Grid Strategies

White Paper

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Grid Funding from Data Centers in the Bipartisan American Affordability and Jobs Act (BAAJA)

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I. Executive Summary

With the rapid growth in data centers over the past few years, federal policy makers have been focused on how to make sure that adding large data centers to the electric system does not increase electricity bills for residential and other commercial and industrial customers. For example, the Trump Administration established a Ratepayer Protection Pledge with voluntary commitments from data center developers, utilities, governors, and other electric industry stakeholders targeted at data centers covering their full costs to the grid. Additionally, the U.S. House of Representatives passed the Ratepayer Protection Act with a similar goal.

Most recently, a bipartisan group of senators introduced an energy permitting reform bill, the Bipartisan American Affordability and Jobs Act (BAAJA), which includes a section on ratepayer protection. The first part of this section—on federally regulated transmission service—applies to "computational loads" (data centers) and would require electric utilities to charge these loads more for transmission service than under the current paradigm and more than other electric customers pay. This paper specifically estimates the costs that would be charged to data centers under the new transmission pricing provisions established in BAAJA.

BAAJA's ratepayer protection provisions are in Section 2107. Section 2107(a), requires the federal electricity regulator, the Federal Energy Regulatory Commission (FERC), to change its policy to no longer prohibit what is known as "and" pricing for transmission service but only where that service is requested on behalf of data centers. Under "and" pricing, a utility charges a customer for transmission service based on both the "embedded" costs of the existing grid and the "incremental" transmission cost triggered by serving that customer. While FERC has previously found this to result in charges above the cost of providing transmission service, BAAJA would overturn that policy for serving data centers. This section of BAAJA protects other ratepayers in two key ways. First, any incremental costs the data centers pay must be used to reduce transmission costs charged to other customers that the utility is serving. Thus, this source of funding for needed transmission investment could benefit other customers by alleviating their cost burden. Second, other customers would enjoy large net economic and reliability benefits from additional transmission capacity that has been difficult to fund in recent years despite clearly demonstrated need. Section 2107(b) includes the Ratepayer Protection Floor. This section has additional policies that may affect incremental costs for data centers and high-density computing loads, including a more expansive definition of "incremental" costs that includes the cost to construct and operate the generation or storage resources and distribution services to serve that customer. The policies outlined in this section would need to be implemented by individual states, but they are not required to do so.

A rough estimate of this new funding source (i.e., the additional charges to data centers via "and" pricing) is possible to calculate using industry-wide forecasts and cost estimates. There are significant uncertainties about the quantity of data centers that would be served under FERC's new policy, as required by BAAJA, and the incremental transmission cost that they would pay. However, based on a conservative estimate of 40.3 GW of data centers additions from industry forecasts and other assumptions documented later in this paper, **we estimate the "and" pricing policy change in BAAJA will result in $55 billion in transmission service charges to data centers over ten years, or close to $6 billion per year,** as summarized in the table below.[1] For comparison, we estimate that data centers are currently paying approximately $2 billion per year for transmission, meaning the "and" pricing policy change would result in an annual increase of approximately $3.5 billion over what data centers would be charged without BAAJA, yielding an additional $35 billion collected over 10 years.[2]

Table 1. Estimated costs collected from data centers over ten years with "and" pricing

Embedded Costs	Incremental Costs	Transmission Total
$35 billion	$20 billion	$55 billion

As noted earlier, the money received from data centers, as required by Section 2107(a), would be used to reduce transmission costs charged to all other ratepayers. Over a ten-year period, this would be enough to cover the cost of construction of almost 10,000 miles of new 765 kV transmission, roughly 1.5 times the total number of 765 kV lines currently planned to be in-service in the United States over the next decade.

While it would not require all states to adopt the provisions in the Ratepayer Protection Floor, we estimate that the incremental generation costs that could be recovered from the 40.3 GW of data centers over 10 years. We estimate that data centers could pay an additional $136 billion in incremental generation costs over 10 years, or approximately $14 billion per year, as an indication of the potential magnitude of the charges rather than a precise estimate. In addition, because data centers already pay some generation costs today, the total incremental generation costs created by the Ratepayer Protection Floor provisions should not be viewed as fully additive to existing charges.

