubling over the next decade, then accelerating upward as customers depart
- Customers without the means to electrify could be left with crushing gas bills

Scenario 1: Business-as-usual CapEx with moderate customer decline

Figure 5.11: Annual revenue requirement per customer with BaU CapEx and moderate customer departure



Source: The Future of Gas in Illinois, BDC

Call to action

- Gas utilities are (generally) not proactively planning and adapting for this future
  - In fact, many are doubling down/accelerating infrastructure investment
- Consumers you represent and advocate for will benefit from a planned transition, relative to an unplanned one
- Help raise the prominence of these issues in your states
  - Rate cases (prudence review, capital investment planning, non-pipeline alternatives)
  - Accelerated pipeline replacement proceedings
  - “Future of heat” or “future of gas” proceedings
  - Public and elected official engagement

Questions? Discussion is welcome…

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