

How NineDot's community batteries supported New York City during the July 2026 heat dome

And what was revealed about ways to enhance flexibility

During New York's July 1-4 heat wave, NineDot Energy's community battery energy storage system (BESS) fleet reduced power grid stress precisely when and where¹ it was needed most.

NineDot exported **34 megawatts** during the peak hours from nine BESS projects – the largest fleet operating in Con Edison's service territory – supporting both the local distribution system and the statewide transmission system. That's the equivalent of removing the power load from about 50,000 window air conditioners from the grid².

The heat wave also provided a real-world demonstration of a pressing and timely regulatory issue: BESS are capable of responding rapidly to changing power grid conditions, despite limitations within the Value of Distributed Energy Resource (VDER) program, which require BESS to operate with static dispatch windows. **During the July 2nd event, Con Edison, for the first time, began examining how VDER BESS can, instead, dynamically operate based on hourly grid needs rather than static dispatch schedules.** The event underscores the need to evolve the VDER framework to optimize benefits to the distribution and transmission grids. As heat waves and power grid stress events become more frequent and intense, flexibility is the most important tool for reliability and affordability.

A week of increasing grid stress

The week began with typical summer power grid usage before escalating into one of the most significant grid reliability events New York City has experienced in years.

NineDot's fleet operates under two operating profiles:

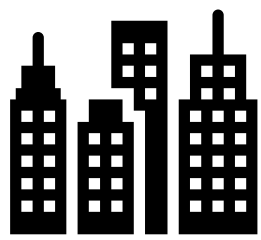
- daily dispatch under [VDER](#) according to fixed operating windows (typically 4-8 PM on non-holiday weekdays) as set by the tariff and
- utility-directed demand response through the Dynamic Load Management (DLM) program, where day-ahead operating windows can be reset each summer and BESS can be called outside of these windows with as little as ten-minute notice.

Throughout the heat wave, NineDot's batteries performed exactly as designed under their respective operating program. The following figure illustrates how the BESS fleet's charging and discharging profile closely tracked rising electricity demand throughout the week.

¹ NineDot's fleet is located downstate in NYISO Zone J (New York City). Downstate was determined to be among the highest value deployment areas for energy storage as the retirement of its aging fleet of fossil fuel power plants drives the need for "dispatchable capacity to maintain reliability, both in terms of resource adequacy and transmission security," [New York's 6 GW Energy Storage Roadmap: Policy Options for Continued Growth In Energy Storage](#), Case 18-E-0130 (Updated March 15, 2024).

² For example, The *New York Times Wirecutter* top pick for window air conditioners ([Midea U Smart Inverter model](#)) has a peak power draw of 710 watts.