1 Section 2107(a) of the bill appears to apply to the entire United State including ERCOT. However, since FERC does not traditionally regulate transmission service in ERCOT, this white paper does not include it.

2 Estimate produced by multiplying total data center demand (192 TWh) from Lawrence Berkeley National Laboratory (2026) by the transmission component of commercial electricity rates from EIA (14% of $0.083 per kWh).

The most likely result from the "and" pricing changes is the dollars collected from the incremental and embedded transmission costs will both drive down the embedded costs that other customers have to pay and enable new, incremental transmission to serve data centers, delivering broad economic and reliability benefits to other customers at no cost to them.

II. BAAJA requirements

BAAJA includes several provisions intended to ensure new data centers do not increase electricity bills for other ratepayers and simultaneously fund needed grid upgrades. The bill focuses specifically on "computational loads"—which it defines as technology infrastructure used for software, AI, cryptocurrency, or other computation activities at data centers—that are connected to the bulk power system. Other large industrial and commercial loads, such as manufacturers, are excluded.

At the federal level, BAAJA's ratepayer protection section requires FERC to change its long-standing policy on transmission pricing to require utilities to charge data center customers a rate that, in the past, FERC deemed excessive. Within 270 days of enactment, FERC must revise its 1994 Transmission Pricing Policy Statement to remove the prohibition on what is known as "and" pricing, to require utilities to charge wholesale customers taking transmission service on behalf of data centers a rate based on both embedded and incremental transmission costs. The bill explicitly finds that charging these customers less than the embedded "and" incremental cost of transmission service is not just and reasonable (pages 226-227), which is the primary standard that governs FERC's oversight of jurisdictional rates under the Federal Power Act.

Transmission system "embedded costs" are represented by the transmission revenue requirement associated with existing transmission system investments. This is mostly comprised of the depreciated value of past investments in transmission multiplied by the utility's rate of return, plus current depreciation, taxes, and the cost of operating and maintaining the transmission system. For wholesale transmission customers, such as generation owners, power marketers, municipal utilities, cooperatives, or investor-owned utilities that serve retail customers, these costs are determined through periodic FERC rate cases that set the formula by which rates are calculated, with the inputs to the formula rate updated annually. These costs are often uniform across a utility's footprint, but within a regional transmission organization (RTO) costs can vary by transmission zone and are based on each transmission owner's costs in its rate base and its load.

Transmission system "incremental costs" are typically the costs triggered by interconnecting a new transmission service customer or by providing more transmission service to an existing customer. This includes both the direct connection facilities to connect the new customer to the grid (the "driveway" connecting the customer to the main road) as well as any upgrades to the broader transmission network needed to reliably accommodate the customer (widening the main road). Historically, to determine the incremental cost of transmission service, FERC has

applied a "but for" test—the customer must pay for upgrades that would not have been required "but for" service to the customer.

Because data centers would pay both the embedded and incremental costs of transmission service to them per the changes BAAJA requires, they would most likely pay more than the total cost they impose. BAAJA states that FERC must ensure any incremental transmission cost payments from data centers are credited against the embedded costs recovered from all ratepayers under the utility's annual transmission revenue requirement to prevent the utility from double-recovering these costs. Any incremental cost payments would thereby reduce the rates paid by other customers through their embedded cost charges.

Within 270 days of revising the 1994 Transmission Pricing Policy Statement, BAAJA requires FERC to issue a proposed rule to implement the transmission pricing reforms, and to finalize the rule within a year after that. FERC's rule must require utilities to file tariffs at FERC to align with the Policy Statement (mandatory "and" pricing for service to data centers) and require standardized analysis to identify needed upgrades (which go into incremental costs) and cost reduction options. The bill also specifies that FERC's rule must provide a lower rate for non-firm transmission service.

