Affordability Is All You Need

Meeting New Peak Capacity and the Next Era of U.S. Grid Investment

CREO | February 2026

Disclaimer

The information provided in this document is for informational purposes only and does not constitute a solicitation, offer, or sale of securities. Neither the investment examples cited nor CREO's mention of examples constitute investment advice or a recommendation to purchase or sell any securities. CREO is not and does not provide services as an investment advisor, investment analyst, broker, dealer, market-maker, investment banker, or underwriter. CREO does not receive any compensation or fee for citing investment examples in this document or any consideration because of any discussion or transaction with respect to any such investments.

Author

David Siap
Senior Manager, Energy

Executive Summary

The U.S. power system is entering a period of rapid load growth driven by electrification, economic expansion, and AI-related data center development. Simultaneously, high cost-of-living is a central regulatory and political issue that constrains rate cases, limiting new build. In this environment, affordability has become a binding constraint, selecting which capacity resources scale and earn durable returns.

This paper introduces the Marginal firm Capacity Cost (MCC), a system-level assessment of the incremental impact of adding one unit of firm peak capacity on household electricity bills. Complementary to levelized cost of energy, MCC captures how marginal capacity impacts affordability, factoring in capital costs, operating costs, reduced energy consumption, and avoided or deferred infrastructure investment. It also highlights the growing divergence between energy and capacity economics for some resources.

Scenario analysis highlights the stakes, showing that a future grid with high penetration of demand flexibility and storage could meet new peak loads without increasing rates. In contrast, meeting load growth via business-as-usual pathways could lead to real rates rising by ~20% nationally, $500 billion in additional capital expenditures, and 3-5 million more high burden households.

These dynamics create “affordability alpha”: structural tailwinds favoring resources and business models that lower system-level costs and customer bills. Evidence of this trend is already visible in utility planning, regulatory decisions, and private investment flows that increasingly favor lower-MCC resources.

Table of Contents

List of Figures

Introduction – Affordability in an era of load growth

Affordability is rapidly becoming a binding constraint in the U.S. energy sector. Rising peak demand due to load growth will require hundreds of billions of dollars in capital expenditure. However, the exact cost and associated ratepayer burden depends on the resources utilities deploy to meet demand. Scaling more capital-efficient capacity resources could save ratepayers billions annually compared to a business as usual (BAU) case. These savings are increasingly critical as rates have risen since 2019[1] and outpaced inflation in 2025,[2] compounding broader cost-of-living pressure and leading regulators to strongly favor rate cases that minimize increases.

This paper addresses the question of how adding new peak capacity impacts affordability. The analysis does this via the Marginal firm Capacity Cost (MCC), a new metric which measures the incremental impact of adding one unit of firm peak capacity on average household electricity bills, inclusive of capital costs, operating costs, demand reduction effects, and avoided or deferred grid investment. The analysis includes all major capacity resources, evaluates three scenarios for meeting demand, and links system outcomes to household impacts. The last analytical piece integrates an energy perspective that serves to highlight the sometimes-divergent capacity and energy economics.

What surfaces is that scaling demand flexibility in the form of energy efficiency and demand response (DR) is the least costly way to meet load growth. Storage and extending or upgrading existing plants are also low-cost pathways to capacity but not always energy. These resources will have greater social license to operate leading to tailwinds like increased utility procurement and a favorable regulatory environment. These tailwinds, or affordability alpha, will select which resources will scale in the era of AI-driven load growth.[i] This presents investors with a rare triple bottom-line opportunity to capture returns, have positive climate impact, and positive social impact by preserving affordability.

1 Context – The coming capacity crunch and the divergence of capacity and energy economics

Over the last decade, two trends have dominated energy system planning: decarbonization and reliability. Increasingly, a third constraint has emerged: capacity[ii] availability. Load growth driven by electrification, economic growth, and AI-driven data center buildout is accelerating faster than the grid’s ability to respond using traditional tools.

Unlike past periods of load growth, today’s demand increases are lumpy, location-specific, and introduce new periods of peak system stress. Data centers introduce large, continuous loads that materially raise peak demand. Concurrently, electrification of transportation and heating is pushing peaks into new hours and seasons (i.e., winter),[3] straining infrastructure and markets not designed for these patterns. These new, higher peaks drive the need for hundreds of gigawatts of new firm capacity resources in the next decade.

Grid planning is fundamentally about meeting peak demand reliably. Yet much of the public and investor discourse focuses on levelized cost of energy (LCOE), a metric that describes

---

[i] Inspiring the title, from a well-known paper in that field
[ii] Power (in kW) to meet demand, as opposed to energy (in kWh) which is electricity over time

energy costs but says little about full system costs or system resource adequacy. As renewable penetration increases, this distinction becomes critical. Some resources with low LCOE may contribute little to peak capacity, as reflected by falling capacity payments,[4] while other comparatively less economic resources may be essential for reliability.

LCOE is well-studied, but the systemic impact of different capacity resources on household bills is not. This analysis introduces a rank-ordered curve of all of the major potential sources of new capacity through 2035 with the purpose of examining which resources might best meet the moment of affordability and grid expansion.

2 Reading the curve

The MCC is an estimate of the impact of adding peak capacity on average household electricity bills, and the curve organizes these from lowest to highest. This is inclusive of capital costs, operating costs, demand reduction effects, and avoided or deferred transmission and distribution (T&D) investment. The goal of the curve is to contextualize the available capacity (horizontal width) and cost to ratepayers (vertical length) for all major resource types at the U.S. national level.[iii] For those familiar with the climate sector, this curve was in part inspired by the 2007 marginal abatement cost curve,[5] but for grid peak capacity as opposed to carbon abatement.

