Bloom energy

2026 Utilities Insights:

How Onsite Power Is Becoming Part of the Large Load Strategy

June 2026

Executive Summary

Utilities are navigating several barriers to serving large load customers such as data centers. Interconnection timelines, equipment availability, and community acceptance are the most significant barriers, and most utilities report these conditions have gotten worse over the past six months.[1]

When grid power can't be delivered on the customer's timeline, data center developers[2] are turning to onsite behind-the-meter power. 61% of developers point to onsite power as their primary choice when grid power is a bottleneck, and only 12% would relocate to another market.

Forward-thinking utility decision-makers see a growing, permanent role for onsite power. Utilities expect onsite power to serve 34% of large load demand by 2030 and 41% by 2035, and 80% view distributed or onsite power as permanent infrastructure rather than a temporary bridge.

> **"Ultimately, utilities will provide integrated front-of-the-meter and behind-the-meter power solutions as part of a single package. That's increasingly the structure behind many of the major deals being announced today."**
>
> Senior Development Manager, Regulated IOU

Faster time to power is the most immediate benefit, but not the only one. 44% of utilities rank time to power as the leading driver of onsite power adoption, with reduced transmission and distribution (T&D) upgrade costs and improved reliability second and third at around 20% each. In some cases, these distributed assets can also strengthen local grid resiliency and flexibility, complementing the grid during constrained conditions or periods of peak demand.

Utilities have an opportunity to shape how onsite power fits into their service territory. Increasingly, onsite power is viewed as a complement to the grid.

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1 Survey was commissioned to enable a double-blind process between Bloom Energy and survey respondents. Survey was conducted in April 2026 and included 98 senior decision makers at US-based investor-owned utilities, unregulated or competitive subsidiaries, independent power producers, power developers, and municipal utilities. Interviews were also conducted with industry leaders to pressure-test findings and understand real-world implications

2 In this brief, the term "data center developers" includes hyperscalers, colocation providers, neoclouds, pure-play data center developers, and real estate developers entering the data center market.

1. Utilities face mounting barriers to serving large loads

It is well understood that utilities are struggling to connect large loads. Data centers are now requesting hundreds of megawatts and even gigawatts while T&D infrastructure takes years to build and interconnection queues are already under strain.

Utilities cite interconnection timelines, equipment availability, and community acceptance as the most significant barriers to connecting large loads (Figure 1). These most critical barriers are also the ones utilities report **are deteriorating fastest**, with 54%, 51%, and 61% of respondents saying interconnection, equipment, and community acceptance have gotten worse in the past six months.

Where utilities have more direct influence, the picture looks better. 33% say tariff pathways to sequester costs are improving and 28% say regulatory cost allocation is improving, **suggesting that regulatory barriers to serving large loads are starting to ease.**

Figure 1: Barriers to Serving Large Load Customers and Changes Over the Past Six Months

Barrier	Average severity score 1=Not a barrier, 5=Critical barrier	Respondents saying barrier has gotten worse / better over past 6 months
Interconnection timelines	3.6	54% worse / 12% better
Equipment availability	3.4	51% worse / 15% better
Community acceptance	3.4	61% worse / 11% better
Skilled labor availability	3.0	41% worse / 14% better
Regulatory cost allocation	2.9	30% worse / 28% better
Capital or financing availability	2.8	33% worse / 24% better
Stranded asset risk	2.7	23% worse / 16% better
Tariff or regulatory pathway to sequester costs	2.7	20% worse / 33% better
Adequate returns	2.5	17% worse / 21% better

