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October 6, 2025

Submitted electronically

TO: NYSERDA
17 Columbia Circle
Albany, NY 12203-6399

RE: Draft State Energy Plan Comments

Dear New York State Energy Planning Board,

The New York Battery and Energy Storage Technology Consortium ("NY-BEST") is pleased to submit comments for consideration in relation to the Draft State Energy Plan released by the New York State Energy Planning Board ("the Board") on July 21, 2025.

We greatly appreciate the Board's consideration of our comments and recommendations. If you have any questions about these comments or need additional information, please contact us at 518-694-8474 or by email at info@ny-best.org. Thank you.

Respectfully submitted,

A handwritten signature in black ink that reads "William P. Acker".

Dr. William Acker
Executive Director, NY-BEST

INTRODUCTION AND BACKGROUND

The New York Battery and Energy Storage Technology Consortium (NY-BEST) is a not-for-profit industry trade association with a mission to grow the energy storage industry in New York. We act as a voice of the energy storage industry for more than 180 member organizations on matters related to advanced batteries and energy storage technologies. Our membership includes manufacturers, developers, start-ups, leading research institutions and universities, government bodies, and numerous companies involved in the electricity and transportation sectors.¹

NY-BEST and our members have been actively engaged in the development and implementation of the State's 3 GW and 6 GW Energy Storage Roadmaps and the Climate Action Council's implementation of the State's Climate Leadership and Community Protection Act (CLCPA)². NY-BEST is committed to helping meet New York State's goal to deploy **6 GW of energy storage on the electric grid by 2030**,³ in support of a cleaner, more reliable, and more affordable electricity grid for all New Yorkers.

Indeed, **energy storage is a key enabling technology to achieve an affordable energy transition**. The benefits of energy storage to the State of New York have been extensively studied and documented, including but not limited to the analysis done for the NYSERDA/DPS 6 GW Energy Storage Roadmap ("Roadmap"). According to the Roadmap, "A target of 6 GW of storage by 2030 is projected to **reduce the projected future electric system costs by approximately \$2 billion**, in addition to public health benefits resulting from reduced exposure to harmful pollutants from fossil fuel resources that would otherwise operate during peak demand periods."

NY-BEST appreciates the Board's efforts to develop the Draft State Energy Plan and its consideration of energy storage to support the State's energy goals. However, we are concerned that the Draft Plan fails to recommend critical actions that will **ensure energy storage deployment can be accelerated at the pace necessary to capture cost-saving benefits and ensure the State achieves its energy targets and mandates**. Our comments below focus primarily on the shortcomings of the Pathways Analysis and the recommendations included in *Chapter 1: Electricity*, but we also offer feedback on other sections of the Plan, particularly as they relate to energy storage supporting the decarbonization and resiliency of other sectors.

¹ NY-BEST comments represent the interests of the organization as a whole and not the views of any single member. Our members have diverse interests and the organization's views are intended to be reflective of the energy storage industry collectively.

² New York State Climate Leadership and Community Protection Act, Chapter 106 of the Laws of 2019.
<https://www.nysenate.gov/legislation/bills/2019/s6599>.

³ New York State Department of Public Service (DPS) and the New York State Energy Research and Development Authority (NYSERDA). "New York's 6 GW Energy Storage Roadmap: Policy Options for Continued Growth in Energy Storage (Case 18-E-0130)," March 2024. Accessed online:
<https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Programs/Energy-Storage/2024-06-6GW-Energy-Storage-Order.pdf>

COMMENTS ON THE DRAFT STATE ENERGY PLAN

Shortcomings of the Pathways Analysis

NY-BEST's primary concern is the shortcomings of the Pathways modeling analysis used to inform the Draft Energy Plan. If New York State will collectively invest billions in Energy Plan initiatives informed by this modeling, the analysis must be significantly improved to ensure accurate and cost-effective planning. Key issues include:

- **Modeling does not capture the value of energy storage to reduce cost.** The Pathways analysis is conducted in three phases: reliability modeling (RECAP), least-cost capacity expansion (RESOLVE), and iterative valuation (REACP).⁴ As the Draft Plan notes, "Within the capacity expansion framework [RESOLVE], the model simulates the operations of the system over 30 representative days."⁵ This 24-hour snapshot approach assumes that energy storage will charge and discharge between midnight and 11:59pm a single day, preventing the model from capturing load-shifting potential across days or weeks. This fundamentally flawed approach undervalues the contributions of intraday energy storage and completely omits the value proposition of long-duration energy storage (LDES, defined by the U.S. Department of Energy as greater than 10-hour duration) and multi-day storage. By systematically under-representing the beneficial incorporation of energy storage in the system in the modeling, the Energy Plan is not fully utilizing the capabilities of energy storage to optimize the system and reduce cost. A portfolio of energy storage resources of different durations can maximize renewable utilization, avoid overbuilding of resources, and reduce reliance on expensive, fuel-based Clean Firm technologies. More granular modeling encompassing longer timeframes must be conducted to accurately inform the resource mix that will be needed in 2040 to achieve State targets.
- **Modeling fails to accurately evaluate long-duration and multi-day energy storage among Zero-Carbon Firm resources.** As the Draft Plan notes, "In this modeling, this need for zero-carbon firm capacity is met by hydrogen in combustion-based generation resources; however, the need could also be met by a number of other emerging clean firm technologies."⁶ Further, the modeling done for the State analysis only includes lithium-ion energy storage between 2-8 hours duration and 8-hour pumped hydro storage.^{7,8} Omitting energy storage resources between 8-100hrs is a significant gap that must be remedied to ensure the State is pursuing the most cost-effective path to a zero-carbon electricity grid by

⁴ New York State Energy Board, "Draft New York State Energy Plan, Chapter 16: Pathways Analysis," p A-4-5. July 21, 2025. Accessed online: <https://energyplan.ny.gov/-/media/Project/EnergyPlan/files/Draft-2025-Energy-Plan/Topic-Area-Chapters/Draft-New-York-State-Energy-Plan-16-Pathways-Analysis.pdf>

⁵ Ibid., pA-9.