For all 32 resources in the curve, published literature provides central estimates for both nominal additional capacity by 2035 and cost. These serve as inputs to the model, which translates these into household bill impacts using industry-standard assumptions, with adjustments for demand reduction and avoided T&D investment. One important input is Effective Load Carrying Capability (ELCC), a concept whose formal definition dates back to the 1960s but has had elevated importance in recent years. PJM defines ELCC as "[capturing] the expected performance of resources during tight RTO-wide system operation hours that can be caused by high loads and/or poor resource performance."[6]

Figure 1 depicts this process. There are several simplifications, including a static rate base, which in reality should increase due to load growth and could further decrease rates.[7] Instead, this analysis focuses on how different resources affect the top-line annual revenue requirement (ARR) and how changes to that impacts ratepayer bills.

[iii] As an example, utility-scale solar contributes ~250 GW of nominal capacity at an impact of $.08 per GW per household per year in the US. The 250 GW sets the width of the utility-scale solar bar, and the $0.08 impact sets the height.

Figure 1: MCC calculation overview

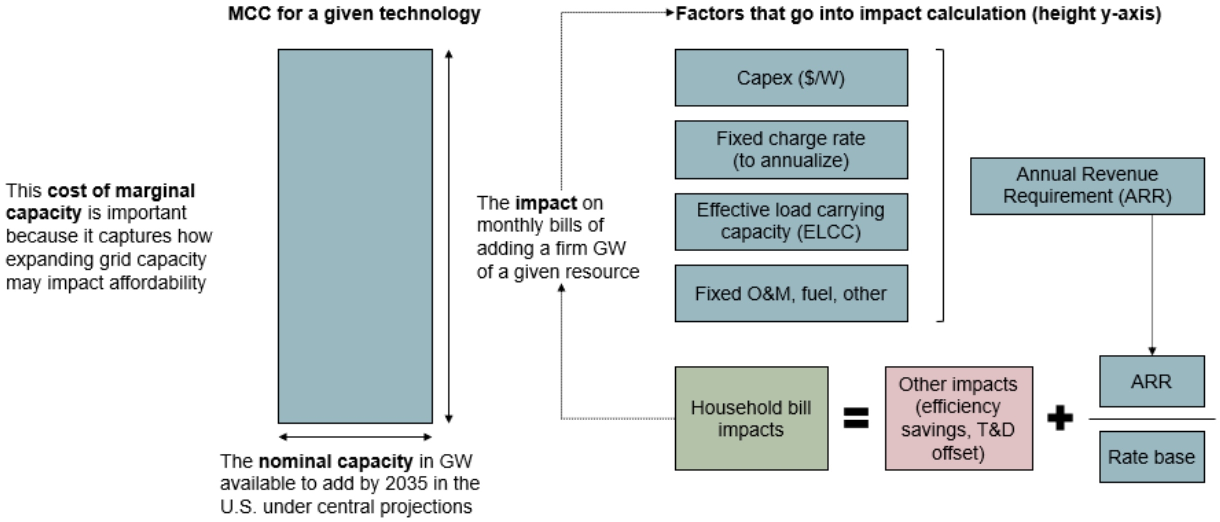
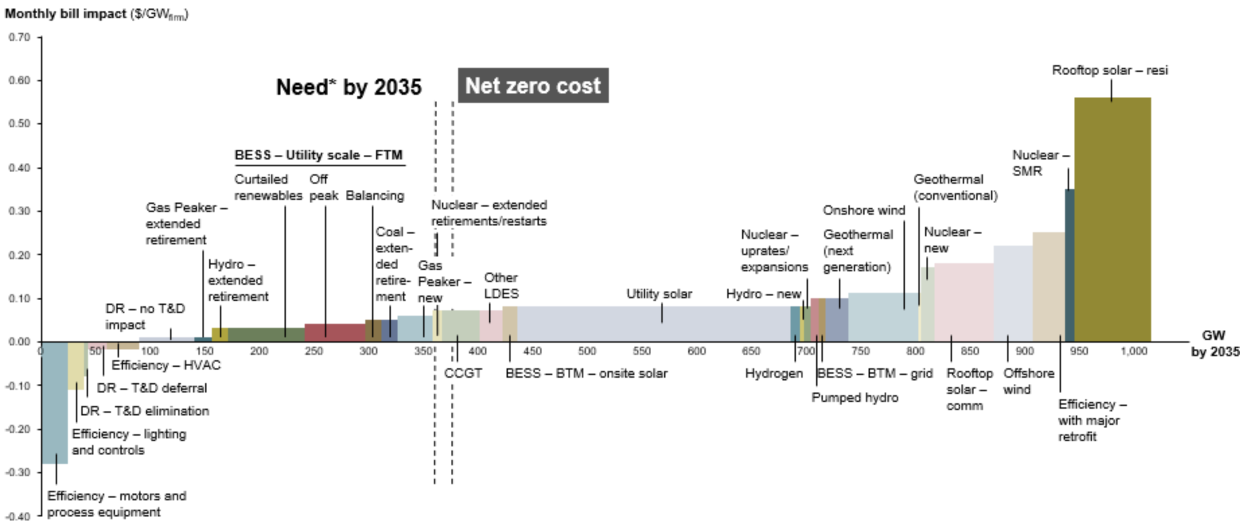


Figure 2 shows the full cost curve, including callout lines for the projected need by 2035[8] as well as the point where resources that lower bills balance out those that raise them.

