# Wildfire Risk and Affordability

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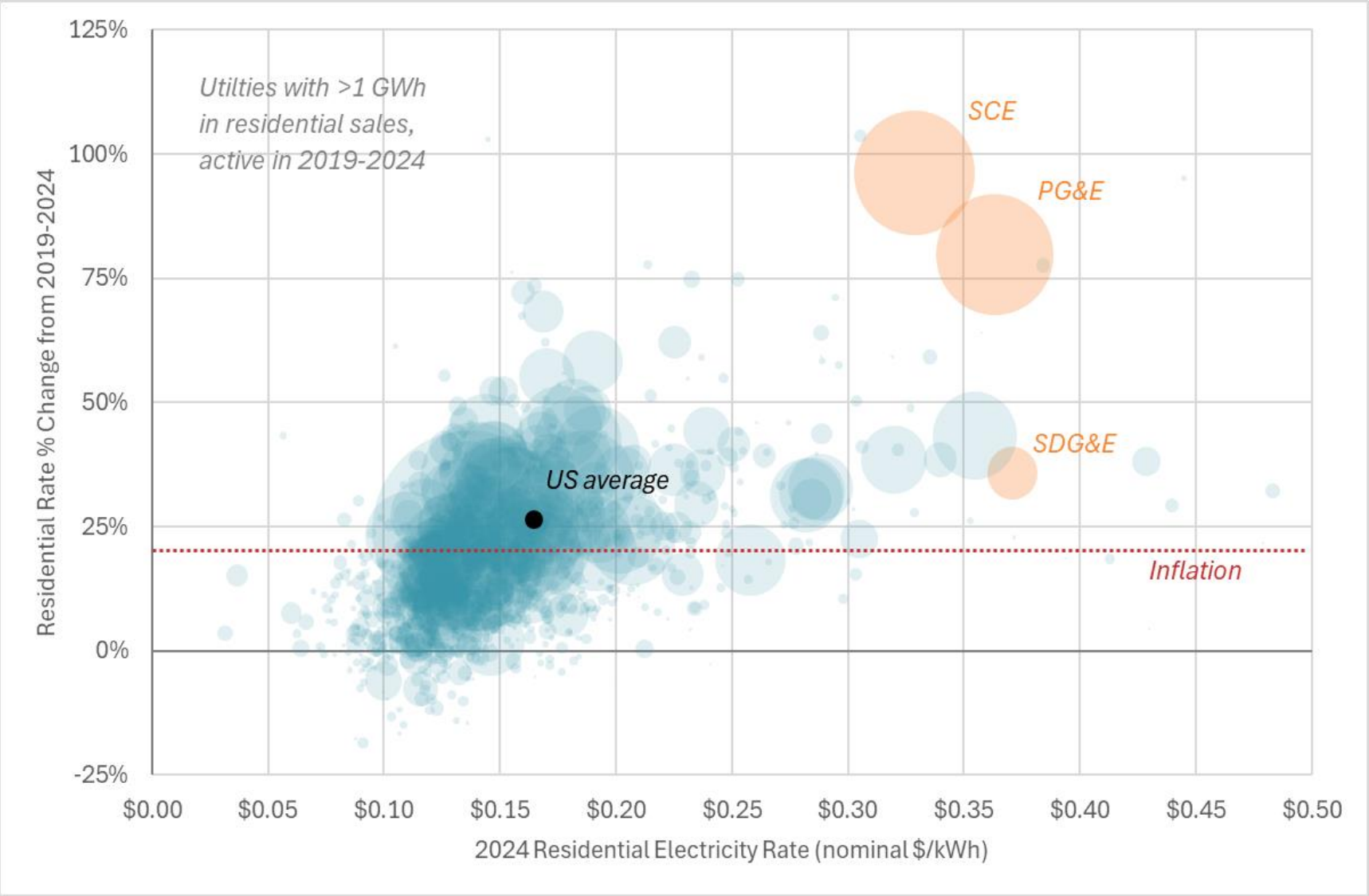
# Synapse Energy Economics

- Founded in 1996 by CEO Bruce Biewald
- Leader for public interest and government clients in providing rigorous analysis of the electric power and natural gas sectors
- Staff of 40+ includes experts in energy, economic, and environmental topics

# Wildfires and Affordability in California



# Overall Framework for Assessing Safety and Affordability

Three key elements:

1) Robust benefit-cost analysis (BCA) based on granular risk modeling. Inputs and outputs can be utilized to a) *prioritize investment* from highest to lowest risk areas/infrastructure, and b) *assess tradeoffs,* if any, between safety and affordability.
    - Important to establish a culture of improvement to continually work on these models and make them better.
2) Recognition that ratepayers have finite resources. The goal should be to achieve the maximum amount of risk reduction for each ratepayer dollar spent, ideally within an overall budget constraint that also considers other priorities and expenditures.
    - This can be done by evaluating risk and risk reduction context – US, state, utility, and evaluation of multiple alternatives
    - The examples to follow from Minnesota and California provide illustrations of this.
3) Equity issues should be considered and/or incorporated into the BCA. For example, vulnerable communities may not be adequately represented in a typical BCA.

