Energy Wallet and Affordability

Geoffrey J. Blanford, Ph.D.
Principal Technical Executive, Energy Systems and Climate Analysis

National Academies Workshop, Washington, DC
February 25, 2026

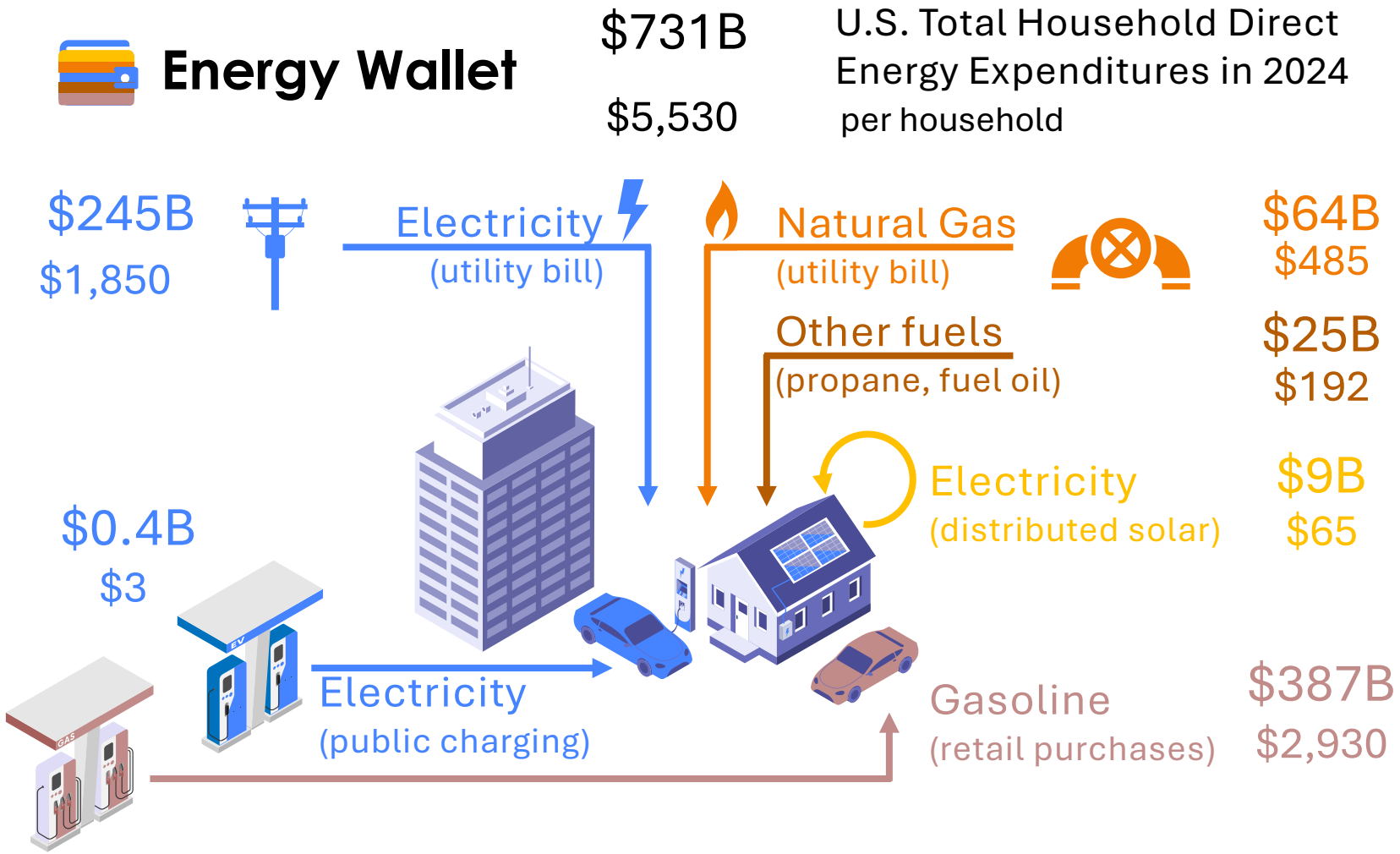
Energy Wallet: Motivation

- Direct household energy expenditures are a key metric for affordability, but only half the story: must be understood relative to income and other costs

- The **Energy Wallet** provides a broad perspective, integrating expenditures on utility bills, distributed energy resources, and other fuel purchases and showing historical trends and variation across state