Figure 2: Full MCC curve



The resources are in order of impacts from least to highest, which makes several conclusions immediately apparent:

- **There is a set of negative cost resources that could add substantial capacity** – These solutions reduce peak load, resulting in additional effective capacity on the grid while reducing ratepayer bills. These are mostly resources like energy efficiency (e.g., HVAC, motors and equipment, and lighting) that do not require major retrofits, and DR that reduces or defers need for additional T&D build.
- **Some high-cost solutions may be unexpected due to divergence between energy and capacity economics** – The placement of some resources that are low LCOE may be surprising to some readers. Residential rooftop solar is the most obvious example.[iv] This is because rooftop solar contributions to system peaks in grids with substantial

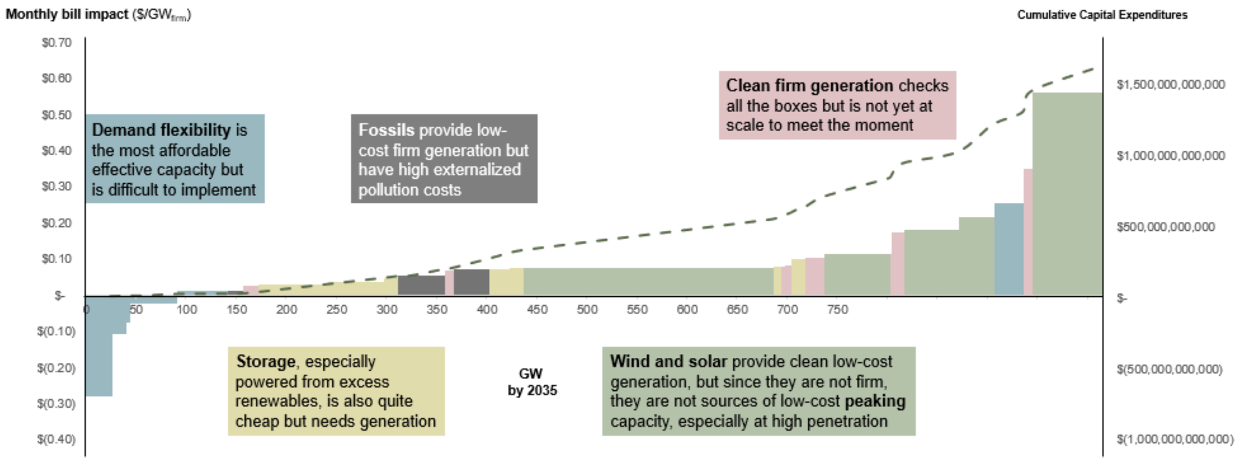
[iv] Noting this is system-level grid cost, so agnostic of subsidies or net metering regimes

renewable penetration are low per unit of nominal capacity. This is a prime example of a resource with low ELCC (leading to higher MCC) and low LCOE that highlights diverging energy and capacity economics.

- **There is a path to meet load growth at flat or no cost to ratepayers** – The hypothetical lowest cost pathway to meet projected grid needs, consisting primarily of demand flexibility and storage, actually reduces household bills while expanding grid capacity by over 200 GW. While this is more a heuristic than a reasonable pathway due to real-world constraints, it does show the potential to avoid costs with more efficient use of existing grid resources. Per this model, the grid could expand by almost 300 GW with no net impact on customer bills in aggregate.

While the full chart may be challenging to digest, Figure 3 aggregates resources by type for a more simplified view. It also includes a cumulative capex dashed line on the right axis.

Figure 3: MCC curve by type, with cumulative capex



The most impactful demand flexibility (i.e., energy efficiency and DR) resources on the far-left side reduce consumer bills through decreased energy use and avoided infrastructure investment but have historically struggled to scale. Storage similarly improves utilization of existing assets by shifting generation to match demand. In contrast storage does require substantial capital expenditure as shown by the rise in the dashed line corresponding to the axis on the right of Figure 3.

Fossil fuels, especially Combined Cycle Gas Turbines (CCGT) and gas peakers, are a smaller tranche due to manufacturing constraints but are still substantial, approximately 100 GW in total. For simplicity, the analysis excludes the substantial externalized social costs of pollution associated with these resources. Additionally, they are sensitive to gas prices, which may be rebounding off the historic lows of 2024.[9]

Wind and solar comprise the next tranche and are the largest source of nominal capacity. Within the category, utility-scale solar is most economic, and the higher impacts of rooftop solar reflect lower economies of scale, less optimal siting, lower efficiency due to fixed-tilt versus tracking installations, and less efficient financing and operations. While wind and solar are generally not low-cost peak capacity, they are low-cost energy, ~90%+ of new grid capacity in 2025[10], and essential to the grid of the future.