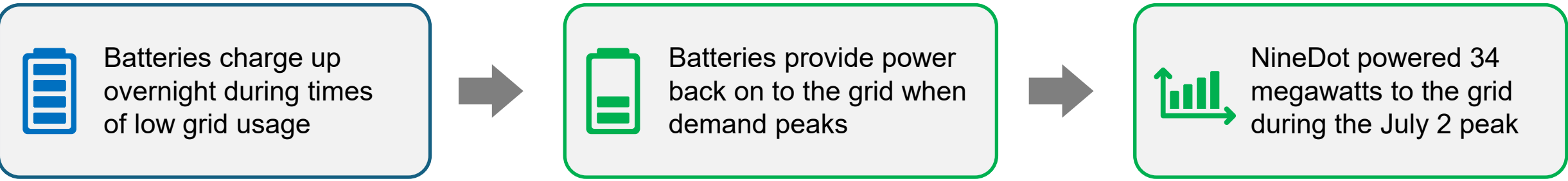
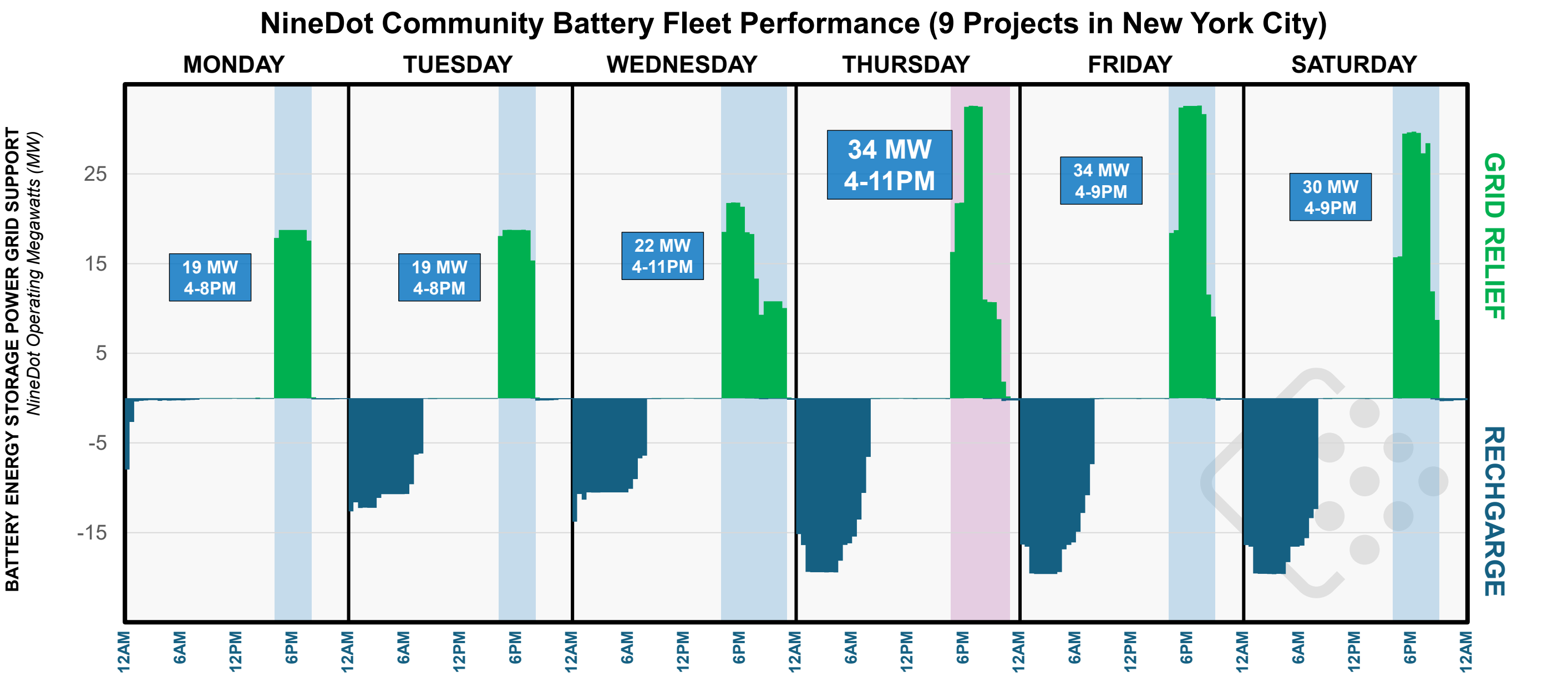
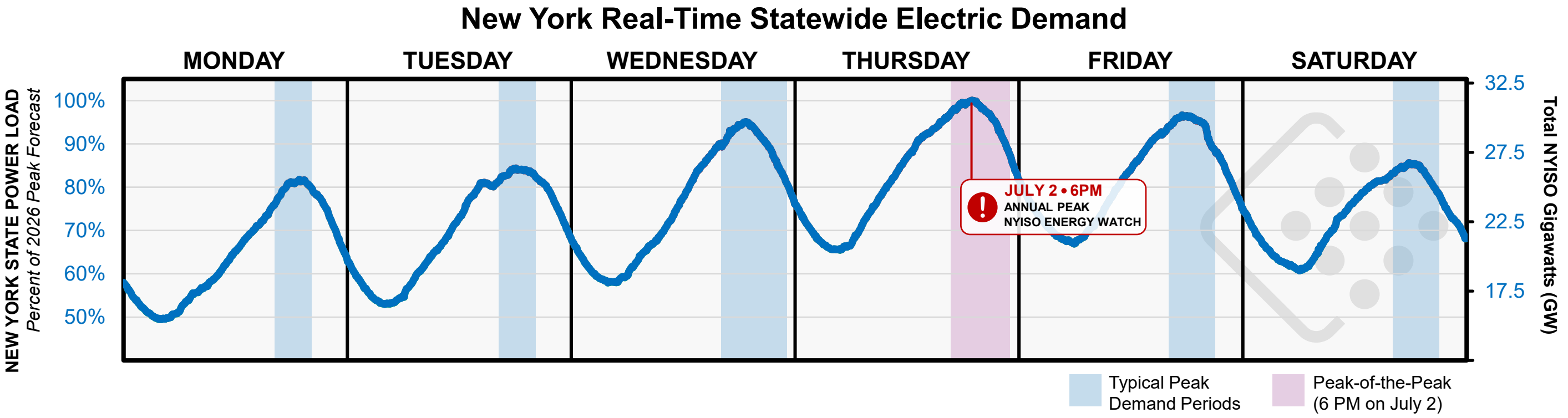
BATTERIES SUPPORT NEW YORK'S GRID DURING EXTREME HEAT



BATTERIES = BETTER GRID EFFICIENCY + RELIABILITY + AFFORDABILITY

Batteries shift electricity consumption from periods of low-usage to periods of peak demand, reducing stress on both Con Edison's local distribution system and the bulk transmission grid.

