



PSEG Large Load Adjustment Request for 2027 Load Forecast

Large Load Adjustment to the 2027 PJM Load Forecast for PSEG Zone

WHY IT MATTERS

Grid reliability

- An accurate load forecast is essential to grid reliability in both the near term and the long term.

EMERGING DEMAND

Additional load growth is expected

DATA CENTERS

- Expansion of existing facilities.
- New data center load requests.

PORTS

- Major port electrification projects will drive new energy demands.

RECOMMENDATION

For Accurate 2027 Forecast

- PJM's econometric load forecasting framework does not capture these project-driven loads.
- Adjustment is needed to reflect evolving New Jersey demand.
- PSE&G submitted adjustments to PJM to improve the accuracy of load forecast.

Large Load adjustments will align the forecast with emerging demand and support grid reliability.

Background

Existing Data Centers

PSE&G currently has 40 data center sites with a summer peak demand of 297 MW.

Changes from Prior Submission

- Submission content updated to reflect changes in project status and timing.
- Methodology updated to incorporate potential impacts of new Certificate of Public Convenience and Necessity (CPCN) and New Jersey large-load tariff legislation.
- Energization dates pushed out, resulting in corresponding changes to the forecast methodology and timing of load realization.

RERRA Process

- PSE&G met with its RERRA, the New Jersey Board of Public Utilities (NJBPB), on August 27 to review the proposed LLA adjustment forecast.
- Meeting discussions resulted in no adjustment to the forecast.

Large Load adjustments will align the forecast with emerging demand and support grid reliability.

Data Centers | SmartConnect Agreements

Safeguard Customers. Build Project Confidence. Support Progress.

01

INITIAL ASSESSMENT

Capacity Review

- Customer submits a \$25,000 fee.
(\$10,000 fee for 26kV less than 20MW)
- PSE&G performs a preliminary assessment of whether the requested load can be supported at the proposed location.
- Identifies initial system constraints and potential upgrade needs via a snapshot analysis.

69kV or
Higher



02

DETAILED ENGINEERING

Feasibility Analysis Review Agreement (FAR)

- (Customer commits to payment (~\$400K – \$1M+) and enters into a FAR agreement with PSE&G.
- Detailed engineering assessment of required facilities and system upgrades to deliver load.
- Serves as a deposit if project continues or actual study costs are retained.



03

CONSTRUCTION / FINANCIAL COMMITMENT

Transmission Extension Agreement (TEA)

- Final agreement for projects advancing to construction and make the loads firm.
- Defines required transmission and related infrastructure.
- Requires customer deposit covering the full cost of construction (typically \$40M+) to ensure other customers are not at risk for paying stranded costs.



26kV

ESO / RA

Electric Service Obligation / Refunding Agreement

Deposit is determined based on construction cost. Eligible refunds are tied to performance milestones on revenue over a 10-year term.

As projects advance through each agreement, confidence increases in customer commitment and load realization, while safeguarding the broader customer base.