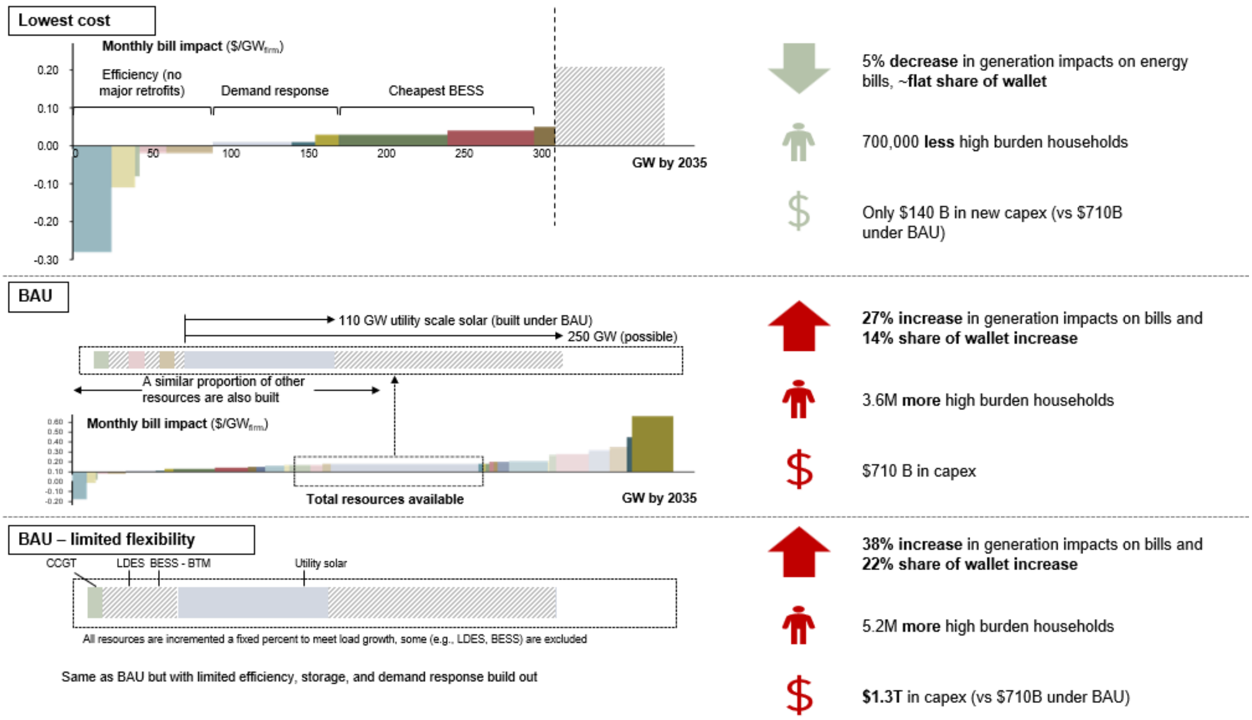
Clean firm generation is a broad category with capacity across the cost curve. These resources are by definition firm, so they have high ELCC and high potential as capacity resources. Most are not yet ready to scale due to cost or technological maturity (e.g., new nuclear, next generation geothermal) or have an embedded constraint (e.g., hydro, conventional geothermal). Still, next generation geothermal and nuclear (both large and SMRs) have strong momentum and costs may come down rapidly.

The following scenarios further explore the curve's heuristic potential by using different sets of resources to meet the anticipated grid need.

3 Scenario analysis

There are three scenarios analyzed in the context of the MCC curve: Lowest Cost, BAU, and BAU with limited flexibility (BAULF), as shown in Figure 4. In addition to a schematic explaining the scenarios the figure also includes some important outcomes, including the impact on share of wallet,[v] high burden households,[vi] and the capital expenditures of the pathway. The main takeaway is that scaling the grid via demand flexibility and storage is much less costly than doing so with limited flexibility (i.e., simply building out generation).

Figure 4: Scenario analysis and key results



The lowest-cost scenario simulates meeting the anticipated peak demand growth mostly by adding more energy efficiency, DR, and BESS. This results in lower energy bills due to reduced energy use from energy efficiency and cheap capacity from DR and BESS. Extended retirement of existing hydro and coal assets provides a small but low-MCC source of capacity as those costs were primarily licensing, minor upgrades, and (for coal) fuel costs.[vii] This also lowers strain on T&D infrastructure.[viii] While these results serve to highlight

---

[v] The amount of household income spent on electricity
[vi] The number of households where share of wallet is above 6%
[vii] Noting coal externalities are quite negative, but unpriced in this analysis
[viii] Priced for DR but not for efficiency for simplicity

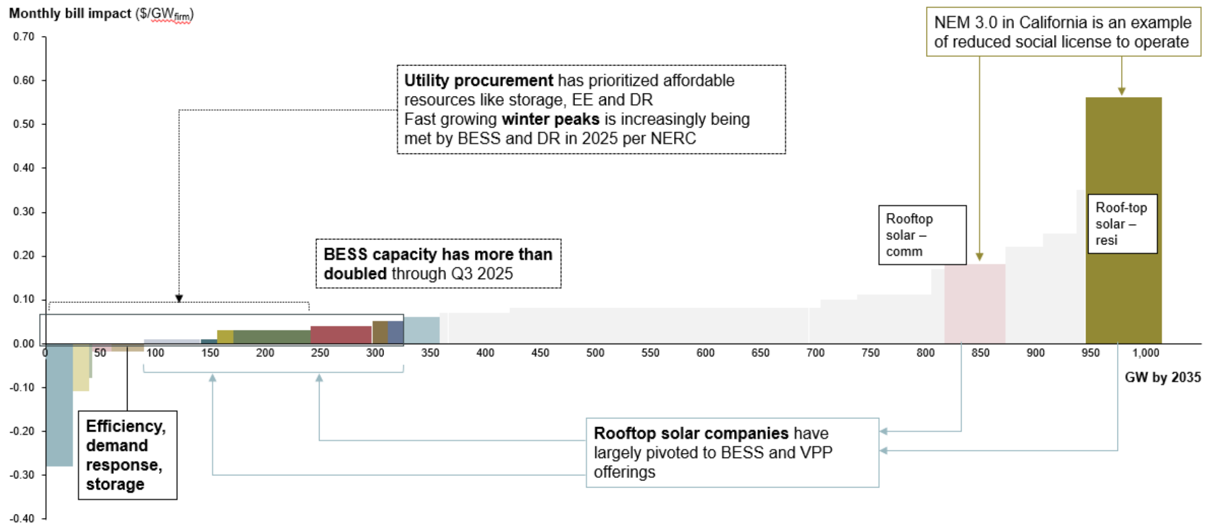
the potential impact of these resources, in practice, scaling demand flexibility in this manner would require restructuring business practices, supply chains, and other systemic changes, even considering the rapid projected BESS growth over the next few years.[11]

