1. SYNOPSIS. The energy storage industry represents an unprecedented opportunity to achieve climate goals and drive job creation and economic growth. The Federal Consortium for Advanced Batteries (FCAB) has set a goal for the U.S. to establish a secure Li-ion battery supply chain by 2030, a need increasingly underscored by recent disruptions driven by global crises. While the U.S. currently manufactures 59 GWh annually, demand for batteries in domestic electric vehicles alone is estimated to reach 320 GWh in 2028, requiring >25,000 new direct manufacturing jobs and >100,000 new supply chain jobs. Of these, >15,000 are estimated to be needed in New York State (NYS). NYS is positioned to become a national leader to meet this challenge, with ambitious goals set by the state's Climate Leadership and Community Protection Act (CLCPA), including mandates for 70% of electric production from renewable sources by 2030, a carbon-neutral grid by 2040, and adoption of electrified transportation across all sectors.

New Energy New York (NENY)'s* vision** is to help the U.S. meet the demand for domestic battery products and create a competitive edge for U.S. companies by establishing a battery development and manufacturing industry cluster in Upstate New York's Southern Tier around an emerging storage ecosystem and the state's first Li-ion gigafactory being opened by Imperium3 (iM3NY). NENY will connect key industry stakeholders in the energy storage space, support domestic development and engineering initiatives, accelerate the transition of innovative technologies, and grow an advanced manufacturing workforce, built on a foundation of equity and environmental justice through the following ***6 component projects:

1. Battery-NY Center Construction will construct a Technology and Manufacturing Development Center equipped with state-of-the-art manufacturing lines for the production of full-size battery cells, enabling the scale-up, qualification, and advanced manufacturing of batteries for various sectors.
2. Battery-NY Center Operations will ensure the operational readiness of the Center, assembling a world-class team and establishing robust infrastructure and procedural frameworks to engage key strategic partners and support industry clients with their battery testing, scale-up, qualification, and manufacturing needs.
3. Battery Sector Supply Chain Development will establish supplier qualification and certification resources, promote new and expanded operations, support and connect existing manufacturers, and attract new business operations and private sector investments to the region.
4. Southern Tier Energy Storage Workforce Development will address the training needs of the growing industry cluster by expanding existing and deploying new training programs while developing strategies to overcome barriers to training and labor force participation.
5. Equity & Justice will ensure that the economic benefits of the industry cluster are equitably accessible and shared across the region by working with community organizations to establish training and wraparound services that focus on the empowerment of underserved communities.
6. Innovation and Entrepreneurship will provide programs, funding, and support services to accelerate battery technology development from academic innovations to startup growth through scale-up and manufacturing readiness.

To implement this comprehensive approach, NENY brings together a 13-member ***coalition of diverse stakeholders***: ***Academic institutions.*** *Binghamton University* (Coalition Lead), home of the 2019 Nobel Laureate inventor of the Li-ion battery Stanley Whittingham and the Northeast Center for Chemical Energy Storage; *Rochester Institute of Technology*, the 3rd largest private STEM university in U.S. and home of the RIT/NY-BEST Battery Prototyping Facility; *SUNY Broome Community College* and *Corning Community College*, comprehensive 2-year community colleges in the Southern Tier instrumental to region's workforce development efforts. ***Non-Profits.*** *NY-BEST*, an energy storage consortium with a membership of >185 private and public organizations throughout NYS; *Research Foundation for The State University of New York,* overseeing sponsored research and technology commercialization throughout SUNY's 64-campus network; *The Clean Fight New York*, a nonprofit accelerator in NYS helping growth-stage startups scale at speed;

Southern Door Community Land Trust (SDCLT), serving minority and disadvantaged populations in Broome County; *IncubatorWorks* serving 4 underserved rural counties in the Southern Tier; *AM&T*, the Manufacturing Extension Partnership for the Southern Tier, serving the more than 700 manufacturers in the region. ***Government.*** *New York State Research and Development Authority* (*NYSERDA*), a NYS public-benefit corporation dedicated to making NYS a global climate leader; *Empire State Development* (*ESD*), NYS government economic development organization; and *Broome County*. The coalition is engaging with additional partners as described in the *component narratives*.

Industry engagement is at the core of the NENY initiatives. The coalition's extensive network of industry connections includes major industry players, small- and medium-sized businesses, startups, venture capital, and other investors. These working relationships have been forged as part of NY-BEST membership, the use of RIT's battery prototyping center, membership in Binghamton's Southern Tier Clean Energy Incubator (SCI), Clean Fight NY's strategic venture partners, and NYSERDA's s far-reaching clean energy industry network across the state. During Phase I, the coalition engaged >50 companies in the battery sector, with many actively committing to NENY initiatives as detailed below. Notably, iM3NY, launching the state's first battery gigafactory in the Southern Tier in 2022, committed to utilize the Battery-NY Center, support the supply chain buildout, and participate in a DOE-based Community Benefits Agreement.