Realization Probability and Utilization Factors For Data Centers

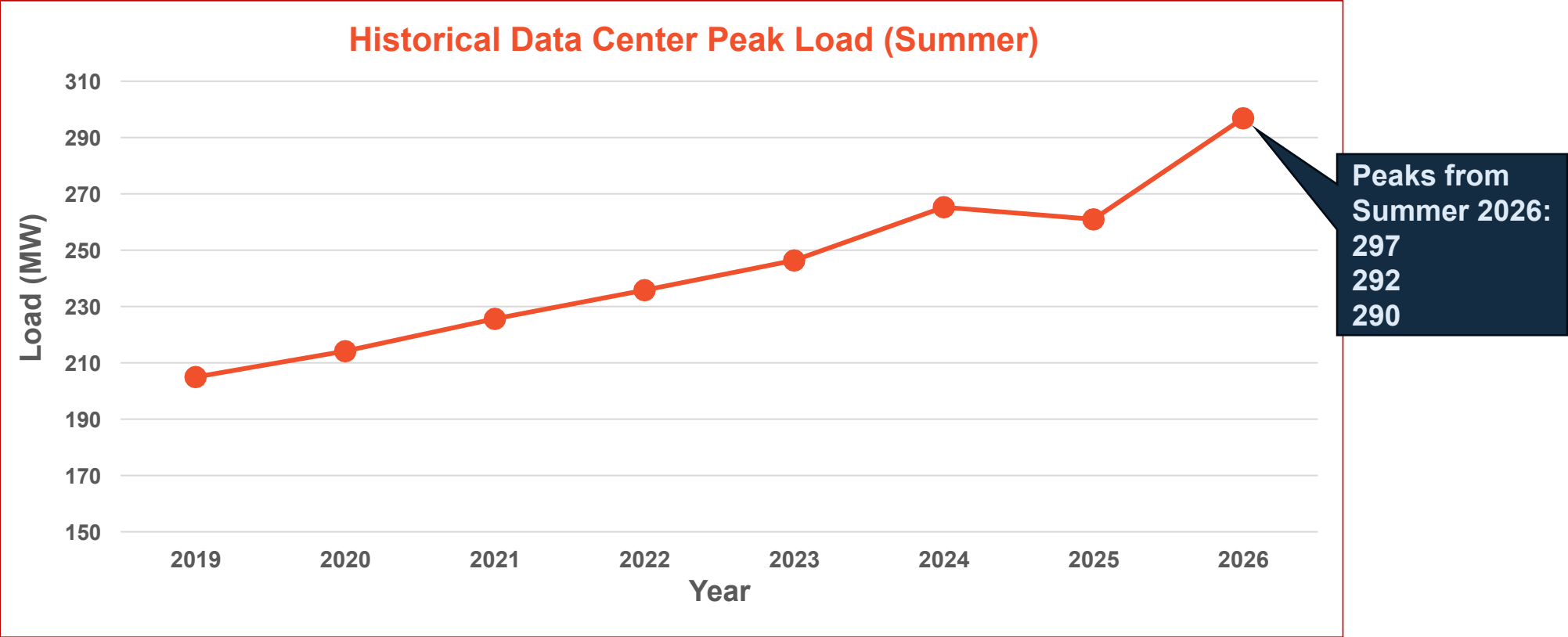
REALIZATION PROBABILITY	
Existing Expansions	100%
TEA Pending	85%
FAR Committed	85%
FAR Pending (69kV)	50%
FAR Pending (230kV)	30%
Capacity Review	30%

UTILIZATION FACTOR (DEMAND / CAPACITY RATIO)	
Project Category	Factor
Existing	70%
Existing Expansions	85%
TEA	
FAR Committed/Pending Capacity	
Review	

- By billing 85% of peak contracted load, the new data center tariff incentivizes customers to maximize use of their requested capacity.
- Based on customer feedback regarding expected utilization of their service, utilization factor has been standardized at 85%.
- Probability factors have shifted from reliance on customer communications to objective project milestones and demonstrated contractual/financial commitments.
- The 2026 approach employs an evidence-based assessment of expected data center load.

Forecast treatment is increasingly tied to documented project maturity and customer commitment.

Data Center Historical Data



Data Center Forecast

Forecast Peak Load (Summer)

Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
Capacity (MW)	448	701	881	1226	1644	2588	3171	3661	3848	3993	4005	4014	4022	4030	4038	4045	4053	4060	4061	4061	4061
Demand (MW)	365	580	732	1025	1380	2182	2678	3095	3254	3377	3387	3395	3402	3408	3415	3421	3428	3434	3435	3435	3435

Firm/Non-Firm Data Center Load

Firm: 20%

Non-Firm: 80%

Ports Electrification

- The Clean Ports Program in the Inflation Reduction Act includes \$3 billion in funding to plan, purchase or install zero-emission port equipment or technology at the U.S. ports¹.
- The Port Authority of New York and New Jersey (PANYNJ) is planning to electrify operations at the Ports of Newark, Elizabeth and Bayonne in support of its goal to achieve net-zero carbon emissions by 2050².
- This load increase is not captured by the economic drivers in PJM’s Load Forecasting Model.

Year	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
Capacity (MW)	0.9	12	12	13	15	32	45	52	60	65	70	76	81	119	121	122	123	123	147	148	148
Demand (MW)	0.7	10	10	10	12	26	36	41	48	52	56	60	65	95	97	98	98	98	118	118	119

100% Probability Factor assumed based on the established port electrification roadmap

Utilization Factor (Demand / Capacity): 80%

1: United States Environmental Protection Agency, “Clean Ports Program”, <https://www.epa.gov/newsreleases/epa-announces-historic-400m-clean-ports-investment-new-jersey>
2: Squires, Anna,” NREL Leads the Charge to Electric Trucks at Port of New York and New Jersey”, National Renewable Energy Laboratory, January 30, 2023



 **Thank**
you