Both BAU scenarios increase all solutions proportionally to meet load growth. The BAULF scenario omits new capacity from efficiency, DR, and storage. As shown in Figure 4, energy bills increase under both BAU and BAULF scenario, respectively leading to 3.6 million and 5.2 million more high energy burden households. Additionally, compared to the lowest cost scenario, ~ $570 billion more capital expenditures occur under BAU and over $1 trillion under BAULF. Note that these are national averages and not inclusive of other impacts driving rate increases, such as increased fuel costs, wildfire liability, or other impacts.

4 Social license to operate and economics, the foundation of affordability alpha

Because lower-cost capacity resources will result in lower customer bills, these resources will likely have tailwinds in a backdrop of increased affordability concerns. These tailwinds take the form of increased social license to operate and favorable economics, which in practice translates to a more favorable regulatory environment, easier permitting, preference in utility procurement, and favorable unit economics for consumers. These tailwinds, or "affordability alpha," describe the structural advantage of investments that lower system-level costs and customer bills. Figure 5 contextualizes recent instances of these tailwinds via the MCC curve.

Figure 5: Evidence of affordability tailwinds via MCC lens



Regulators have recently acted in favor of affordability in several instances.[12] This has led to legislation at the state (e.g., California SB 254, Connecticut SB 4, and Massachusetts H.4144) and federal level (HR 3638, 3628). There is momentum for various initiatives aimed at lowering energy costs while maintaining reliability by reforming utility processes, strengthening the supply chain, strengthening subsidies to low-income households, modernizing permitting, financing transmission, and other initiatives. Further, affordability was a key topic in the 2025 gubernatorial elections and experts expect it will continue to be a key issue in the 36 races in 2026.

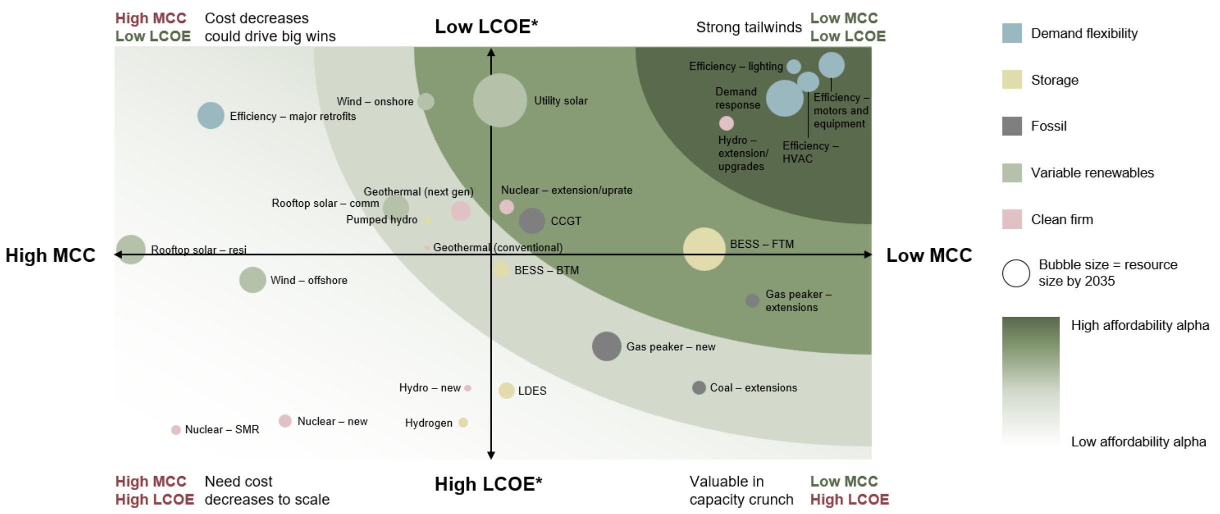
This regulatory pressure, coupled with the economics, is increasingly impacting utility procurement and planning. The recent NERC report for winter 2025 highlighted large increases in batteries (~10 GW) and DR (~7 GW) to meet new winter peaks amid flat or declining contributions from other resource types.[13] While utilities have historically been reluctant to rely on efficiency and DR in long term integrated resource planning, this is changing.[14] Also, in New York and elsewhere, storage, efficiency, and DR are being included as non-wires alternatives (NWA) to transmission.[15] These changes to utility processes as well as procurement velocity underline the tailwinds these solutions currently have.

There is also evidence of this trend in private industry, mostly driven by economics. Many rooftop solar companies have pivoted to include BESS and DR offerings. The best example of this is Sunrun, the leading residential solar company, whose battery attachment rate has grown from 18% to 70% in the last two years, with 400% growth in VPP participation in the last year.[16] Hyperscalers have taken notice as well. The concept of flexible data centers has been one of the hottest topics of 2025,[17] and energy efficiency has also been proposed as a cost-effective way to free capacity for data centers.[18] BESS growth has been well-heralded, with installations through Q3 2025 alone outpacing the entire installed capacity prior to this year.[19] Finally, there has been some notable deal flow for startups in this sector, notably Base Power's $1 billion raise for behind-the-meter (BTM) BESS and Redaptive's $216 million raise for novel energy-efficiency financing.

