

Utility of BESS in New York State 2026 Informational Report

Rising demand for electricity makes it ever-harder to meet the needs of yearly-peak hours, which in most American grids are near double the hourly average over 24 hours. For a commodity in short supply at these times, utilities must pay sky-high spot prices, passed to customers. The up-trending price of natural gas also raises bills for electricity even in months that don't see yearly maximal loads.

A sensible approach to threatened brownouts or rolling blackouts and the hard reality of higher electric bills is to increase supply by adding generating capacity. (Equally important is slowing the rate of growth in demand, but that's not our topic here.) For the added capacity, New York State has wisely determined to emphasize wind, distributed solar and utility-scale solar. These are cheaper to build than base-loaded plants fired by fossil fuels or fissionable material. Moreover,

- They don't put lung-damaging fine particulates into the air we breathe.
- They don't traffic in bomb-grade uranium or produce high-level radioactive waste for which no long-term repository can be agreed on.
- They don't require new or larger natural gas pipelines.
- They don't heat up the atmosphere by polluting it with carbon dioxide and leaked methane, raising temperatures over land and ocean.
- They take years less to come into production than the others.
- And, their fuel is literally free.

Ideal solution? No, but a good one. Why not ideal?

Three problems with wind and solar:

(1) Being variable energy resources, they can't be counted on to meet a timed demand.

(2) Even on a sunny, windy day, neither can be geared to increase the rate at which it generates and sends out electricity over the next hour; they are not dispatchable. Thus, neither is useful in itself to help with seasonal maxima in demand like those on a hot summer evening. For delivering electricity in bulk

during the predictable peri-sunset ramp-up in load, wind can help; solar, however, is no use in those hours unless its earlier output has been temporarily stored.

(3) Neither has a place in keeping the second-to-second balance of supply and demand that the grid *must have* for reliable operation at 60 cycles per second. Typically, grid stabilization relies on fast-spinning heavy turbines, the inertia of which resists deviations from the established system frequency. Solar and wind, both inverter-based, have no inertia. Where they are a big part of the electricity mix (think California in the daytime), inertia is less in that some heavy spinning turbines have been idled. To stabilize the grid then can require more dispatchable energy than base loaded plants can provide instantly.

Utility-scale Battery Energy Storage Systems (BESS) help solve all three of the drawbacks of wind and solar mentioned above. BESS can store electricity generated when the total capacity of base load plants plus variable energy resources to supply the grid for a certain time span exceeds demand over that interval. BESS can then dispatch energy with no lag time to meet increased short-term demands or to stabilize the grid. BESS shift energy availability from one part of the day to another, for example from mid-day to the evening ramp-up in load. BESS can thus, on a daily basis, ease the burden on base-loaded generators to meet the anticipated evening increase in load, by dispatching energy stored earlier in the day.

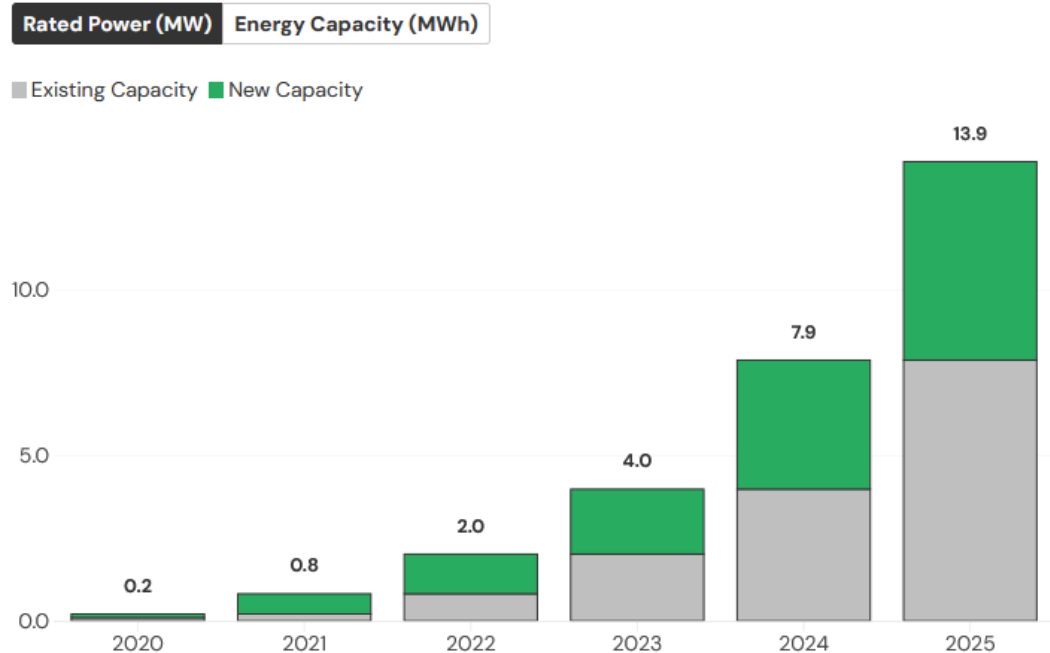
BESS can also take the place of air-polluting [peaker plants](#) that should have been retired before now. The cost of their product per KWh is gigantic, as they must be maintained year-round at great expense to go on standby a few days a year and to run near full capacity only a few hours on those days. To replace old gas-fired “peakers” with newer gas-fired ones would mean huge capital costs passed to ratepayers. The new ones would still emit CO₂ and harmful oxides of nitrogen though less than their predecessors did.

A full BESS can discharge electricity instantly to stabilize the grid in case of a sudden increase in load or dip in supply. If low, it can instantly start charging to buffer an upswing in supply or an unexpected drop in load.

One BESS, even relatively large (say, 100 MW and 400 MWh), can do little for the entire NYISO grid, which as this is written in early June has its highest daily load around 27,000 MWh. (The forecasted peak demand for a heat wave this summer is around 31,600 MWh.) A series of BESS, however, would combine to a very useful proportion of that figure. New York State aims for 6,000 MW (6 GW) of BESS power storage by 2030, which could deliver 12,000 to 24,000 MWh of electricity over the most trying four hours of the daily cycle. To get there, many localities must cooperate to shore up a resilient modern grid that will benefit everyone connected to it. Is that do-able? Yes. Texas added 6,000 MW just in the year 2025.

6 GW of battery capacity began operating in 2025 - nearly doubling ERCOT's existing capacity

Operational battery capacity (MW)



Without a very big role for solar and wind “immediately if not sooner,” New York State faces a future of fast-rising costs to slowly construct, then scramble to fuel, fossils and nukes. In this future, greenhouse gas emissions will certainly go up, as will electricity bills to consumers.

In contrast, a big role for utility-scale solar and wind working with BESS means faster and lower-priced rollout of new generating capacity the fuel for which is free; thus, less increase in cost to consumers. If wind and solar penetrate enough into the NYS electricity generating mix, our state will be helping the atmosphere to stave off further climate collapse rather than contributing to it as we are now.

Without BESS, however, it will be impossible for NYS to realize the enormous advantages – to consumers and to the atmosphere – of a grid in which wind and utility-scale solar have a major role. We’ll be stuck in the poisonous rut where nearly all added capacity (and replacement) is from fossil fuels and nuclear.

Prepared by the Saugerties Conservation Advisory Commission. 14 June 2026
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Abbreviations

MW = megawatt = 1000 kilowatts (KW) = 1,000,000 watts of power

MWh = megawatt hour = a megawatt of power delivered for one hour

ERCOT Electrical Reliability Council of Texas It has a role like that of NYISO (New York Independent Systems Operator)