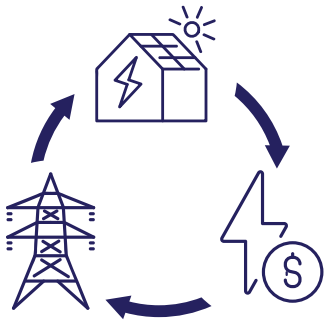
ALLIANCE TO SAVE ENERGY
using less. doing more.

POLICY BRIEF

Maximizing Energy Efficiency

A Path to Lower Costs, Stronger Grid Resilience, and Smarter Government Spending

EXECUTIVE SUMMARY



Energy efficiency is a proven strategy for reducing household energy costs, enhancing grid reliability, and strengthening national security. [1] By leveraging tax incentives, modernizing infrastructure, and streamlining government energy expenditures, policymakers can achieve significant economic and environmental benefits while reducing the cost burden on American consumers.

This paper outlines a comprehensive, bipartisan approach to reducing consumer energy bills by up to 50% through targeted investments in efficiency programs. [2] By expanding tax credits for energy-efficient home improvements, increasing support for low-income weatherization programs, and promoting grid modernization, each federal dollar invested in consumer energy-efficiency incentives could generate an estimated **$2–$4 in lifetime savings,** according to multiple studies. [3]

In practical terms, this can translate into **$500 or more in annual savings on the average household's utility bills—reducing their average cost by 15% and representing a significant step toward meeting the current administration's 50% reduction goal.** [4] Additionally, these measures strengthen broader efforts on tax relief: not only can policymakers highlight tax cuts, but through expanded rebates and credits, they can point to meaningful, quantifiable savings on monthly electricity costs that bolster household budgets for years to come.

Additionally, energy efficiency in federal agencies presents a major **opportunity to cut 1.5 billion annually in operational expenses** and reinvest savings into critical public services. [5] Strategies such as digital transformation, outcome-focused efficiency mandates, and periodic reviews of outdated government programs can significantly reduce unnecessary energy waste and optimize government spending.

EACH $1 IN ENERGY EFFICIENCY INVESTMENTS YIELDS $2-$4 IN SAVINGS.

ABOUT THE ALLIANCE TO SAVE ENERGY

ASE is a leading non-profit, bipartisan energy efficiency policy organization consisting of a coalition of manufacturers, utilities, technology companies, environmental advocates, and others who are committed to advancing the role of energy efficiency in U.S. energy policy, and its value in achieving energy affordability, grid reliability, emissions reductions, and energy security.

CONGRESSIONAL ASK- CALL TO ACTION

To ensure that American families and businesses continue to benefit from lower energy costs, we call on policymakers to protect and expand energy efficiency funding and tax incentives, while ensuring that investments are directed where they can have the greatest impact. [6]These investments have consistently proven their value, generating substantial savings for consumers while bolstering grid reliability and national security. By making smart, targeted investments in energy efficiency, policymakers can amplify economic growth, enhance energy resilience, and reduce unnecessary government spending. The measures outlined in this brief provide a clear roadmap to achieving lower energy costs, a stronger grid, and a more efficient government. By prioritizing efficiency-driven policies, Congress can deliver long-term economic and environmental benefits for all Americans.

HOW TO IMMEDIATELY LOWER CONSUMER ENERGY COSTS

DETERMINING THE FACTORS BEHIND CONSUMER ELECTRICITY COSTS

The cost of electricity for most Americans is shaped by complex state-level rate-making procedures and utility-specific regulations, making it virtually impossible for any administration to unilaterally adjust rates nationwide. [7] Nevertheless, federal-level programs— rooted in bipartisan efforts over the years—have proven they can meaningfully reduce household energy bills without overriding state authority.