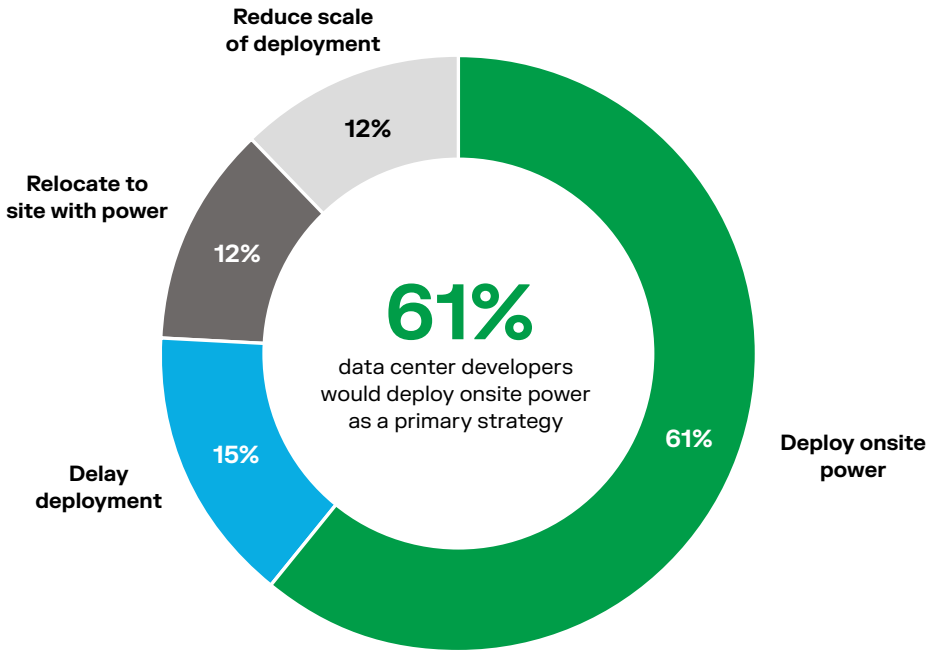
Source: Bloom Utility Power Survey, Q1 2026. Survey question: "How significant is each of the following as a barrier to your organization's ability to serve large load customers?" N=98; Survey question: "For this barrier, indicate how it has changed over the past six months" N=98

2. When grid power is not available, data center developers are turning to onsite behind-the-meter power

When grid power can't be delivered on the customer's timeline, data center developers are increasingly looking to onsite alternatives (Figure 2). In a survey of data center developers, **61% point to onsite power as their primary choice when grid power is a bottleneck**, a portion of which would be bridge power until grid power is available. Another 15% would delay deployment.

Notably, **only 12% expect to relocate to another market.** Data center developers want to stay in the utility's service territory and are looking for ways to make it work, with onsite power as the most common choice.

Figure 2: Data Center Developers' Primary Strategies if Grid Power is a Bottleneck



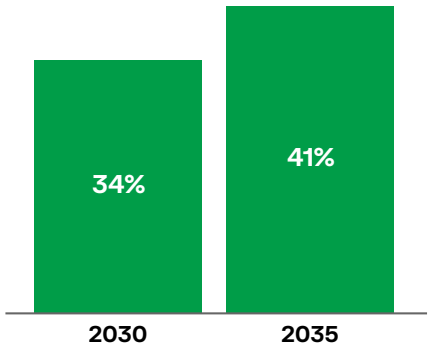
Source: Bloom Power Survey of data center developers, Q2 2026. Survey question: When grid power is a bottleneck for data center deployment, what is your organization's primary strategy? N=90

3. Utilities view onsite power as a growing, permanent part of how large loads get served

Utilities expect onsite power's role to grow (Figure 3), with behind-the-meter serving 34% of large load demand by 2030 and 41% by 2035.

Onsite power is becoming a structural part of how large loads get served. 80% of utilities view distributed or onsite power as permanent infrastructure, either as baseload (44%) or supplemental generation (36%), and only 5% see no role for it (Figure 4). Taken together, utilities are no longer treating onsite power as a workaround but as a long-term piece of how large loads get served. The choice now is how to engage, whether by owning and operating assets directly, partnering with onsite providers, or planning with them as they become integrated over time.

Figure 3: Utilities' Expectations of Onsite Power Share, Average Estimated % of Total Large Load Demand



Source: Bloom Utility Power Survey, Q1 2026. Survey question: "By each of the following timeframes, what fraction of large load customer demand do you expect to be served by onsite or BTM generation?" N=98

Figure 4: Primary Role of Distributed Power in Serving Large Load Customers, % Share of Respondents

Segment	Share (%)
Permanent baseload generation	**44**
Supplemental power (peak shaving or backup)	**36**
Bridge power only	**15**
We do not see distributed power as viable	**5**
We have not formed a view	**1**