5 Integrating LCOE – Creating a holistic view

To date, the key figure of merit in the sector has been LCOE. LCOE is a great metric for understanding the energy cost of a project in isolation. However, a view of capacity at the system level is also valuable, as grid planning focuses on meeting peak demand reliably. A combined capacity and energy view is thus necessary to analyze affordability holistically. Figure 6 presents this, integrating the MCC view shown in Figure 2 with LCOE values from the literature. The analysis models non-generation assets like storage as charging from the current grid for the purpose of comparison. Affordability zones in green show the strength of the affordability tailwinds around resource clusters and are strongest for low-LCOE and low-MCC resources as in the top right.

Figure 6: LCOE versus MCC for all resources, with affordability zones



5.1 Affordability zones – Tailwinds and headwinds

The darkest affordability zone in Figure 6 contains mostly non-generation resources with low or negative MCC and LCOE, similar to the far left resources in Figure 3. These resources are not just low cost, but they are resilient to uncertainty in load growth, as they do not require irreversible, long-lived capital commitments. While load is growing, evidence is mounting that it may not be growing as fast as some initial projections.[20]

However, the dominant incentives of regulated utilities and capital providers have historically worked against these resources. These actors typically earn returns by deploying capital into physical assets rather than by reducing or reshaping demand. While technological, regulatory, and market design also play important roles, this incentive misalignment is the most important constraint on the adoption of demand flexibility. In economic terms, this is an instance of the principal-agent problem. The grid value of demand flexibility does not accrue to those planning and building the grid. That said, the aforementioned case where hyperscalers pay for efficiency improvements neatly sidesteps this issue, as data center builders get capacity they need and ratepayers get lower rates.

To date, this sector has scaled despite misaligned incentives due to its usefulness and favorable economics. Technological enablers, market reform, and need for capacity have been tailwinds for adoption. For DR, this has manifested as smart devices, electrification, and smart meter infrastructure. Efficiency has also benefited from electrification tailwinds, but regulation (e.g., efficiency standards) has played a larger role in driving adoption of novel technologies (e.g., LED lighting). Looking forward, utility reform like performance-based ratemaking that rewards performance against predetermined metrics instead of capital expenditures and volumetric sales as well as inclusion of demand flexibility as NWAs work to re-align incentives to better serve ratepayers.

5.2 The scaling zone: resources expanding today

The next affordability zone includes the resources dominating capacity additions today. They have low to moderate MCC and LCOE, and utility-scale solar and FTM BESS are the most prominent examples. These resources benefit from declining capital costs and enjoy strong deployment momentum.

While this momentum will persist for the near future, as renewable penetration increases, the ELCC of solar declines, shifting its system value even more away from capacity toward energy. Storage can firm solar output, but a grid powered fully by solar and storage would be more costly due to the need for overbuilt generation and associated transmission.[21]

There are some firm generation resources in this zone such as CCGT, gas peaker extensions, and nuclear extensions/upgrades. These can provide needed peaking capacity but either have limited scaling potential or meaningful carbon externalities.[ix] Therefore, the

---

[ix] Including carbon externalities would shift CCGT to the middle zone and peakers to the constrained zone.

grid needs options for clean firm resources to continue growing and decarbonizing affordably.

5.3 The middle zone and the constrained zone

The third zone consists of a mix of resources. Next generation geothermal is a developing technology with the potential for an advantaged cost structure at scale for a premium clean firm dispatchable product. New gas peakers and coal extensions are currently more suited for niche applications for reliability due to their cheap peaking capacity, expensive energy costs, and poor environmental impacts. These have value in periods of capacity scarcity, but if demand growth underperforms expectations, they are likely to experience declining utilization, lowering asset value and investor returns.

Resources with high MCC and LCOE fall in the final zone and face headwinds if they do not decrease costs. Nuclear (both SMR and large new reactors) is a prominent sector with lots of momentum. While there is a pathway to affordability, as China and Korea appear to already have achieved <$4/W,[22] their position on this figure reflects the current state in the U.S.

6 Investor implications – The "so what"

The MCC framework and affordability zones described above are not only tools for system planning; they also have direct implications for capital allocation. Affordability is a durable, salient issue, and long duration investments that lower system cost will outperform, as will infrastructure for resources primed to scale.

For **venture** investors, this means even more focus on cost as a determinant for success.

- **Technology providers for resources with affordability tailwinds** have the biggest "moonshot" potential. Enablers who are closer to customers will also benefit.
  - **Demand flexibility** and **storage** experience the strongest tailwinds now as they can already provide affordable peak capacity
  - **Clean firm generation** is next, especially **next generation geothermal** which has a shorter development cycle than nuclear and is beating projections on cost, coming close to cost parity in some geographies. **Future technologies** (e.g., fusion and space-based solar) that could enjoy even more advantaged cost structures would be transformative.
- **Technologies with uncompetitive cost structures may see consolidation** in an era of constrained funding. Venture and private-equity funding flows across sectors decreased in 2024, though this changed in late 2025, mostly for AI enablers. New entrants without meaningful AI exposure thus are more likely to succeed where they offer radically lower cost structures, absent novel high-value use cases.

Infrastructure investors should likewise have a lens on cost but also focus on the resources primed to scale and related implications.

- **Transmission will be a binding constraint for renewable penetration**. To accommodate load growth the transmission grid will need to double in size by 2050, and triple to accommodate high renewables penetration.[23] Build out has lagged forecasts thus far,[24] and affordability is a key factor[x] that may limit new build. If build continues to lag, eventually it will limit renewables and necessitate more (clean) firm generation.