⁶ Ibid., p28.

⁷ Ibid., p A-9.

⁸ New York State Energy Board, "Technical Supplemental Annex A - Input Assumptions, Electric Supply Overview." Accessed online: <https://energyplan.ny.gov/-/media/Project/EnergyPlan/files/Draft-2025-Energy-Plan/Pathways-Analysis-Technical-Supplement-Annex-1-Input-Assumptions.xlsx>

2040. By omitting these resources, the modeling likely overstates both the total needs for existing and new generation resources, and total electric-sector costs. Assuming that firm capacity must be met exclusively by green-hydrogen fueled combustion power plants yields deeply misleading results and should not form the basis of the State’s energy planning. Instead, the modeling *must* incorporate a portfolio of energy storage of varying sizes and durations, including multiday storage, to achieve the most cost-effective and reliable solution.

- **Net Zero scenarios do not inform Energy Plan recommendations.** NY-BEST is deeply concerned that in the Draft Plan, the Board has scaled back its commitment to CLCPA mandates and the vision set out by the Climate Action Council Scoping Plan adopted in 2022.⁹ While the Scoping Plan recommits to the CLCPA mandates, including net zero emissions by 2050,¹⁰ the Draft Plan omits the net zero by 2050 target from the summary of Clean Energy and Climate Targets.¹¹ Further, the Draft Plan states, “The core planning scenario for the State Energy Plan is Additional Action, a forward-looking scenario that is consistent with ambitious but achievable progress. ... The net zero scenarios reflect what would be needed for full achievement of the 2050 emission reduction targets *for comparison*” (emphasis added).¹² NY-BEST urges the Board to recommit to Net Zero, particularly as the net zero scenarios demonstrate significantly higher benefits beginning as soon as 2030 and increasing through 2040. The current framing raises concern that the State may no longer be fully committed to the 2050 emission reduction targets mandated by law under the CLCPA.

Chapter 1. Electricity

4.1: Accelerate the Deployment of Clean Energy Resources

Draft Energy Plan Recommendations

1. *Support the Large-Scale Renewables (LSR) industry and increase clean energy supply by continuing CES solicitations and leveraging additional recommendations from the CES Biennial Review process.*
2. *Continue to build-out distributed solar through NY-Sun to achieve the 10GW target and leverage Statewide Solar for All as a cost-effective way to drive additional development while maximizing LMI benefits.*

⁹ New York State Climate Action Council. “Scoping Plan: Full Report,” December 2022. Accessed online: <https://climate.ny.gov/resources/scoping-plan>

¹⁰ Ibid., p51.

¹¹ New York State Energy Board, “Draft New York State Energy Plan, Summary for Policymakers,” p5. July 21, 2025. Accessed online: <https://energyplan.ny.gov/-/media/Project/EnergyPlan/files/Draft-2025-Energy-Plan/Volume-I-Summary-Draft-Plan.pdf>

¹² New York State Energy Board, “Draft New York State Energy Plan, Chapter 1: Electricity,” p21. July 21, 2025. Accessed online: <https://energyplan.ny.gov/-/media/Project/EnergyPlan/files/Draft-2025-Energy-Plan/Topic-Area-Chapters/Draft-New-York-State-Energy-Plan-01-Electricity.pdf>

3. *Monitor the effectiveness of the RAPID Act with respect to the pace of additions and local community engagement.*
4. *Support strategies that expedite and streamline development including advancing Clean Energy Zones and leveraging NYPA's authority to build renewables.*
5. *Continue to support workforce development by directing efforts to those in DACs and fossil fuel workers transitioning to clean energy jobs.*
6. *Continue to evaluate the State's existing clean firm capacity resources since they will be critical to achieving a zero-emissions grid.*
7. *The State will need to be strategic about the pace of combustion unit retirements and/or replacements as it works to pursue achievement of its clean energy targets.*

NY-BEST Comments

4.1.a.) Add recommendations on energy storage. This recommendations section notably omits a mention of energy storage, which is a clean energy resource critical to the achievement of the State's energy goals. Indeed, the Pathways analysis shows a need for between 9.4 GW (in the Additional Action Scenario) and 11.4 GW (in the Net Zero Scenario) of short-duration energy storage by 2040, well beyond our current 6 GW by 2030 target, and well beyond our current deployment of ~ 0.5 GW today. These figures also omit the 25GW of zero-carbon firm resources that could be met by long-duration and multi-day storage resources by 2040. This section must be updated to highlight the importance of the State doubling down on its support for a portfolio of energy storage solutions to support clean energy supply, and should include the following:

- NYSERDA should continue the bulk storage solicitations and incentive programs for residential and retail energy storage in support of the 6 GW by 2030 target under the Energy Storage Roadmap 2.0;
- NYSERDA should develop and launch an updated Energy Storage Roadmap 3.0 to support additional energy storage deployments at the bulk, retail, and residential levels through 2040;
- Draft Energy Plan Recommendation #3, above, should be expanded to include evaluating the opportunity to expand the purview of the Office of Renewable Energy Siting and Electric Transmission (ORES) to permit bulk energy storage projects greater than 25 MW, in line with renewable permitting under the RAPID Act.

