

Electricity Pricing Primer

Relevant For:

Federal and state policymakers; utility and energy regulators; large commercial and industrial customers including data centers

Policy Question

How can retail electricity tariff design be updated to support efficient decarbonization and fair cost recovery?

Key Evidence

New research from MIT finds that current U.S. electricity tariffs recover system costs—including energy supply, transmission, distribution, and policy-related costs—through a single volumetric electricity price.

A flat retail price ignores how the cost of serving electricity varies by hour, location, and system conditions. This can raise retail prices above the marginal cost of supplying electricity and weaken incentives to shift consumption for flexible loads such as EVs, heat pumps, and data centers.

Policy Implications:

Updating tariffs to reflect actual system costs can encourage load flexibility, improve grid utilization, and lower the overall cost of integrating renewable energy. Equity concerns can be addressed more directly through targeted, income-based support rather than distorting of marginal prices.

Policy Actions:

1. **Introduce time-varying electricity prices**, such as time-of-use or critical peak pricing, which can coexist with consumer protection.
2. **Implementing dynamic tariffs requires system upgrades**, including smart meters, data systems, customer education, and supplier incentives
3. **Recover residual costs through transparent mechanisms**, such as fixed or income-adjusted charges, rather than hiding them in volumetric rates.
4. **Pair tariff reform with targeted affordability measures**, including income-based bill credits or low-income discounts

What to Watch

Federal Energy Regulatory Commission decisions on transmission cost allocation; emerging utility tariff structures for data centers; and international examples of tariff design.