Achieving the current administration's bold target of cutting average household energy bills by 50% demands a cohesive strategy that integrates consumer incentives, market-driven efficiencies, and cross-sector collaboration. [8] Enhanced tax credits for efficient HVAC systems, insulation, windows, and renewable energy installations—such as those supported under Sections 25D, 25C, 45L, 179D, HOMES, HEER, and the Greenhouse Gas Reduction Fund (GGRF)— can accelerate adoption of cost-saving technologies. [9] Programs like the Weatherization Assistance Program (WAP) benefit low-income families and rural communities, while the Low-Income Home Energy Assistance Program (LIHEAP) supports millions of households per state, providing essential relief that could be jeopardized if funding is cut. [10]

EXPAND AND SIMPLIFY TAX CREDITS AND REBATES

Building on existing federal regulations, which have historically garnered broad bipartisan support, the administration can make it easier and more affordable for families to invest in technologies that cut their energy costs. [5] By expanding and simplifying tax credits and rebates, more consumers can take advantage of upgraded home improvements and domestically generated electricity solutions.

One critical avenue is increasing the value of tax credits for home energy upgrades—such as installing efficient HVAC systems, heat pumps, smart thermostats, and LED lighting. Lowering upfront costs encourages wider adoption, enabling families to benefit almost immediately from lower utility bills. [2] Expanding rebates for windows and insulation, especially in older homes, can also generate major returns, since heating and cooling often account for a large share of household energy expenditures. [6]

Promoting smart appliances adds further savings potential. Under improved federal guidelines, consumers could receive rebates for technologically advanced refrigerators, washers, and dryers that minimize standby power losses and take advantage of lower off-peak electricity rates. This not only reduces individual expenses but also helps stabilize demand on the grid.

In addition to these measures, existing law has long provided incentives for homeowners seeking to use domestically produced energy systems. For instance, provisions often referred to as Section 25D have historically allowed homeowners to claim credits when installing solar panels, small wind turbines, battery storage, or geothermal heat pumps. Maintaining robust and straightforward credits in this area would enable more Americans to invest in home-based energy generation, thereby reducing their monthly bills. Similarly, other programs, such as Section 25C, cover improvements ranging from high-efficiency windows and doors to insulation, air sealing, and updated HVAC equipment—raising the credit percentage and caps would encourage more homeowners to undertake retrofits that can save hundreds of dollars each year.

Builders and developers also benefit from existing provisions sometimes referred to as Section 45L, which reward the construction of homes meeting certain energy-efficient standards. Extending or increasing these incentives promotes a new generation of houses that are less costly to operate, ultimately saving their owners on monthly energy bills for years to come. Meanwhile, a long-standing deduction codified under **Section 179D,** although primarily associated with commercial properties, can likewise benefit multi-family residential buildings, thus **lowering costs for renters** by reducing overall energy use.

Collectively, these initiatives have proven effective at lowering energy bills and have won support across the political spectrum. By emphasizing domestically created electricity and boosting the financial attractiveness of efficiency upgrades, this administration can build upon and expand these longstanding programs, ensuring that more households reap the benefits.

THE AVERAGE HOUSEHOLD COULD SAVE $500+ PER YEAR WITH EFFICIENCY UPGRADES.

UTILITY-LED FINANCING PROGRAMS & SMART METER AND DEMAND-RESPONSE INCENTIVES

Even with stronger tax credits and rebates, many families hesitate to adopt home energy improvements because of initial outlays. On-bill financing helps solve this problem by allowing consumers to repay upgrade costs through their monthly utility bills. In many cases, the monthly savings from improved equipment (often $20–$50) exceed the financing charges, delivering immediate net savings. [16] Standardizing these programs at the federal level can help ensure that middle- and lower-income households have a clear path to reducing energy expenses and improving their homes.

Utilities, too, have a major part to play in keeping electricity prices down. Smart meter installations provide time-of-use pricing that lets consumers run major appliances during off- peak hours, when costs are lower. **Households participating in demand-response programs may see 5—15% reductions in annual electricity costs—a potential $75—$150 savings each year.** [17] Moreover, these initiatives reduce peak demand on the grid, lower the risk of new power plant construction, and thus stabilize rates for everyone.