# Putting Risk and Spending in Context

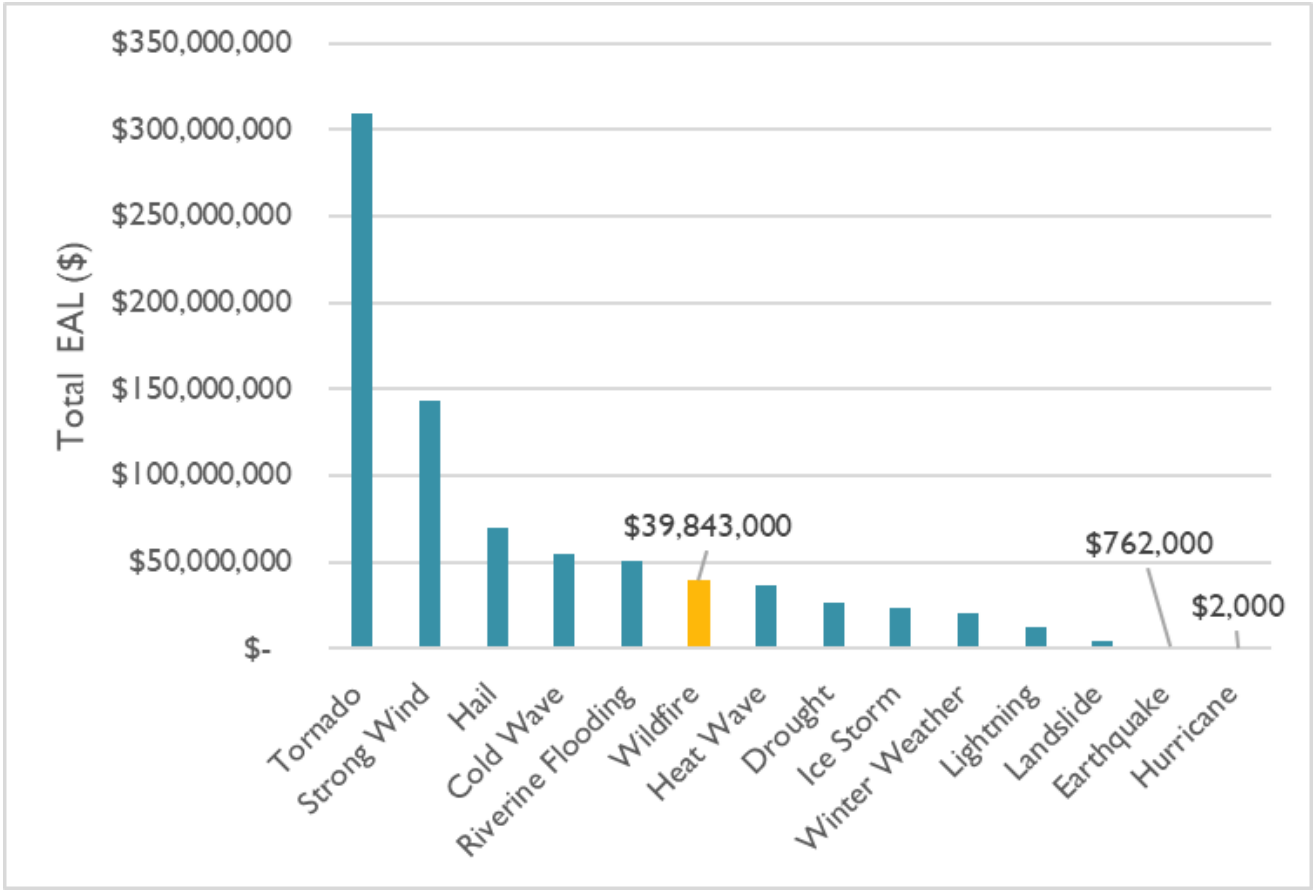
*MN and CA Examples*

# Wildfire risk in Minnesota compared to other risks

***Wildfire is not the top risk in Minnesota.***

- Ratepayers have finite resources to address a multitude of priorities.
- Risk data from FEMA indicates that wildfire is the sixth most pressing risk facing Minnesota.
- It likely that wildfire is not Xcel MN's top risk, either.