BAAJA Section 2107(b) also establishes a "Ratepayer Protection Floor," which makes further federal policy changes towards ensuring data centers are paying the costs they cause to the electric system, including actions that states may take to charge new data centers at the retail level for those costs. The Ratepayer Protection Floor extends beyond transmission-only costs to encompass incremental generation, storage, and distribution costs as well.

The Ratepayer Protection Floor provisions represent guidance from the federal government on the rate treatment of large loads, but in order to have an effect, the provisions would need to be adopted by each individual state.

III. Cost estimates, assumptions, and uncertainties

We believe that reasonable estimates are possible for each of the components of the costs that could be imposed on data centers if BAAJA passes. However, we recognize and acknowledge that there are uncertainties in a number of areas that should be made explicit to contextualize the estimates. This section discusses the assumptions we make for the purposes of the cost impact estimate provided below.

There are significant uncertainties about the quantity of data centers that will be served under this policy. Data center and data center-related power demand growth, with or without this legislation, is inherently uncertain, as many forecasters, including Grid Strategies, have noted. This trajectory depends on many factors, including interconnection and generation delays, supply chain constraints, local permitting obstacles, questions about the financial sustainability

of the current investment trajectory, competition from foreign AI companies, and efforts to slow the rate of AI improvement.

Another key uncertainty is the ultimate applicability of FERC's new policy to existing transmission service agreements. Many data centers are already built and operating, while others have signed or will sign interconnection agreements but have not yet come online. The bill text does not address the timeline for applicability of the new "and" pricing policy. Moreover, because interconnection agreements are not typically public, and data centers can sign agreements between now and enactment of the bill, we do not have good data regarding how many new data centers will be subject to this policy.

For our analysis, we assume around 40.3 GW of new data centers outside of Texas that are affected by the new policy. This is likely a conservative estimate based on Enverus' High Confidence project tracker in its 2026 Q3 Data Center Capacity Forecast, which includes a total of 56 GW. The High Confidence project tracker is likely to be a conservative projection because it only covers ~90% of total data center related load growth forecasted by Enverus in 2027-2028, falling to ~30% in 2030. We used this High Confidence estimate for analysis because it is similar to the Grid Strategies estimate of ~60 GW nationally based on other market analyses summarized in our 2025 load growth report. Our 2025 load growth report also included a higher estimate of ~90 GW of data center additions as reported by utilities in FERC Form 714 reports.

In addition to uncertainties around the quantity of demand, the incremental transmission costs triggered by serving new data centers is highly uncertain. Interconnection costs may also increase going forward as the "low-hanging fruit" for interconnection is fully utilized and headroom on the grid becomes more and more scarce. Furthermore, the capital cost for new generation is in flux as demand exceeding supply has caused inflated and highly dynamic pricing that is often not publicly disclosed, and cost and fuel use vary across different generation types. Fuel prices are also highly uncertain.

For the incremental cost of transmission estimate, we use data from the Midcontinent Independent System Operator (MISO), which tracks approved transmission upgrades associated with spot load projects across the RTO's territory. Currently, MISO is tracking 163 approved projects, representing an $11.4 billion investment, to connect roughly 43.5 GW of spot loads. Based on this data, we calculate the load weighted average dollar per MW incremental cost of transmission for interconnecting new loads in MISO. This estimate from MISO is similar to our calculation of the incremental cost of transmission for new loads in other regions we reviewed, but MISO had the largest, publicly available dataset. There are also likely to be some additional incremental transmission upgrades in MISO's regional transmission planning process (called the MISO Transmission Expansion Plan, or MTEP) associated with new large loads for which we are unable to account without a true "but for" analysis.