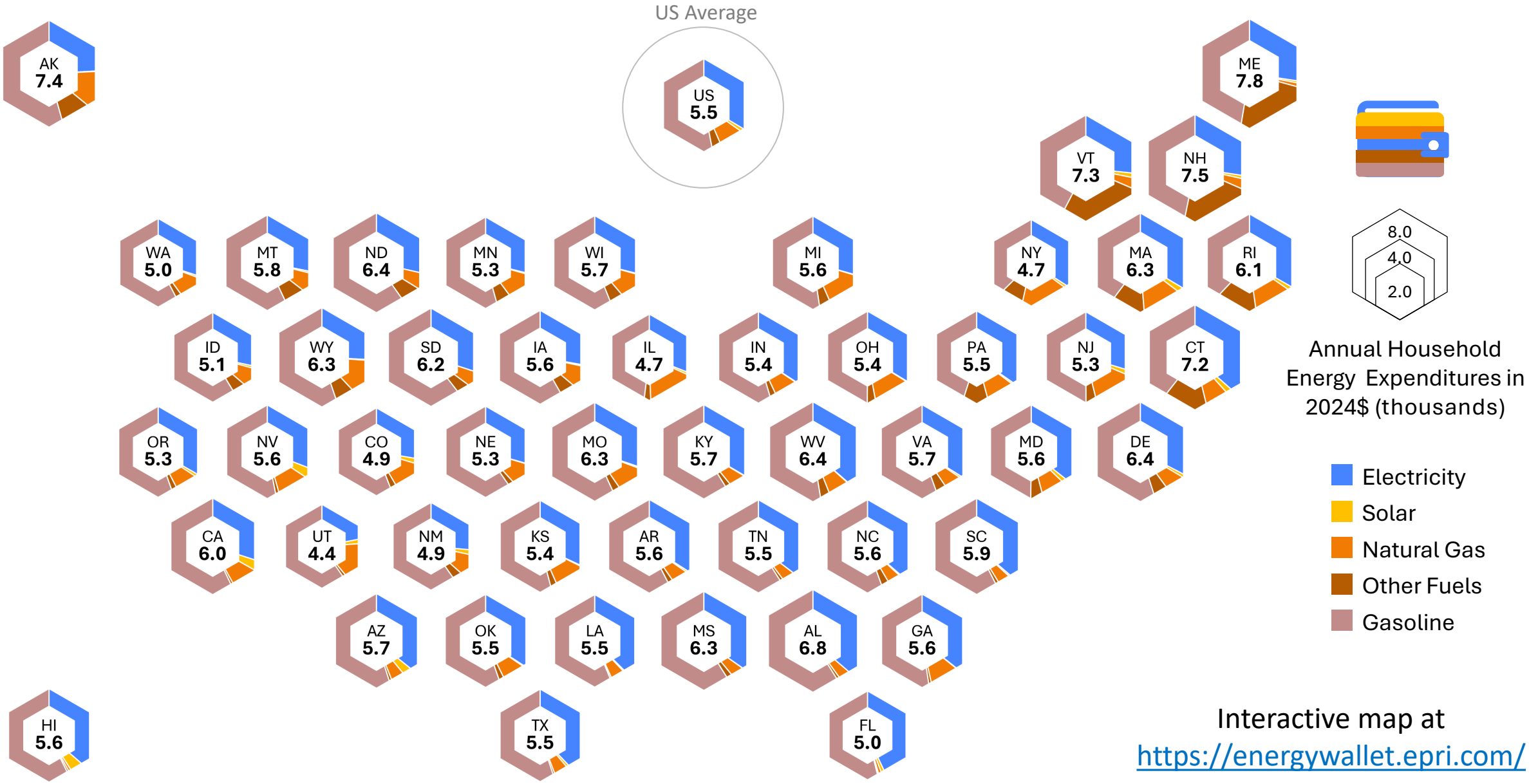
- Future technological and structural change, in particular electric vehicles, have the potential to reduce significantly average household energy expenditures, with high variance regionally and across household types

What are current direct household energy expenses?