*Risk by Hazard in Minnesota (2022 $)*

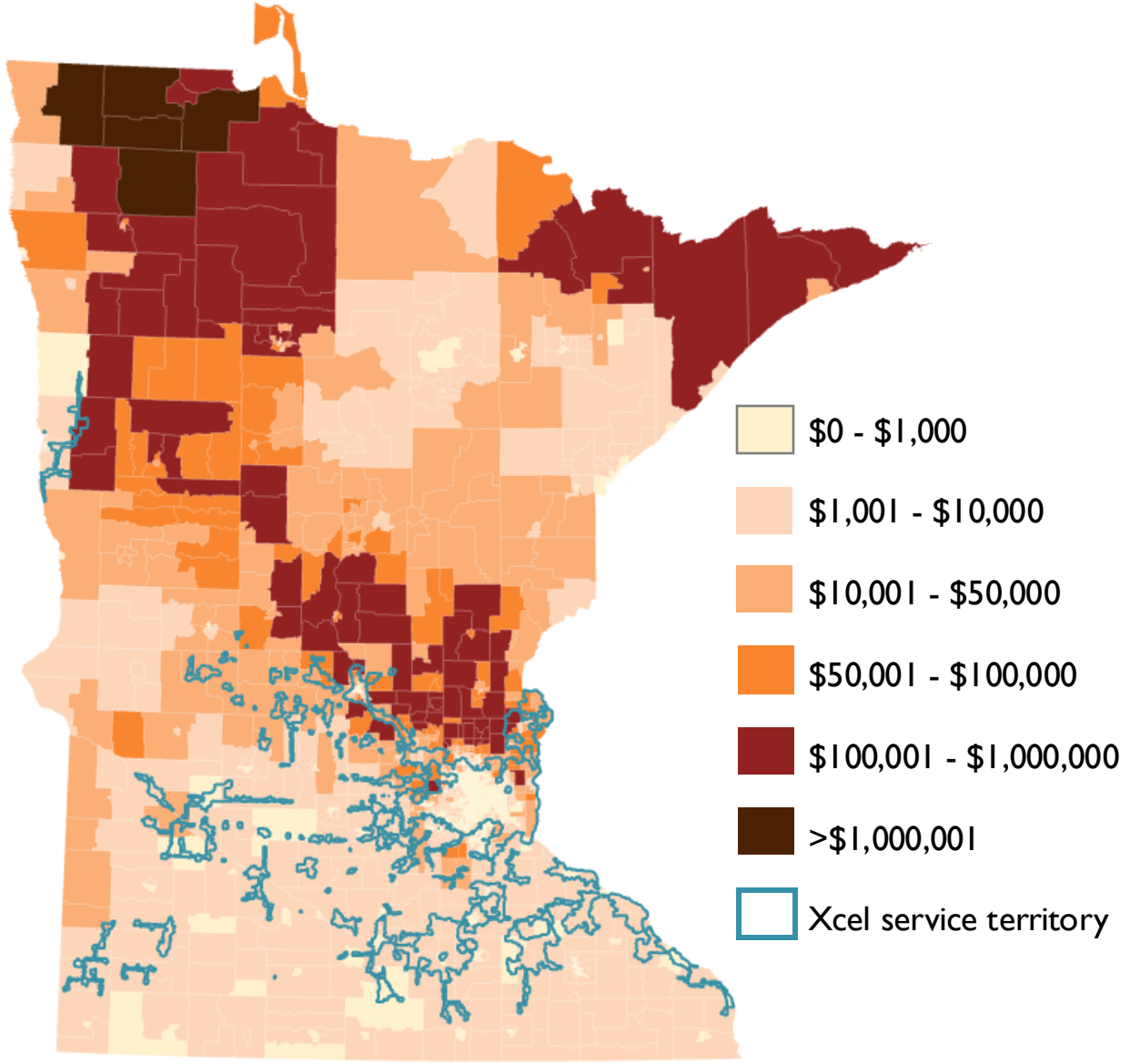



*Source: FEMA, 2025. Data Resources. Available at Data Resources | National Risk Index*