For the embedded transmission costs, we use the current network integration transmission service (NITS) rates for the transmission owners or RTO sub-regions or transmission zones

where data centers are being developed, as identified by Enverus in its High Confidence project tracker in its 2026 Q3 Data Center Capacity Forecast. Embedded transmission cost-based rates are generally calculated by dividing the annual transmission revenue requirement for a transmission owner by the peak load (reported as $/MW-year). We are unable to account for how embedded cost rates may change over time for purposes of this calculation. For example, as new transmission investments are made, the annual revenue requirement for the investing transmission owner will increase, which could then increase the NITS rate. However, peak load is also likely to increase at the same time. Depending on the magnitude of the peak load growth, the increased denominator for determining the NITS rate may offset the increased numerator (the annual transmission revenue requirement), with the result steady or even decreased NITS rates. Without additional modeling, we are unable to account for this dynamic and, therefore, assume embedded cost rates remain the same throughout our analysis.

For the incremental cost of generation, we assume gas combined cycle generators provide the new capacity (MW) and energy (MWh) needed to serve new data centers. Gas combustion turbines are also being deployed as new capacity resources, but they are typically uneconomic sources of energy as they are less efficient than combined cycle generators. We use combined cycle gas generators as the incremental cost of generation because it provides a simple, rough estimate of both energy and capacity needs and costs to serve data centers. Developing a representative resource mix that includes new renewable generation, thermal generation, and storage, for both energy and capacity requires much more sophisticated modeling that optimizes resource adequacy and costs and would likely produce an incremental cost estimate that is not qualitatively different than using combined cycle gas generators. The use of combined cycle gas generator costs for the purposes of this estimate should also not be interpreted as implying that new gas generation would necessarily be the dominant source of incremental generation to meet new load. Indeed, the transmission provisions in BAAJA make it materially more likely that a generation mix reflective of current interconnection queues would be available to serve incremental load.

For combined cycle gas generators the assumed cost ($297/kW-year capital and fixed costs and $2.7/MWh variable O&M cost) and performance (6303 British thermal unit/kWh heat rate) of the combined cycle generator is taken from PJM's latest estimate, with the generators providing 78% of their nameplate capacity as dependable capacity, and a fuel cost of around $4.10/million British thermal units is assumed based on the national average electric sector delivered cost over the period August 2022-July 2026. New data centers are assumed to operate at a 70% load factor based on PJM's assumptions in their 2026 load forecast. We assumed the projects designated as behind-the-meter by Enverus would supply their own generation to cover their power demands and only included incremental costs of generation for the high confidence projects designated as grid-connected. It is important to note that the cost of generation for grid-connected data centers can be much higher in markets where there is no long-term hedging, and new supply entry is not keeping up with entry of new demand.

Another consideration is how many data centers will elect firm transmission service, which is a higher rate than non-firm. Non-firm customers can be curtailed during periods of peak system need, so non-firm service imposes less cost on the grid than firm service because it avoids the need for grid upgrades to ensure service can be provided under all credible scenarios for system stress. Given that few data centers are currently flexible and willing to curtail operations, we assume for this analysis that all new data centers take firm service.

As for policy choices that affect incremental costs, the Ratepayer Protection Floor section of BAAJA (Section 2107(b)) suggests that states could choose to use an "open season" approach to allocate access to electricity service to data centers. Open seasons are essentially auctions in which potential customers bid their willingness to pay for service. Open seasons are often used to subscribe new gas pipeline capacity but have also been used for new transmission investments. The price under an open season would be a market-based price, reflecting the supply of grid capacity and demand (willingness to pay) for such capacity. At this time, there appears to be so much demand relative to available supply, and limited prospects to expand grid capacity significantly in the near term, that one would expect, based on these economic fundamentals, to see high clearing prices. These prices are allowed to be well above the cost of supply, and thus higher than are normal in regulated electric service. BAAJA explicitly states that the price can be above embedded and incremental costs (in this case, covering generation, transmission, and distribution). We do not include this potential market-based charge, which would likely provide much higher payments from data centers, at the retail level, and instead limit our analysis to federal-level transmission service charges based on embedded and incremental transmission costs.

IV. Costs to data centers, and savings to other ratepayers

As explained above, there are significant uncertainties about the quantity of data centers that would be served under the new federal transmission pricing policy in BAAJA and about the incremental transmission costs to be recovered. However, based on the assumptions documented above, we estimate the "and" pricing policy change would result in $6 billion being charged annually for transmission service to data centers. The table below summarizes our results by region.