- **Increased demand flexibility penetration creates additional revenue streams** for asset owners with little incremental capital investment. This dynamic is most attractive in lower-margin real estate (e.g., warehouses, parking facilities, some refrigerated storage) where the marginal revenues are meaningful but may be applicable in many cases.
- **Prioritizing flexibility over generation reduces stranded-asset risk** by avoiding investments tied to uncertain load growth, echoing lessons from the late-1990s gas overbuild and subsequent crash.
- **The value of capacity is rising as reliability risks intensify**. Unlike the 2000s, today's low reserve margins (e.g., 8% in ISO-NE by 2034)[25] suggest continued scarcity of capacity, making a broad collapse unlikely but still putting a premium on capacity. Extreme weather and aging infrastructure contribute to this. Assets exposed to capacity markets may benefit in this environment.

In summary, affordability in focus leads to an even greater focus on cost at the system level. Resources that can meaningfully lower system costs will scale disproportionately, which leads to opportunities for those that develop and deploy those technologies. Investors across the risk-return spectrum will likewise reap the rewards of this success.

7 Conclusion – Affordability as opportunity

In an era of rapid load growth, affordability has emerged as the top social issue in energy. It is capacity, and not just energy, that is the binding constraint in today's grid. Thus, the marginal cost of capacity is now a decisive metric for both system planning and political feasibility. The MCC framework highlights that there is a substantial set of resources capable of meeting future demand while holding bills flat or even lowering them.

Demand flexibility, storage, and selective extensions of existing assets represent the lowest-cost pathways to expand capacity in the near term, while clean firm generation holds long-term promise if costs continue to decline. Together, these resources define an affordability zone that will increasingly shape utility procurement, regulatory outcomes, and investment performance.

This creates a rare alignment of economic, political, and social incentives. While this paper has focused on economics for investors, social impact is what drives these outcomes. While 3.4 million additional high-burden households under BAU may sound high already, a better way to frame this is it exacerbates an economically salient issue for ¼ of all US households and $^2/_3$ of low-income households – 80 million Americans.[26] It also represents a bridge between the AI-powered growth that has rewarded investors and ordinary Americans, whose wages have remained stagnant relative to inflation for years.[27] At minimum, ratepayers should not be financially liable for key enablers of the growth of such a profitable industry.

---

[x] Others being social and permitting challenges, supply chain, and workforce shortages

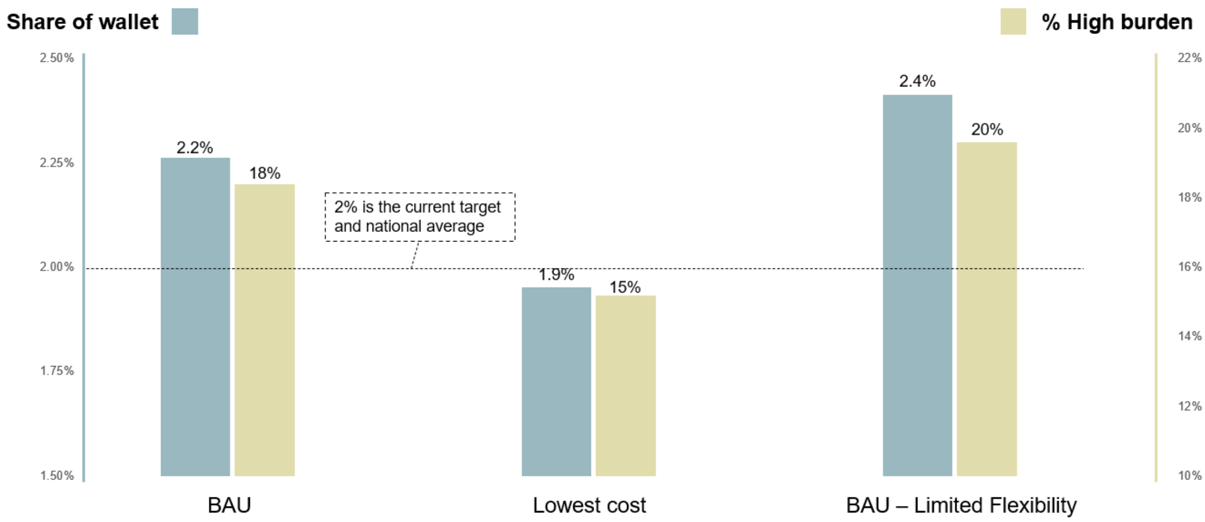
In a grid defined by capacity scarcity, affordability is no longer a secondary consideration. It is the limiting factor. Technologies and business models that fail this test will face headwinds. Those that pass it will define the next decade of grid investment.

Appendix

Share of wallet – The mean moves a little, the tail moves a lot

The most common metric for affordability in the utility energy sector is share of wallet, or the percentage of household income that goes toward energy bills. Figure 7 shows how the share of wallet changes for each scenario, noting this is inclusive of only electricity, with the mean share of wallet plotted on the left in blue and the % high burden on the right in tan. Note the difference in the scale on each side as the mean share of wallet varies from 1.9% to 2.4%, but the percentage of high burden varies from 15% to 20% (adding in other sources of energy burden e.g., gas, this jumps to well over 25%). This reflects the fact that energy burden disproportionately impacts the low- and middle-income tail of the distribution. While a 0.4% jump in costs seems small to the middle, 5% more households in high burden is a substantial increase that is relevant politically and is large enough that regulators will move to protect their interests.