# Wildfire Risk in Minnesota and Xcel MN Territory

***State and societal risks should be addressed holistically***

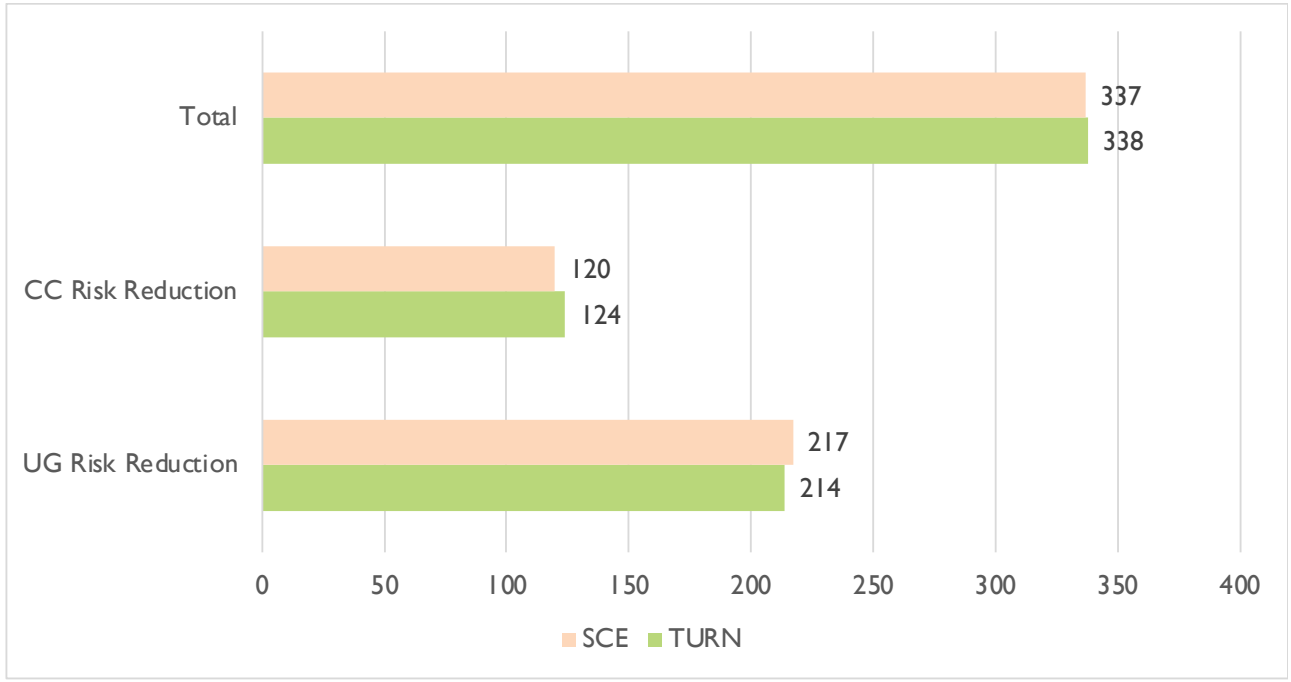
- Risk varies significantly across Minnesota.
- Other parts of the state contain most of the wildfire risk.



# Example: Southern California Edison (SCE) Synapse/TURN Proposal

- We proposed significantly less undergrounding than SCE (177 vs. 580 miles) but more miles of covered conductor (1,651 vs. 1,250).
- By focusing on only the highest risk circuits, we dramatically reduce risk.
- The risk reduction of these proposals is equal, and would save ratepayers **$2 billion**.

*Risk Reduction of Grid Hardening Proposals*




*Mileage and Costs of Grid Hardening ($ thousands)*

| | Undergrounding | | | | |
|---|---|---|---|---|---|
| | 2025 | 2026 | 2027 | 2028 | Total / Weighted Average |
| TURN Miles | 44 | 44 | 44 | 44 | 177 |
| SCE Miles | 60 | 150 | 200 | 170 | 580 |
| *Unit Cost* | *$ 5,083* | *$ 5,677* | *$ 5,717* | *$ 5,687* | *$ 5,632* |
| | | | | | |
| TURN Budget | $ 224,903 | $ 251,227 | $ 252,984 | $ 251,633 | $ 980,746 |
| SCE Budget | $ 304,954 | $ 851,620 | $ 1,143,432 | $ 966,727 | $ 3,266,733 |
| **TURN-SCE** | **$ (80,051)** | **$ (600,392)** | **$ (890,448)** | **$ (715,095)** | **$ (2,285,986)** |

| | Covered Conductor | | | | |
|---|---|---|---|---|---|
| | 2025 | 2026 | 2027 | 2028 | Total / Weighted Average |
| TURN Miles | 413 | 413 | 413 | 413 | 1,651 |
| SCE Miles | 850 | 300 | 50 | 50 | 1,250 |
| *Unit Cost* | *$ 763* | *$ 778* | *$ 805* | *$ 812* | *$ 770* |
| | | | | | |
| TURN Budget | $ 314,921 | $ 320,902 | $ 332,373 | $ 335,247 | $ 1,303,442 |
| SCE Budget | $ 648,666 | $ 233,289 | $ 40,271 | $ 40,620 | $ 962,845 |
| **TURN-SCE** | **$ (333,745)** | **$ 87,613** | **$ 292,101** | **$ 294,627** | **$ 340,597** |