4.1.b.) Add focus on distributed energy. While large-scale renewables (LSR) often have a lower baseline cost due to economies of scale, in many cases distributed solar and storage resources can yield greater benefits, such as: delivering direct utility bill savings to low-income households, enhancing reliability of the distribution grid, and reducing land use conflicts, since they can be co-located with existing uses. The Draft Plan does not contemplate additional support for distributed solar beyond the 10 GW x 2030 target, nor discuss the role of the State in supporting distributed storage as a clean energy resource. Notably, the Pathways model models all solar and storage resources as bulk

transmission-level resources, an assumption that does not align with the reality of grid needs.

This section should therefore add a new recommendation: *Support distributed clean energy resources, including solar and energy storage, through expanded incentive programs, recognition of their distinct value in State and NYISO planning processes, and updated modeling that accurately reflects the contribution of distribution-level resources to achieving reliability, equity, and decarbonization goals.* Additional recommendations to support flexible resources like energy storage are included in section 4.2 below.

4.2 Advance Demand-Side Solutions and Flexible Resources

Draft Energy Plan Recommendations

- 1. Improve integration of flexible resources into grid planning and grid operations.*
- 2. Continue to evaluate the contributions of longer duration energy storage to enhance the reliability of the electric grid.*
- 3. Investigate opportunities for flexible resources to provide grid-forming capabilities.*
- 4. Identify opportunities to enhance energy efficiency and managed electrification measures and other building upgrades.*
- 5. The State needs to continue to lead the nation in energy storage safety.*

NY-BEST Comments

4.2.a.) Strengthen support for flexible resources. While we support the focus of this section on the opportunity provided by flexible Distributed Energy Resources (DERs) like energy storage and Vehicle-to-Grid (V2G), the language must be strengthened to indicate the State's commitment to removing barriers and increasing incentives to achieve flexibility needs. Draft Energy Plan Recommendation #1, above, should be updated to "Improve *and incentivize* integration of flexible resources into grid planning and grid operations." This section of the State Energy Plan should specifically include the following commitments to support flexible resources:

- **Establish a Bidirectional Service Class** to provide a holistic framework for bidirectional resources that will align price signals, rate design, and interconnection standards with actual grid needs. Notably, existing tariffs do not incentivize optimized dispatch for bidirectional resources, resulting in charging/discharging signals that do not align with real-time grid needs. As a result, utilities are failing to maximize the value of flexible resources, resulting in unnecessary and costly investment in traditional infrastructure upgrades and higher costs for ratepayers. This fragmented and outdated approach will not support the scale of deployment needed to realize the State's energy vision. The State Energy Plan should commit to developing a more holistic and integrated framework for bidirectional flexible resources.

- **Establish a holistic vision for utilities to incentivize DER deployment in high-need areas.** This should include evaluating improvements to the Value of DER Tariff (VDER) Locational System Relief Value (LSRV) that enhance its reliability, accuracy and usability, such as by requiring standardized and routine updates to the geographic boundaries of high-need areas, incorporating performance penalties to ensure dispatch certainty, and offering standard contracts that accelerate deployment and channel investment toward priority areas.
- **Expand services that DERs are incentivized to provide.** DERs are capable of providing a broad spectrum of grid services, including: supporting electrification, providing peak shaving in winter, providing power over longer durations, providing reactive power and voltage support, and providing wholesale services. However, many of these capabilities remain uncompensated or underutilized under current utility regulations. The Department of Public Service and the Joint Utilities must work to update existing tariffs and compensation mechanisms, which currently reflect historical use cases and are not aligned with the emerging needs of an electrified, dynamic, and decarbonized grid, resulting in inefficiencies that are slowing deployment and failing to maximize system benefits.
- **Direct utilities to adopt Flexible Interconnection standards and streamline DER interconnection.** Traditional interconnection standards treat DERs as inflexible, worst-case scenario contributors to grid constraints, limiting hosting capacity and delaying project timelines. In contrast, flexible interconnection (Flex IX) allows DERs to operate with utility oversight, enabling full output most of the year while curtailing or modifying operations during rare, grid- constrained periods. This approach significantly increases available hosting capacity and reduces the need for costly upgrades. The State Energy Plan should commit to advancing Flexible Interconnection standards for New York, in line with the Order recently filed by the California Public Utilities Commission¹³ that enables projects to interconnect that would otherwise need to await costly grid upgrades.
- **Direct utilities to remove interconnection barriers and establish revenue mechanisms for V2G.** Current interconnection processes are burdensome for bidirectional EV chargers, disincentivizing deployment. The State should commit to addressing misalignment between interconnection timelines of V2G versus traditional EV charging infrastructure, and develop a more transparent and fair process for bidirectional interconnection. In addition, the State should evaluate new revenue mechanisms to compensate V2G vehicles for shifting load when the grid is strained and supporting integration of a growing EV sector.

The State's explicit commitment to not only improving integration of flexible resources, but actively incentivizing their deployment, is critical to the success of the overall Energy Plan.