New York City Daily High Temperatures During the 2026 Heat Dome Emergency (°F)					
June 29	June 30	July 1	July 2	July 3	July 4
88°	89°	95°	102°	100°	98°



- **Monday and Tuesday:** Only NineDot's VDER BESS were activated. The batteries started fully charged then discharged during their normal 4-8 PM operating window and recharged overnight during off-peak grid hours.
- **Wednesday:** Temperatures climbed into the mid-90s and Con Edison called all DLM resources in addition to the pre-scheduled VDER-participating BESS. NineDot's VDER batteries stuck to their 4-8 PM schedule, while most of its DLM batteries were called on to provide additional support from 7 to 11 PM.
- **Thursday:** Statewide electricity demand reached its weekly—and possibly annual—peak. NYISO issued an [Energy Watch](#) urging customers to reduce electricity consumption due to declining operating reserves. Con Edison experienced localized blackouts, implemented brownouts via intentional voltage reductions³ impacting nearly 400,000 customers, and suffered the loss of a [major transmission line](#). **At the height of Thursday's system peak (6-8 PM), NineDot's fleet exported 34 megawatts of power to the grid**, providing local load relief while also reducing demand on New York's bulk transmission system and generation units.
- **Friday and Saturday (Independence Day):** Con Edison adjusted the dispatch window for DLM batteries in response to evolving grid conditions to 5-9 PM rather than 7-11 PM. NineDot was also able to operate its VDER-participating BESS, which are typically designed as a weekday-only resource, to provide extra Saturday grid relief during the holiday, on short notice - this was another first.

Thursday's reliability event underscored the need for more flexibility

On Thursday afternoon, Con Edison contacted NineDot to discuss whether batteries operating under the static VDER program could technically be discharged outside of their preset operating windows. The question arose because of a reliability event on the upstream transmission system that created grid conditions that differed from the fixed dispatch schedules.

The batteries are technically capable of doing so, in near real-time. NineDot dispatches its fleet using a control system that allows for remote modification of charging and discharging schedules. However, Con Edison's current interconnection standards require systems to include software and hardware controls that automatically trip the batteries offline if they operate outside the predefined windows.

During a joint conference call between Con Edison and NineDot's Operations team, it was determined that modifying operating windows is technically feasible with manual intervention both on-site and within Con Edison's control center. Ultimately, no override was requested.

The calling of Auto-DLM events (outside of test events) on Friday and Saturday also marked a first for NineDot's participating batteries. Under the DLM program, Con Edison can call two types of events for participating BESS: Term-DLM and Auto-DLM events. Term-DLM events, aimed at a broad array of demand response assets, are called a day ahead; Auto-DLM events are reserved for the grid's highest-need periods and can be called with ten minutes' notice. Until now, all NineDot DLM events have been made a day ahead under the Term-DLM program.

³ According to Con Edison, [the brownouts impacted 396,000](#) customers across Brooklyn and Queens.

The Auto-DLM events were notable for requested discharge windows of 5-9 PM. In January, Con Edison modified the Term-DLM discharge windows for most Staten Island networks from 4-8 PM to 7-11 PM. Under the current DLM program, assigned day-ahead windows are selected from a set of only four potential windows (11-3, 2-6, 4-8, or 7-11) which were established over twenty years ago and have not been updated to provide for more locational variation in grid needs. 5-9 PM is not one of the day-ahead options, even though many networks experience peak demand during this four-hour window. More variation in Term-DLM operating windows would allow for batteries to better meet grid needs.

Looking forward

As electrification continues to grow and extreme weather events become more frequent, distributed BESS projects can provide multiple reliability services simultaneously:

- Reduce loading on local distribution infrastructure
- Lower demand on the transmission system
- Shift electricity from periods of surplus generation to periods of peak demand
- Respond rapidly to changing grid conditions and contingency events
- Reduce reliance on peaker plant generation
- Absorb excess renewable energy generation
- Reduce greenhouse gas emissions by shifting consumption to lower-emission periods

The 2026 heat wave demonstrated that these capabilities are no longer theoretical. Community-scale batteries are already providing meaningful reliability benefits to New York's electric system. As battery deployment accelerates, continued evolution of New York's VDER, DLM, and interconnection frameworks can allow utilities to make smarter and more fulsome use of these resources during both routine operations and reliability emergencies.

Many of these opportunities have already been identified in Public Service Commission (PSC) filings⁴ and could be implemented through relatively modest changes to existing program design. ConEdison and the PSC should act swiftly to effectuate reforms under its active VDER (15-E-0751 and 19-E-0283) and Zone J Transmission Reliability Needs dockets (25-E-0764).

⁴ Highlights include (1) NineDot Proposal for a Modified Locational Service Relief Value (LSRV) Pricing Signal: Optimizing Local Grid Benefits and Transmission Reliability Needs in its [Comments on MCOS, DRV + LSRV](#), Case 15-E-0751, page 29 and (2) NineDot's Bidirectional Service Classification proposal, [NY-BEST Comments on the Grid Flexibility Potential Study and First Iteration of the Grid of the Future Plan](#), Case 24-E-0165, July 21, 2025, page 17