POTENTIAL TAX REBATES AND COST SAVINGS SUMMARY

Historically, energy efficiency programs have proven their value. Based on simple assumptions, energy cost savings from efficiency investments since 1980 have consistently saved Americans around $800 billion annually. [18] [3] To put this in perspective, without these energy efficiency measures, energy spending in 2020 would have been 77%, or $774 billion, higher. [18] [4] Although actual outcomes vary based on factors like home size, location, and energy prices, the combined effect of these strategies is substantial. **A homeowner who installs a qualifying energy system could see $3,000–$6,000 in immediate tax credit savings, while upgrades covered under other federal rules might yield $300–$1,200 in rebates for insulation, windows, or HVAC improvements.** [7] Solar or geothermal systems alone can generate annual utility bill reductions between $300 and $1,800, while more basic improvements like insulation and efficient HVAC can trim $150–$600 off yearly bills. Smart appliance usage adds another $50–$200 in potential savings. [5] Altogether, property owners who systematically adopt multiple measures over a 10–15-year period could realize $10,000–$25,000 in net savings, helping many families approach this administration's ambition of reducing typical energy bills by 50%. [5]

MODERNIZING THE GRID AND ENCOURAGING DISTRIBUTED GENERATION

Household-level actions yield even greater dividends when combined with a modernized grid. By funding and promoting system upgrades that reduce line losses and accommodate distributed energy solutions—such as rooftop systems with battery storage—utilities can cut peak loads and avoid building additional capacity. Ultimately, that means better reliability and lower costs for all. The administration can also make it simpler for Americans to produce their own domestic power by streamlining permitting processes and boosting incentives for at-home generation, letting households directly contribute to a less expensive, more secure energy landscape.

EDUCATE CONSUMERS AND PROVIDE TRANSPARENT PRICING

Finally, encouraging widespread adoption and maximizing savings hinges on awareness and clarity. A federally supported national awareness campaign can direct families toward the right mix of rebates, tax credits, and financing options, helping them swiftly upgrade their homes. At the same time, transparent billing—requiring itemized costs and fees—enables consumers to clearly see how changes in their energy consumption translate into monthly savings. Together, these measures empower Americans with the knowledge they need to reduce energy use and keep more of their hard-earned money.

STREAMLINING GOVERNMENT SPENDING AND REDUCING BLOAT

Efficiency must begin at home—the federal government's "home," that is. Federal agencies collectively spend billions on energy every year, from power-hungry data centers to outdated HVAC systems in government buildings. By systematically reducing waste, the administration can free up capital, lower the national debt burden, and deliver tax relief to Americans. [8]

Federal energy waste is a drain on taxpayer dollars, contributing to unnecessary government spending and long-term national debt. In 2022, federal agencies spent over $6 billion on energy costs (Source: U.S. Department of Energy), and without intervention, these expenditures will continue to rise, reaching $7.5 billion by 2030. [9] Energy efficiency measures provide a market-driven, cost-effective solution that aligns with conservative economic principles by reducing government waste, cutting spending, and lowering household energy costs—without requiring new subsidies or tax increases. [10]

WITHOUT EFFICIENCY PROGRAMS, 2020 ENERGY SPENDING WOULD HAVE BEEN **77% HIGHER.**

REDUCING GOVERNMENT BLOAT BEYOND ENERGY

Beyond cutting energy waste, the federal government can streamline its operations more broadly by embracing Digital Transformation. [11] Migrating more federal services to digital platforms minimizes the need for physical infrastructure and manual processes, resulting in lowered printing expenses, reduced energy consumption, and fewer administrative tasks. [12]

A culture of transparency and accountability further supports budgetary discipline through Outcome-Focused Agency Mandates, where each agency sets explicit efficiency and cost-reduction targets. [13] Public scorecards can then track progress, fostering healthy inter-agency competition. Additionally, Sunset Reviews of Programs would help identify outdated or redundant initiatives, allowing resources to be reallocated to critical areas such as infrastructure, defense, or education. [14]

By implementing efficiency policies, **we can achieve $1.5 billion in annual savings** [15] while also enabling families and businesses to lower their energy bills. The next sections outline how efficiency measures, tax incentives, and market-driven policies can ensure that taxpayer dollars are used effectively while driving down costs across all sectors.