¹³ Public Utilities Commission of the State of California, Energy Division. "Resolution E-5296," March 21, 2024. Accessed online: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M527/K828/527828730.PDF>

4.2.b.) Align utility revenue mechanisms to support Distributed Energy Resources (DERs).

While distributed energy resources (DERs) and demand-side flexibility can provide significant distribution deferral value in areas with capacity constraints, utility profit incentives remain primarily aligned with traditional capital investments. As noted in Volume 1 of the Grid of the Future Flexibility Study, “Distribution deferral value is significant in locations with potential capacity constraints due to load growth. Realizing this value will require greater system visibility and control, *as well as system operator willingness to depend on grid flexibility as a distribution resource*” (emphasis added).¹⁴ As DER deployment increases, utilities face a direct financial disincentive to rely on flexible solutions, since doing so reduces the opportunity to earn a return on capital investments. Without realignment of utility earnings mechanisms, efforts to scale grid flexibility will remain limited in both ambition and effectiveness. The Commission has previously recognized this tension, and the 2018 Synapse Energy Economics report, [Earnings Adjustment Mechanisms to Support New York REV Goals](#), emphasized the importance of linking utility financial performance to outcomes that support system efficiency, DER integration, and customer value.

This section should therefore add a new recommendation: *Evaluate new Earnings Adjustment Mechanisms (EAMs) or other revenue streams that directly incentivize utilities to partner with stakeholders in implementing Grid of the Future initiatives.* The mechanisms considered should:

- Reward utilities for measurable deployment of third-party flexibility that avoids or defers infrastructure investment;
- Include outcome-based metrics such as the development and implementation of a Bidirectional Service Class framework; and
- Recognize and value robust stakeholder engagement processes.

4.2.c.) Strengthen support for Long Duration Energy Storage (LDES) and multi-day storage.

The Draft Plan acknowledges existing analysis demonstrating the benefits LDES can provide, but does not commit to supporting LDES beyond “continued evaluation,” which is concerning. LDES technologies are particularly well-suited to not only support reliability, but also fill the Clean Firm capacity need while lowering electric grid costs. These technologies are commercially available today and are capable of providing power over extended periods—whether throughout the day or across multiple days—making them ideal for supporting the grid when renewables like wind and solar are not available. Nationally, the U.S. Department of Energy’s *Pathways to Commercial Liftoff: Long Duration Energy Storage report (DOE Liftoff Study)* estimates the U.S. grid may require up to 460 GW of LDES by 2050, with the potential to save \$10–\$20 billion in annual system costs.¹⁵ In New York, modeling by NY-BEST member company Form Energy suggests that **deploying up to 35 GW**

¹⁴ Brattle. “New York’s Grid Flexibility Potential, Volume I: Summary Report,” p9. January 2025. Accessed online: <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={70ECBD94-0000-CB2A-BCB1-EB2D260FED0B}>

¹⁵ U.S. Department of Energy. *Pathways to Commercial Liftoff: Long-Duration Energy Storage*, March 2023. Accessed online: www.sandia.gov/app/uploads/sites/256/2023/09/Pathways-to-Commercial-Liftoff-LDES-May-5_UPDATED.pdf

of LDES by 2040 could result in **\$8.7 billion in annual savings**, while ensuring a cleaner and more resilient grid.¹⁶

Many LDES technologies are already mature, cost-competitive, and ready for deployment, and as the *DOE Liftoff Study* makes clear, a range of emerging technologies will also become available at increasing scale in the coming years. For example, in New York, NYSERDA has recently awarded demonstration funding to three new LDES technologies of 10-100 hour duration that will soon be deployed.¹⁷

In addition, NYSERDA is currently procuring at least 600 megawatts of 8+ hour LDES by 2030—a critical first step toward meeting our Clean Firm capacity needs. Given the significant differences in use case and grid value between short-duration and long-duration energy storage, we strongly support establishing dedicated procurements for LDES resources of greater than 8 hours, distinct from short-duration battery solicitations.

Recommendation #2 should be updated to include a clear directive to the State to evaluate and implement opportunities to build a robust LDES market in support of decarbonization and reliability goals, including NYISO market reform and dedicated State procurement pathways. In addition, the State’s energy planning modeling must be improved to accurately assess the true value that LDES could provide to the grid. It is inappropriate to model hydrogen-fueled combustion power plants as a stand-in for LDES resources, as these resources provide different functions on the grid, and LDES resources have significant ability to optimize renewable energy resources by shifting low-cost or excess renewable generation to higher value periods weeks or months later. Additionally, current State capacity expansion models use 24-hour snapshots that do not consider how energy could be shifted over multiple days, weeks, and months. Particularly in load pockets where transmission is constrained, LDES provides a unique opportunity to support the replacement of fossil units, which should be evaluated and incorporated into the State’s Energy Plan recommendations. Further, we provide more detail on how the State can support LDES as a Clean Firm technology in response to Section 4.3 below.