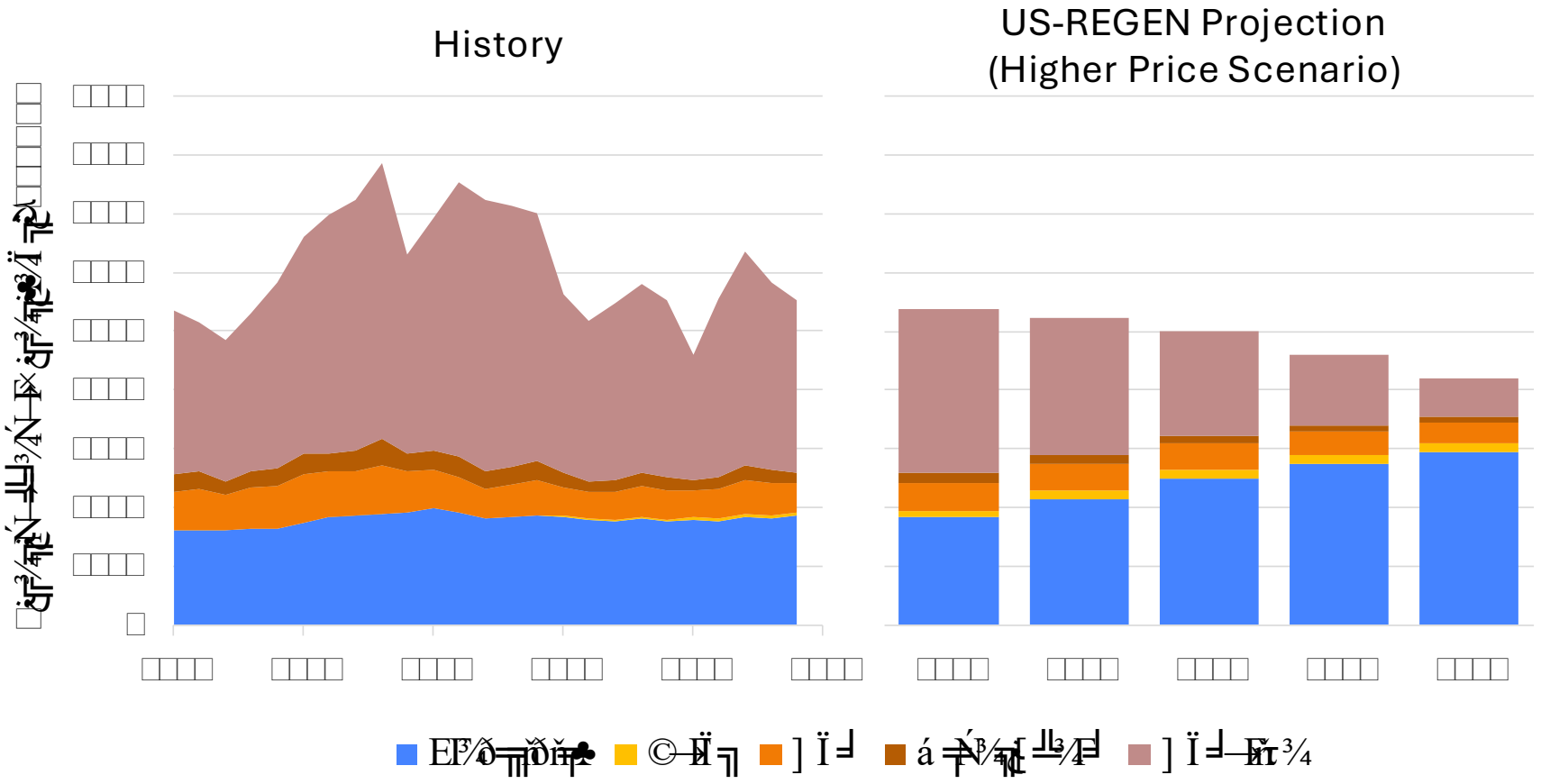
Primary data source: https://www.eia.gov/state/seds/

Watts in Your Wallet? State Spending Differences in 2024



Interactive map at
https://energywallet.epri.com/

How Could Energy Wallet Spending Change Over Time?



- Use EPRI's US-REGEN energy systems model to evaluate household energy consumption and expenditures in future
- Higher Price scenario phases out IRA subsidies and includes higher fuel prices
- Electrification of heating and personal vehicles is driven by economic adoption
  - Energy for EV per mile is ~1/3 for gasoline, which drives cost savings
  - 2035: Half new vehicle sales EVs

Household energy wallet projected to decline, despite increased electricity expenditure

Energy Wallet Key Takeaways

Energy Wallet Spending Could Decline

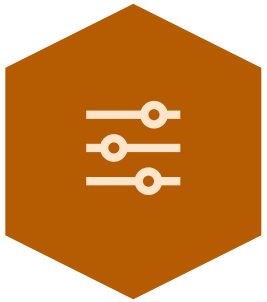
Technological change, especially electric vehicle adoption, has the potential to reduce real average household energy expenses 36-42% by 2050

State-Level Differences in Current Spending

Reflects differences in existing fuel mix and fuel prices, climate impacts (e.g., on heating, cooling, charging load), and structural differences in demand

Gasoline Is Largest Current Category

In 2024, U.S. average energy wallet was $5,530 per household, and gasoline accounted for $2,930



Energy Wallet Declines Vary by State

State-level average declines range from 10% to 50% by 2050 in real terms (36% national average)

Higher Electricity Demand Over Time

Deployment of electric vehicles and heat pumps increase electricity demand and spending, but these increases are more than offset by lower gasoline

Lower Energy Wallet Even with Higher Fuel Costs

Higher fuels costs (e.g., from LNG exports) and removal of IRA credits can still lead to lower household costs relative to today, especially with electrification and efficiency

TOGETHER…SHAPING THE FUTURE OF ENERGY®

www.epri.com