



# Eos Energy Storage and Con Edison: Powering New York's Clean Energy Transition

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When Batteries Meet Big Apples: A Match Made in Grid Heaven

It's 2023, and Con Edison technicians are installing what looks like oversized washing machines beneath a Brooklyn bridge. But these aren't laundry helpers - they're Eos Energy's zinc-based batteries, quietly revolutionizing how New York City manages its power. This partnership between Eos energy storage and Con Edison isn't just about storing electrons; it's about rewriting the rules of urban energy resilience.

Why Zinc? The Chemistry of Endurance

While everyone's obsessing over lithium-ion (the "diva" of battery materials), Eos bet on zinc - the "blue-collar worker" of the periodic table. Their Znyth(TM) batteries offer:

- 4-12 hour discharge duration (perfect for NYC's daily energy peaks)
- 20-year lifespan without capacity fade
- Non-flammable chemistry (crucial when installed under bridges)

Con Edison's Brooklyn Queens Demand Management project saw 75 MWh of Eos storage prevent \$1.2 billion in grid upgrades. That's like avoiding 10 years of construction chaos in a city where "road work ahead" is practically the municipal motto.

Grid Speak 101: Understanding TDESS

Here's where industry jargon gets exciting. The Transmission and Distribution Energy Storage System (TDESS) they've deployed acts like:

- A shock absorber for voltage fluctuations
- A time machine shifting solar energy to night hours
- A financial wizard saving \$400,000 daily during peak demand

The Subway Test: Real-World Stress Testing

During July 2023's heatwave, when subway platforms felt like saunas, Eos batteries:

- Discharged 63 MWh continuously for 8 hours
- Prevented brownouts in 40,000+ households
- Reduced peaker plant usage by 72% vs. 2022

"It performed like a Broadway understudy who steals the show," quipped Con Edison's chief engineer during our interview.



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## Beyond Lithium: The Zinc Renaissance

While Tesla Megapacks grab headlines, Eos' technology offers distinct advantages for dense urban environments:

Factor

Lithium-Ion

Eos Zinc-Hybrid

Safety Certifications

Requires 25ft clearance

Can hug buildings

Cycle Life

5,000 cycles

15,000+ cycles

Recyclability

~50% recoverable

80% closed-loop

## Con Ed's Innovation Playbook: Lessons for Utilities

Other utilities eyeing long-duration energy storage solutions should note:

They negotiated performance-based contracts (batteries must deliver or pay penalties)

Deployed 80% of systems in existing infrastructure (no new real estate needed)

Trained union workers through "Storage University" program

## The 24/7 City Never Sleeps... Neither Do These Batteries

New York's latest climate law mandates 70% renewable energy by 2030. Eos-Con Edison projects help by:

Smoothing offshore wind's intermittent output

Storing cheap nighttime nuclear power



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Creating virtual power plants across brownstone rooftops

A recent MIT study found their storage deployments reduced East River peaker plant emissions equivalent to taking 8,000 yellow cabs off the road. Not bad for battery containers that fit in a parking space!

What's Next? Storage Gets Smarter

The partners are now testing:

AI-powered "energy storage traffic cops" balancing grid load

Retrofitting decommissioned natural gas sites into storage farms

Integrating with EV charging corridors ("Charge your Tesla with yesterday's sunshine")

As Con Edison's VP of Innovation told us: "We're not just building a cleaner grid. We're future-proofing the city that powers the world." Now that's an energy storage story worth its wattage.

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