4.2.d.) Include education as a key component of energy storage safety. NY-BEST applauds the leadership of the State and of the Interagency Fire Safety Working Group on their achievements with regard to energy storage safety. Building on this work, expanding the State’s existing community outreach and education efforts will be critical to combat misinformation and clarify the robust energy storage safety and regulatory framework in New York. While NYSERDA has already demonstrated leadership on this front, a coordinated effort across State agencies and leadership will help communities and local governments understand how storage is regulated to ensure safety, and help build confidence in its

¹⁶ Form Energy. *Modeling Multi-Day Energy Storage in New York*, 2023. Accessed online: <https://formenergy.com/wp-content/uploads/2023/09/Form-Modeling-Multi-Day-Energy-Storage-in-NY-whitepaper-8.8.23.pdf>

¹⁷ NYSERDA News. *Nearly \$15 Million Awarded to Four Demonstration Projects To Advance Long Energy Duration Energy Storage Technology Solutions*, August 2023. Accessed online: <https://www.nyserda.ny.gov/About/Newsroom/2023-Announcements/2023-08-17-Governor-Hochul-Announces-Nearly-15-Million-in-Long-Duration-Energy-Storage>

deployment. We recommend Recommendation #5 be expanded to “continue to lead the nation in energy storage safety and safety education.”

4.3 Support Investments in New Clean Firm Technologies

Draft Energy Plan Recommendations

1. *The State will need to be strategic in identifying and integrating clean firm technologies that have the attributes necessary to support the achievement of a zero emissions electric grid by 2040.*

NY-BEST Comments

4.3.a) Set a technology-agnostic Clean Firm technology target. The Pathways analysis identifies a need for 20-25 GW of Clean Firm capacity to replace the existing fossil fleet by 2040,¹⁸ in line with modeling previously conducted for the Climate Action Council Scoping Plan. While we support NYSERDA’s work to develop a technoeconomic analysis of Clean Firm technologies, we are concerned that a technology-prescriptive approach, rather than a competitive technology-neutral approach, could unnecessarily drive up costs. Deployment must also accelerate dramatically if the State is to meet this need within the 15 years remaining before 2040. Despite their importance, Clean Firm technologies are not yet fully valued or incentivized in current State programs or NYISO markets at the scale required to transition to a reliable, zero-emissions grid.

To address this gap, we recommend the Energy Plan include a recommendation to adopt a **technology-agnostic Clean Firm technology target of 10 GW by 2035**. Such a target would:

- Provide a strong market signal to attract investment and prioritize New York State for the development of advanced clean energy resources;
- Guide appropriate policy and regulatory planning in line with the Climate Act;
- Facilitate the timely retirement of fossil power plants, especially in overburdened communities;
- Stimulate innovation and competition while avoiding prescriptive approaches that favor specific technologies; and
- Ensure deployment is on track to meet the 2040 need.

A technology-agnostic approach would enable a diverse portfolio of qualifying solutions (including long-duration storage, multi-day storage, green hydrogen paired with fuel cells, advanced nuclear, and other innovative technologies), so long as they meet performance and emissions criteria. This framework would maximize competition, lower costs, and ensure New York is positioned to adopt the most effective mix of solutions to deliver reliable, zero-emissions electricity for all New Yorkers.

¹⁸ New York State Energy Board, “Draft New York State Energy Plan, Chapter 1: Electricity,” p55. July 21, 2025.

4.3.b.) Develop a Roadmap to achieve the Clean Firm target. In keeping with Roadmaps it has developed for other technologies, such as the Energy Storage Roadmap and the Offshore Wind Master Plan, NYSERDA should develop a Roadmap to achieve the Clean Firm technology target. This should include an analysis and proposal for increased funding both for procurement programs for commercially mature Clean Firm technologies (including long-duration and multi-day energy storage) and innovation/R&D programs for more nascent technologies. The Energy Plan should be updated to reflect a commitment from the State to develop such a Roadmap.

4.3.c.) Launch the New York Cap and Invest program, now called the New York Clean Air Initiative, to support funding for 100% clean electricity initiatives. NY-BEST urges the State to immediately move forward with the Clean Air Initiative, as recommended in the CLCPA Scoping Plan and subsequently given explicit authorization by the State Legislature. The Clean Air Initiative would provide a stable, recurring revenue stream to fund decarbonization projects that will improve air quality and health and reduce energy cost burden. In support of these goals, NY-BEST urges the State to prioritize investment areas as follows:

- Investment areas should support New York State in achieving 100% clean electricity, since this is the cornerstone of the energy transition and will enable decarbonization of other sectors through electrification.
- Investment areas should leverage public dollars to catalyze private investment in New York State's energy transition, cultivating a cutting-edge clean energy market that will help achieve the mandates of the Climate Act.
- Investment areas should support critical Clean Firm technologies that are not currently being incentivized via other pathways – namely, LDES, as discussed above.

4.4. Continue to upgrade and modernize the State's transmission and distribution infrastructure

Draft Energy Plan Recommendations

1. *Continue to ensure the State's planning processes provide actionable information for decision-makers regarding future system needs and cost-effective solutions.*
2. *Continue to strengthen collaboration between NYISO and Utilities to enhance CGPP process.*
3. *Improve coordination of distribution and transmission planning under CGPP.*
4. *Continue progress towards adoption of cost-saving advanced transmission technologies.*
5. *Enhance interregional coordination.*
6. *Continue collaborative efforts to address distribution interconnection costs and process.*

7. *Consider new cost allocation options for transmission and distribution system infrastructure.*
8. *Pursue integrated electricity and natural gas system planning.*
9. *Consider ways to coordinate transmission deployment and the strategic use of energy storage.*

NY-BEST Comments

4.4.a.) Invest in improved modeling to accurately assess cost savings. While the State has made commendable strides to advance a coordinated grid planning approach between distribution utilities, transmission operators, and the NYISO, the outcome of the first cycle of the CGPP report is likely to fall far short of the stated vision. This is largely due to shortcomings in the modeling framework used to identify needed grid investments.