Figure 7: Share of wallet



References

[1] PowerLines. *Utility Bills Are Rising*. Apr. 2025, https://powerlines.org/wp-content/uploads/2025/04/PowerLines_Utility-Bills-Are-Rising_2025-1.pdf

[2] Borenstein, Severin. "*Locating the Electricity Affordability Crisis*." *Energy Institute Blog*, 26 Jan. 2026, https://energyathaas.wordpress.com/2026/01/26/locating-the-electricity-affordability-crisis/

[3] North American Electric Reliability Corporation. *2025 Winter Reliability Assessment*. 2025, https://www.nerc.com/globalassets/our-work/assessments/nerc_wra_2025.pdf

[4] Lazard. *Levelized Cost of Energy+ (LCOE+)*, https://www.lazard.com/research-insights/levelized-cost-of-energyplus-lcoeplus/

[5] McKinsey & Company. *A Cost Curve for Greenhouse Gas Reduction*, https://www.mckinsey.com/capabilities/sustainability/our-insights/a-cost-curve-for-greenhouse-gas-reduction#/

[6] PJM Interconnection. *Effective Load Carrying Capability (ELCC): Measuring Capacity Contribution of Renewable and Storage Resources*, https://www.pjm.com/-/media/DotCom/about-pjm/newsroom/fact-sheets/elcc-measures-capacity-contribution-of-renewable-and-storage-resources.pdf

[7] GridCare. "AI Data Centers as Engines of Affordability and Capital Investment." *GridCare*, https://www.gridcare.ai/post/ai-data-centers-as-engines-of-affordability-and-capital-investment

[8] The Brattle Group. *Meeting Unprecedented Load Growth: Challenges and Opportunities*. Apr. 2025, https://www.brattle.com/wp-content/uploads/2025/04/Meeting-Unprecedented-Load-Growth-Challenges-Opportunities.pdf

[9] U.S. Energy Information Administration. "Spot Henry Hub Natural Gas Prices Remained Low through the 2024–25 Winter Heating Season." *Today in Energy*, https://www.eia.gov/todayinenergy/detail.php?id=64184

[10] Federal Energy Regulatory Commission. *Energy Infrastructure Update: September 2025*, https://cms.ferc.gov/media/energy-infrastructure-update-september-2025

[11] Canary Media. "U.S. Energy Storage Growth Is Set to Surge by 2030, BloombergNEF Says." *Canary Media*, https://www.canarymedia.com/articles/batteries/us-energy-storage-growth-2030-bloombergnef

[12] Illinois Government. "Governor Pritzker Announces Energy or Climate Initiative." *Illinois.gov*, https://www.illinois.gov/news/release.html?releaseid=29425

[13] North American Electric Reliability Corporation. *2025 Winter Reliability Assessment Infographic*. 2025, https://www.nerc.com/globalassets/our-work/assessments/nerc_wra_infographic_2025.pdf

[14] Lawrence Berkeley National Laboratory. *Price-Based Demand Response in Planning Webinar*. Feb. 2024, https://eta-publications.lbl.gov/sites/default/files/price-based_dr_in_planning_webinar_20240222.pdf

[15] New York Independent System Operator. *Storage as Transmission: Use Cases*. Sept. 2023, https://www.nyiso.com/documents/20142/40044890/2%20Storage%20as%20Transmission%20Use%20Cases_20230918.pdf

[16] Sunrun Inc. "Sunrun Reports Third Quarter 2025 Financial Results." *Sunrun Investor Relations*, 2025, https://investors.sunrun.com/news-events/press-releases/detail/355/sunrun-reports-third-quarter-2025-financial-results

[17] Encoord. "Flexible Data Centers Study." *Encoord Blog*, https://www.encoord.com/resources/blog/flexible-data-centers-study

[18] AnnDyl Policy Group. *Data Center Energy Efficiency*. Dec. 2025, https://anndyl.com/wp-content/uploads/2025/12/2025-12-01-AnnDyl-EE-Data-Center-Efficiency.pdf

[19] Wood Mackenzie. *U.S. Energy Storage Monitor*, https://www.woodmac.com/nslp/power-and-renewables/us-energy-storage-monitor/

[20] Utility Dive. “Market Monitor P3 Flags FERC, AEP, and PJM Capacity Auction Issues.” *Utility Dive*, https://www.utilitydive.com/news/market-monitor-p3-ferc-aep-pjm-capacity-auction/806770/

[21] Environmental Defense Fund. *Long-Duration Clean Energy Analysis*, https://www.edf.org/sites/default/files/documents/LongCA.pdf

[22] Anthropocene Institute. *Report on Chinese Nuclear Power Generation and Costs Analysis*. 2024, https://anthropoceneinstitute.com/wp-content/uploads/2024/07/2023-Report-on-Chinese-Nuclear-Power-Generation-and-Costs-Analysis-20240424Final.pdf

[23] U.S. Department of Energy. *National Transmission Planning Study: Executive Summary*. Oct. 2024, https://www.energy.gov/sites/default/files/2024-10/NationalTransmissionPlanningStudy-ExecutiveSummary.pdf

[24] Americans for a Clean Energy Grid. *Grid Strategies for Fewer New Miles*. July 2025, https://cleanenergygrid.org/wp-content/uploads/2025/07/ACEG_Grid-Strategies_Fewer-New-Miles-2025_Rev-1.pdf

[25] Federal Energy Regulatory Commission. “Stephen George, Vice President of System Operations and Market Administration, ISO New England.” *FERC*, https://www.ferc.gov/media/stephen-george-iso-ne-vice-president-system-operations-and-market-administration

[26] American Council for an Energy-Efficient Economy. “Energy Burden.” *ACEEE*, https://www.aceee.org/energy-burden

[27] Brookings Institution. “Has Pay Kept Up with Inflation?” *Brookings*, https://www.brookings.edu/articles/has-pay-kept-up-with-inflation/