CONCLUSION

By strengthening and expanding existing bipartisan regulations—and combining them into a coherent, user-friendly plan—this administration can put forward a robust strategy to reduce household energy expenses for millions of Americans. Focusing on domestically produced energy, leveraging tax credits and rebates, streamlining utility financing, encouraging demand-response, and promoting grid modernization all play vital roles in cutting electricity bills. Through these efforts, families can draw closer to the goal of reducing their typical energy costs by 50%, demonstrating both economic leadership and tangible relief for everyday consumers.

By addressing both direct consumer energy costs and government inefficiencies, this administration stands to empower American households while significantly reducing federal spending. **American families benefit from expanded rebates, market-driven solutions, and a more modernized grid, leading to substantially lower utility bills.** Meanwhile, federal agencies become leaner and more transparent, saving billions in taxpayer dollars. This two-pronged approach exemplifies the power of energy efficiency as a unifying, nonpartisan solution—ensuring every watt of energy, every tax dollar, and every technological breakthrough contributes to a more robust, competitive, and fiscally responsible America.

SOURCES

1 U.S. Department of Energy (DOE), 'Residential Energy Consumption Survey (RECS),' 2020.

2 American Council for an Energy-Efficient Economy (ACEEE), 'The State Energy Efficiency Scorecard,' 2023.

3 National Renewable Energy Laboratory (NREL), 'Economic Benefits of Energy Efficiency Programs,' 2022.

4 Lawrence Berkeley National Laboratory (LBNL), 'Efficiency Measures and Grid Reliability,' 2021.

5 Congressional Research Service (CRS), 'Federal Energy Efficiency Incentives and Tax Credits,' 2023.

6 Environmental Protection Agency (EPA), 'Smart Metering and Demand-Response Benefits,' 2022.

7 U.S. Energy Information Administration (EIA), 'Annual Energy Outlook,' 2023.

8 National Association of Regulatory Utility Commissioners (NARUC), 'On-Bill Financing and Utility-Led Efficiency Programs,' 2021.

9 Federal Energy Management Program (FEMP), 'Government Building Energy Expenditures and Efficiency Savings,' 2022.

10 The Bipartisan Infrastructure Law (BIL), 'Home Energy Rebates and Efficiency Investments,' 2023.

11 U.S. Government Accountability Office (GAO), 'Federal Digital Strategy and Cost Savings Report,' 2023.

12 Congressional Budget Office (CBO), 'Digital Transformation in Government Operations,' 2022.

13 Office of Management and Budget (OMB), 'Performance.gov - Federal Performance Plans,' 2023.

14 Congressional Budget Office (CBO), 'Effectiveness of Federal Program Evaluations,' 2022.

15 Federal Energy Management Program (FEMP), 'Annual Report on Federal Efficiency Measures,' 2023.

16 Alliance to Save Energy. "Energy Efficiency Impact Report". https://energyefficiencyimpact.org/energy-efficiency-in-utilities

17 Alliance to Save Energy. "Energy Efficiency Impact Report" https://energyefficiencyimpact.org/#:~:text=Without%20the%20energy%20efficiency%20investments%20made%20since,benefits%20go%20beyond%20energy%20and%20cost%20savings;

18 Energy Star. "Federal Tax Credits for Energy Efficiency". https://www.energystar.gov/about/federal-tax-credits

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