Specifically, past modeling conducted by the State, particularly that done by the NYISO, has typically been done using 24-hr snapshots, which is not able to fully capture the value of energy storage systems. The modeling also typically only includes intra-day (4- or 8-hour duration) energy storage systems and *does not* include a portfolio of LDES, resulting in over-reliance on fuel-based DEFRs, which are likely to be a much more expensive solution.

NY-BEST strongly recommends that Draft Energy Plan Recommendation #1, above, is expanded to include a commitment to improve the capacity expansion modeling informing planning processes. Modeling should include a portfolio of energy storage durations to accurately assess cost-saving opportunities. Modeling of this kind could have significant implications for the role of energy storage in the Coordinated Grid Planning Process, as well as for future capacity market design and capacity prices (discussed further in section 4.5 below) and for the State's Energy Plan more broadly. Without these modeling improvements, New York risks locking in expensive and unnecessary rate-based traditional infrastructure investments, instead of unlocking the full potential of energy storage to deliver cost savings.

4.4.b.) Maximize cost-savings by assessing non-traditional alternatives. NY-BEST strongly supports Draft Energy Plan Recommendation #3, above, to better integrate distribution and transmission planning under the CGPP. However, we are concerned that the Proactive Grid Planning Proceeding, which aims to prepare New York's electric grid for building and vehicle electrification by approving "urgent" investments outside of rate cases, may have unintended consequences on ratepayer affordability. The stated intent of approving rate-based investments outside the rate case process is to proactively support electrification efforts, to provide a more standardized approach across utilities, and to allow for more robust stakeholder participation. While these are commendable goals, the Proceeding does not sufficiently require utilities to robustly assess non-traditional alternatives that could satisfy the need, such as energy storage or other DERs. The urgent nature of the proposals could result in approvals of expensive upgrades that could have been avoided with more

robust planning and integration of flexible resources. The proceeding also incentivizes utilities to not propose these infrastructure upgrades during the rate case and to instead submit them as “urgent needs” in parallel.

Therefore, a new recommendation should be added: *Require utilities to fully evaluate non-traditional alternatives, including energy storage and other DERs, and to publicly disclose the details of this analysis, before seeking approval for traditional grid investments.* This requirement would help ensure that cost-effective, flexible solutions are prioritized, minimize unnecessary infrastructure costs, and better align proactive grid planning with New York’s affordability goals.

4.4.c.) Enable and incentivize Storage as a Transmission Asset (SATA). NY-BEST strongly supports the inclusion of SATA in Draft Energy Plan Recommendation #9. SATA, particularly when equipped with Grid-Forming (GFM) capability, is a powerful existing technology that has a crucial role in ensuring Power Quality on New York’s transmission network as the deployment of wind and solar rapidly increases. GFM technology has been successfully deployed in other parts of the U.S. as well as internationally, demonstrating the ability of the technology to effectively provide transmission benefits and achieve billions of dollars of cost savings for ratepayers by:

- avoiding or deferring expensive transmission upgrades, such as synchronous condensers; and
- maintaining or improving Power Quality to enable more wind and solar to connect to the grid.

We recommend the Commission establish a working group as part of the Coordinated Grid Planning Process (CGPP) to consider how SATA should be included in the CGPP modeling that will inform the selection of transmission-level solutions.

4.5. Evolve Electricity Markets to Meet the Future Needs of a Clean Electricity System

Draft Energy Plan Recommendations

1. *The State should continue to work with the NYISO and market participants to further investigate the opportunities described below and any other ideas to evolve current markets and rules to ensure they maintain reliability, promote energy affordability, and achieve clean energy objectives.*
2. *The State should examine what incentives are needed to attract and retain the portfolio of technologies needed to support resource adequacy as the State transitions to a zero-emissions electric system.*
3. *The State should examine the potential need to identify additional market attributes, and provide the proper related incentives, to attract needed grid flexibility and other system services.*

4. *The State should Identify additional planning or operational rules that should be further examined and potentially adjusted in order to support a zero emissions electric system.*
5. *Retail: Examine the role of electricity rates and program incentives to enable deployment of DERs and flexible resources.*

NY-BEST Comments

NY-BEST supports the State's commitment to collaborating with the NYISO and market participants to improve capacity and ancillary service market rules to support cost-effective clean energy deployment. We note that current NYISO market structures do not fully capture or compensate for the value energy storage provides to the grid. For example, NYISO does not currently produce long-term capacity accreditation values for long-duration or multi-day storage resources, and capacity market prices are based on 2-hr duration resources, despite evidence that additional clean firm capacity is needed to maintain reliability and achieve the State's policy goals. Therefore, NY-BEST endorses the need for a detailed assessment of the shortcomings of current market rules and incentives and an analysis of potential improvements or new market attributes that can support deployment of a diverse portfolio of zero-emission resources (including energy storage of varying durations and distributed flexible demand), while maintaining resource adequacy and operational reliability in 2040 and beyond.