Table 2. Data center development and estimated annual transmission costs to be collected from data centers by region over ten years via "and" pricing[3]

Region	Data center (GW)	Embedded Transmission ($B)	Incremental Transmission ($B)	Transmission Total ($B)
MISO	16.7	$1.42	$0.83	$2.25
PJM	13.4	$1.65	$0.66	$2.31
SPP	3.5	$0.23	$0.17	$0.40
Southeast	2.8	$0.06	$0.14	$0.19
West	3.9	$0.18	$0.19	$0.38
Total	40.3	$3.54	$2.00	$5.53

Under the current status quo, data centers are paying some transmission costs as a part of their electricity rates. Based on 2026 estimates of data center electricity usage from Lawrence Berkeley National Laboratory and using the transmission component of commercial electricity rates from EIA, we estimate that data centers today are paying approximately $2 billion per year for transmission. These existing charges mean the "and" pricing provision in BAAJA would increase annual transmission costs for data centers by approximately $3.5 billion, resulting in about $35 billion in additional charges over 10 years compared with what data centers would pay without BAAJA.

As explained in Section II, the incremental costs charged to data centers would be used to reduce the embedded transmission costs charged to all other ratepayers. We estimate the total annual cost collected across the country from data centers over 10 years would be just under $55 billion. Based on current transmission plans in MISO, the Electric Reliability Council of Texas (ERCOT), Southwest Power Pool (SPP), and PJM Interconnection (PJM), there are approximately 6,000 miles of new 765 kV lines planned with in-service dates over the next decade. The transmission costs charged to data centers over a ten-year period would be enough to cover the cost of construction for roughly 10,000 miles of new 765 kV transmission.

3 The data center development in this table is a conservative estimate based on Enverus' High Confidence project tracker in its 2026 Q3 Data Center Capacity Forecast which only covers ~90% of total data center related load growth forecasted by Enverus in 2027-2028, falling to ~30% in 2030. The High Confidence project tracker does not include any data centers in Alaska, Hawaii, New England, and New York, which is reflective of the fact that they are currently negligible data center markets.

We also estimate that if fully enacted by all states, the Ratepayer Protection Floor would add an additional $14 billion in annual incremental generation charges to data centers. We estimate this could be an additional $136 billion in incremental generation costs that could be paid by the 40.3 GW of data centers over 10 years. This estimate is intended to illustrate the potential magnitude of incremental generation costs if all states adopt the provisions in the Ratepayer Protection Floor and should not be interpreted as a central estimate comparable to the embedded and incremental transmission cost estimate.

Reducing the cost of transmission investment for non-data center customers could provide a beneficial incentive to build more transmission. Regional analyses and other studies have found large net economic and reliability benefits from additional transmission investment, yet policy barriers have caused persistent underinvestment in public good network transmission. For example, MISO found a benefit-to-cost ratio of 2.6:1 for the 18 regional projects in its $10.3 billion regional transmission portfolio (Long-Range Transmission Plan Tranche 1), while SPP found a benefit-to-cost ratio of 5.24:1 for its recent $5.2 billion transmission expansion plan.

V. Conclusion

Policymakers at both the federal and state levels are looking for ways to ensure new data centers do not increase electricity bills, especially for residential customers. Congress is moving major legislation, the Bipartisan American Affordability and Jobs Act, that includes a section that would charge data centers more than other customers pay by allowing them to be charged for both the “embedded” costs of the existing grid and “incremental” transmission costs they trigger. We estimate this policy change would recover $55 billion over ten years from 40.3 GW of data centers. Additionally, if all states chose to implement the provisions proposed in the Ratepayer Protection Floor, we estimate as an upper bound another $136 billion would be recovered over ten years. This additional funding from data centers would reduce transmission costs charged to other ratepayers, helping provide an incentive to build more net beneficial transmission.