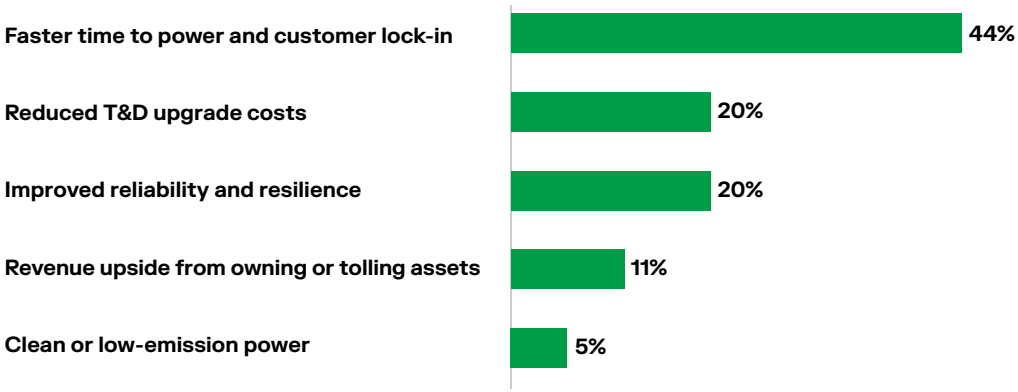
Source: Bloom Utility Power Survey, Q1 2026. Survey question: "For the BTM share, what generation sources do you expect will serve large load customers?" N=98

4. Faster time to power is the most immediate benefit of onsite power, but there are additional operational and strategic benefits

Utilities point to multiple reasons for behind-the-meter power. 44% of utilities rank time to power as the leading driver of onsite power adoption. Respondents recognize other benefits as important: reduced T&D upgrade costs and improved reliability and resilience rank second and third, each cited first by 20% of respondents (Figure 5).

Onsite generation can also be valuable when the grid is constrained, providing local resiliency and flexibility. Onsite generation can help defer T&D expansion and, depending on the technology, can support frequency regulation, voltage, fault ride-through, and dispatchable reactive power.

Figure 5: Benefits of Onsite Power for Serving Large Load Customers, % of Respondents Ranking the Benefit Most Important.



Source: Bloom Utility Power Survey, Q1 2026. Survey question: "What do you see as the most important benefits distributed power can provide to a utility or IPP serving large load customers?" (Rank 1-5) N=98

Implications for Utilities

Onsite power is becoming a permanent part of how large loads get served. The constraints utilities are working through, including interconnection timelines, equipment availability, and community acceptance, will take time to resolve. Data center developers are increasingly looking to onsite power to address their needs. Utilities see this playing out for the long term, with onsite power expected to serve 41% of large load demand by 2035 and 80% viewing it as permanent infrastructure.

How utilities engage will vary based on their structures. Regulated utilities are working through how onsite power fits into rate base, IRP filings, and tariff design, with early signs that the regulatory environment is opening up. Unregulated subsidiaries and competitive affiliates have more room to participate directly through ownership, tolling, or co-development with onsite power providers.

Increasingly, onsite generation is viewed as a complement to the grid rather than a replacement for it. Hybrid models that combine grid service with onsite generation can help utilities serve large loads faster while reducing pressure on transmission and distribution upgrades and improving system resilience. As utilities balance reliability, affordability, and economic growth, these structures may become increasingly important.

> **"More technologies are being viewed as generation assets. That gives utilities more flexibility to structure programs that shift costs, create value, and reduce risk in partnership with customers. These assets become part of our overall plan."**
>
> VP of Innovation, Regulated IOU

Some utilities are starting to put this into practice, integrating onsite generation into their service offering for large load customers, evaluating onsite technologies on speed, permitting, and reliability, and shaping the commercial structures that will make onsite a durable part of their generation mix.

About Bloom Energy

Bloom Energy empowers enterprises to meet soaring energy demands and responsibly take charge of their power needs. The company's fuel cell system provides ultra-resilient, highly scalable onsite electricity generation for Fortune 500 companies around the world, including data centers, semiconductor manufacturing, large utilities, and other commercial and industrial sectors. Headquartered in Silicon Valley, Bloom Energy has deployed 1.5 GW of low-carbon power across more than 1,200 installations globally. For more information, visit **www.bloomenergy.com/industries/utilities-industry/**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