4.6. Increase system resilience to climate change and extreme weather.

Draft Energy Plan Recommendations

1. *Consider whether the current reliability-related metrics should be supplemented given the evolving nature of the grid and increased risks of high-impact reliability events.*
2. *Continue to incorporate the impacts of climate change into future planning scenarios.*

NY-BEST Comments

4.6.a.) Consider energy storage in resiliency planning. NY-BEST strongly supports the recommendations to include forecasted impacts of climate change on energy demand into future planning scenarios. We further recommend explicitly evaluating the role of energy storage in enhancing system resilience as climate change drives more frequent and severe extreme weather events. In New York City, for example, heat waves have proven deadly, with 525 people dying annually due to heat since 2018, and the most important risk factor for heat-stress death being a lack of access to home air conditioning.¹⁹ The grid must be prepared to serve additional cooling demand as summer heat continues to intensify and efforts to improve access to air conditioning expand. Energy storage resources can help

¹⁹ NYC Environment and Health Data Portal. "2025 NYC Heat-Related Mortality Report." Accessed online: <https://a816-dohbesp.nyc.gov/IndicatorPublic/data-features/heat-report/>

reduce blackout risks by supporting the grid during extreme heat events. In addition, storage can provide localized backup power for critical facilities and communities during emergencies, complementing other resiliency measures. By incorporating energy storage more explicitly into resilience planning, the State can improve reliability, protect public health, and reduce the human and economic costs of climate-driven outages.

Chapter 2: Nuclear

While we are not strictly opposed to the State’s continued evaluation of advanced nuclear through its *Master Plan for Responsible Advanced Nuclear Development*, nuclear should be considered as a viable Clean Firm technology only to the extent that it is cost-competitive with alternatives such as long-duration energy storage (LDES) and other innovative zero-carbon resources. As recognized in the Draft Plan, advanced nuclear remains neither technologically nor commercially mature, and proposed projects would be First-of-a-Kind deployments with long development timelines, high and uncertain costs, and unresolved issues related to waste management. These factors make it unlikely that new nuclear power can contribute meaningfully to the State’s 2040 zero-emissions mandate, especially given the urgency of near-term deployment needs.

The Draft Plan appears to elevate nuclear as a fallback solution in scenarios where renewable build rates are constrained. For example, the *Limited Build Rate Sensitivity Run* projects a gap in 2040 of approximately 15 TWh of energy that it ultimately fills with natural gas plants. The Plan states, “To avoid this outcome, the energy gap could be filled by other reliable sources like new nuclear power or generation using renewable natural gas.”²⁰ However, assuming new nuclear as the default firm alternative both understates the potential of cost-competitive solutions like LDES and risks committing the State to technologies that are unlikely to be constructed on a timeline aligned with New York’s climate mandates. A more prudent approach is to maintain a technology-agnostic Clean Firm strategy that prioritizes resources capable of rapid, scalable, and affordable deployment, as described in our comments on Section 4.3 above.

Therefore, NY-BEST strongly recommends that nuclear, an extremely expensive and long-lead-time technology, not play a central role in the State’s Energy Plan, to avoid exposing ratepayers to unnecessary costs and risks.

²⁰ New York State Energy Board, “Draft New York State Energy Plan, Chapter 1: Electricity,” p56. July 21, 2025.

Chapter 5: Low-Carbon Alternative Fuels

NY-BEST Comments

NY-BEST supports the Draft Plan’s stated intent to “avoid localized co-pollutant emission impacts,”²¹ but we are deeply concerned that widespread hydrogen combustion is unlikely to be compatible with these goals. The Draft Plan notes, “As hydrogen combustion generally occurs at a higher temperature than natural gas, its use in systems designed for natural gas without modification have the potential to emit higher levels of NOx per unit of energy.”²² While NOx scrubbing technologies may help manage these emissions, significant cost and technical challenges need to be overcome to ensure these systems can reliably achieve the low-NOx performance required to protect public health, particularly in overburdened communities.

In addition, the Pathways Analysis vastly understates natural gas combined cycle gas turbine (CCGT) costs, assuming \$1,600/kW for CCGT, when costs are currently greater than \$2,000/kW.²³ Costs to retrofit CCGTs for hydrogen combustion, and particularly to build new CCGTs for the purposes of hydrogen combustion, may be much higher than contemplated in the modeling. To identify the most cost-effective path toward the 0 x 2040 target, hydrogen combustion should not be relied upon as the primary Zero-Carbon Firm resource, particularly given viable alternatives like LDES.

NY-BEST does support targeting hydrogen fuel cells to strategic end uses where electrification is not viable, such as certain industrial processes and heavy transportation. For the electricity sector, hydrogen fuel cells (not combustion) offer a zero-emission application that could support resiliency and potentially provide long-duration storage if cost-competitive. The Energy Plan should direct the State to assess how large-scale electrolyzer demand will affect the electricity system and explore opportunities to align green hydrogen production with renewable generation and grid flexibility.

Chapter 8: Buildings

NY-BEST supports the Draft Plan’s recognition that “distributed solar generation and energy storage can provide a dependable source of electricity for buildings, help reduce costs, and improve resiliency.”²⁴ However, we are concerned that the Draft Plan underemphasizes the

²¹ New York State Energy Board, “Draft New York State Energy Plan, Chapter 5: Low-Carbon Alternative Fuels,” p13. July 21, 2025. Accessed online: <https://energyplan.ny.gov/-/media/Project/EnergyPlan/files/Draft-2025-Energy-Plan/Topic-Area-Chapters/Draft-New-York-State-Energy-Plan-05-Low-Carbon-Alternative-Fuels.pdf>

²² Ibid., p25.

²³ Grid Lab, Energy Futures Group, and Halcyon, “The New Reality of Power Generation: An Analysis of Increasing Gas Turbine Costs in the U.S.” September 2025. Accessed online: <https://gridlab.org/portfolio-item/gas-turbine-cost-report/>

²⁴ New York State Energy Board, “Draft New York State Energy Plan, Chapter 8: Buildings,” p1. July 21, 2025. Accessed online: <https://energyplan.ny.gov/-/media/Project/EnergyPlan/files/Draft-2025-Energy-Plan/Topic-Area-Chapters/Draft-New-York-State-Energy-Plan-08-Buildings.pdf>

role of energy storage in supporting building decarbonization and electrification. We strongly recommend that the Plan explicitly include storage alongside solar in strategies to pair building electrification with clean power (as discussed on p20). In addition, the Plan fails to discuss how BTM storage can support both customer decarbonization and system reliability. This section should include a recommendation specifically focused on animating the BTM storage market, beyond the “resiliency first” incentive discussed for critical facilities, including highlighting ongoing support for NYSERDA’s Residential Energy Storage Incentive Program, as well as for the Inclusive Storage Incentive, which will improve access to energy storage for low- and moderate-income households.

Chapter 9: Transportation

NY-BEST supports the Draft Plan’s focus on electrification of the transportation sector but urges the State to explicitly commit to examining the role of energy storage in enabling this transition in Sections 6.1 (Light Duty Vehicles, LDV), 6.2 (Medium and Heavy Duty Vehicles, MHDV), and 6.3 (Electric School Buses). Battery energy storage can be paired with EV charging infrastructure to manage charging loads and reduce the need for costly grid upgrades, a critical consideration as LDVs, MHDVs, and school buses are electrified. The Plan should include a recommendation for the PSC and utilities to explore reforms to streamline interconnection of storage paired with EV charging stations as well as V2G infrastructure, in order to ensure that our State’s charging infrastructure buildout is both cost-effective and reliable.

Chapter 11: Economic Development, Industry, and Agriculture

NY-BEST supports the recommendations in Section 4.2 (Clean Energy Supply Chains), including investing in site readiness for clean energy manufacturing, but believes they fall far short of the opportunity presented by the moment. Battery manufacturing is one of the fastest growing industries, projected to generate 310,000 jobs across the U.S. lithium-ion battery supply chain by 2030, in support of rapid electric vehicle (EV) and battery energy storage system (BESS) deployment and a transition to a clean energy economy. However, New York is currently being significantly outcompeted by other states when it comes to top destinations for private sector battery manufacturing investments.

Driven by recent federal policy, the U.S. has witnessed unprecedented private sector investments in battery, EV, and BESS manufacturing totaling over \$180 billion since 2021. These investments have largely taken place outside of New York, with nine states (AZ, GA, IL, IN, KY, MI, NV, OH, and TN) accounting for over 80% of the total investments to date. While some of these “battery belt” states have clear advantages stemming from their incumbent supplier networks and end users (notably auto makers), not all do.

The Draft Plan states, “Many Cleantech manufacturers that produce solar panels, wind turbines, EVs, and batteries do not proceed beyond the site selection stage to even consider the incentives offered by the State, and as a result, New York is losing these investments to the “Battery Belt” emerging in the Midwest and the South.”²⁵ However, analysis²⁶ shows that large State incentive packages, not systemic or site-specific advantages, are largely driving manufacturer investment decisions. Simply put, other states are out-bidding New York.

To close this gap, the Plan should explicitly recommend the State launch a Battery Manufacturing Expansion and Attraction Program to ensure a spot on the short-list for future job-creating battery manufacturing facilities. Analysis demonstrates that with an upfront investment of approximately \$1 billion in New York State funds, such an initiative could unlock a total private sector investment of \$22.5 billion and create 22,250 high-paying jobs across the State.²⁷ In addition to supporting jobs and economic development goals, such a program would also support energy transition goals by increasing the availability of domestic products and minimizing supply chain risk.

Chapter 14: Environmental and Climate Justice

To support an equitable energy transition, the Plan should include an explicit recommendation to strengthen and expand community outreach and partnerships related to clean electricity through the NYSERDA Clean Energy Hubs. This should include an assessment of the additional funding and staff resources required to achieve this goal. While the Hubs were originally intended to empower community-based organizations to expand access to information about energy programs and the broader energy transition, their focus to date has been largely limited to energy efficiency, with limited outreach on solar and storage opportunities. During this time, fear and misinformation have contributed to dozens of towns across the State imposing moratoria on energy storage development, affecting over 1 GW of projects in the interconnection queue and slowing progress toward clean energy deployment and environmental justice goals. Without a concerted State effort to expand outreach and partnerships, New York will be unable to meet its clean energy and environmental justice targets. Strengthening the Hubs program is a critical step toward achieving this vision.

²⁵ New York State Energy Board, “Draft New York State Energy Plan, Chapter 11: Economic Development, Industry, and Agriculture,” p17. July 21, 2025. Accessed online: <https://energyplan.ny.gov/-/media/Project/EnergyPlan/files/Draft-2025-Energy-Plan/Topic-Area-Chapters/Draft-New-York-State-Energy-Plan-11-Economic-Development-Industry-Agriculture.pdf>

²⁶ Customized Energy Solutions (CES) for NY-BEST. “Analysis And Recommendations For New York State Supply Chain For Battery Cell Manufacturing,” April 30, 2024. Available upon request.

²⁷ Ibid.

CONCLUSION

NY-BEST thanks the New York State Energy Board for your efforts to develop the State Energy Plan. We appreciate the opportunity to provide our feedback and input. Please do not hesitate to reach out with any questions or concerns; we'd be happy to discuss.