NENY is dedicated to the economic revitalization of NYS's Southern Tier, a predominantly rural, high-poverty region. The NENY projects are in alignment with the ***Southern Tier 8 Comprehensive Economic Development Strategy (CEDS)***, advancing the goals of small business and entrepreneurship support, industry cluster development, creating educational opportunities to employment, and addressing infrastructure deficiencies. NENY is committed to ensuring that the industry cluster is established on a foundation of ***equity, justice, and inclusion***, with justice and equity considerations incorporated into every project to combat institutional barriers and increase participation across the supply chain, workforce training and labor force, and the innovation ecosystem. The Equity & Justice component project is specifically aimed at engaging and empowering various disadvantaged populations, including BIPOC, rural, and low-income communities, through training programs and wraparound services, while also identifying and mitigating environmental justice and other risks associated with manufacturing expansion.

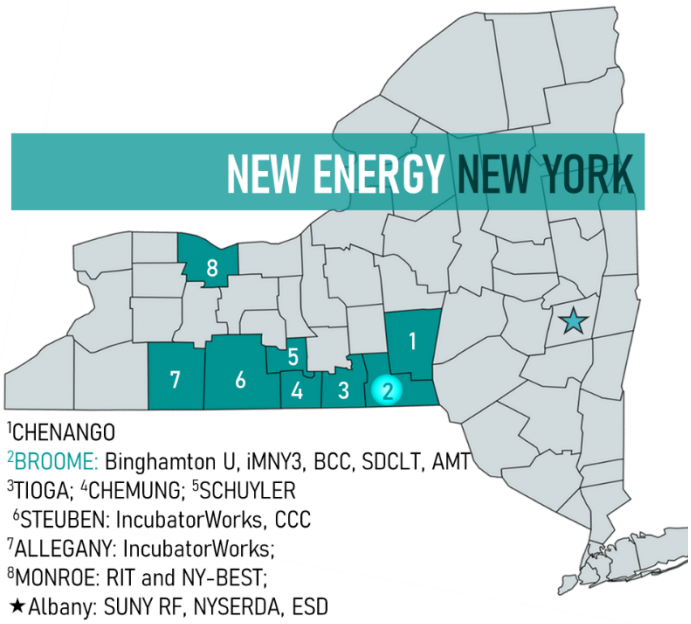
NENY will foster a ***sustainable self-sufficient*** economic industry cluster, with a $50M match investment from NYS (see ESD letter). Other sustainability strategies include: 1) Recruit a broad set of companies with vested interests in energy storage technologies to invest in the region; 2) Maintain annual revenues from Battery-NY, supply chain qualification, and industry training fees; 3) Use revenues to establish funds for equity and justice, workforce development, and entrepreneurship programs; 4) Continue leveraging coalition and partner assets to establish a long-term sense of community and identity within the cluster; and 5) Pursue additional funding from federal and New York State agencies to advance energy storage technology development. The recent U.S. DOE supply chain strategic plan has aside $6B to fund "domestic battery materials processing, manufacturing, and recycling." The timely NENY initiatives will jumpstart the regional industry cluster to create capacity, infrastructure, and industry readiness to leverage the DOE funding to the fullest extent for maximum national impacts.

The coalition is dedicated to maximizing the regional, state, and national impacts of the battery industry cluster, with multiple ***complementary investments*** totaling >$100M: the ESD-funded $10M Downtown Revitalization investment in Endicott, NY the home of the iM3NY gigafactory and the future Battery-NY Center, will transform the area into a high-tech, connected environment for new business and ensure environmental justice and affordable housing availability; NYSERDA is supporting energy storage in NYS through planned investments in the BNL Hex Beam Line benefitting all NYS energy storage companies ($25M), the Retail Energy Storage Bridge Incentive Program ($34.6M), and 4 Renewable Energy Certificate awards to large-scale renewables paired with energy storage in the region ($66.7M).

NENY's multi-sector, comprehensive approach will provide competitive advantages to the regional hub, helping the U.S. gain global leadership in battery manufacturing and establishing a battery supply chain that meets national security requirements. The coalition anticipates that proposed activities will result >4000 trainees, >200 new supplier companies, >25 companies started, >25 new training and support programs launched, >$2B in investments, >10,000 new supply chain jobs to the region within the next 10 years.

	2022		2023				2024				2025				2026	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Battery-NY 1	Space, spec, renovation plans				Renovate, permits				Install, test, validate, client use							
Battery-NY 2	Recruit and onboard staff				Training, outreach				Client use, strategic partnerships							
Supply Chain	Data, gap analysis, database				Recruitment; Qualification				Support, site selection; Run qual center				SUSTAINABLE OPERATIONS			
Workforce	Community analysis and plan				WFD programs deployment								SUSTAINABLE OPERATIONS			
Justice	Onboarding		Community analysis and plan; Projects deployment										SUSTAINABLE OPERATIONS			
Innovation	Onboarding		Recruit and run programs										SUSTAINABLE OPERATIONS			

2. GEOGRAPHIC REGION. NENY's main activities and benefits will occur in NYS' Southern Tier (Chenango, Broome, Tioga, Chemung, Schuyler, Steuben, and Allegany Counties), with additional work and impacts in Rochester (Monroe County). The coalition will operate using a hub and spoke model. The hub will be located in Broome County centered around the Battery-NY Center and the iM3NY gigafactory. Spokes in the surrounding Southern Tier counties will help propagate cluster benefits throughout the region, including to rural communities. The external Rochester spoke, connected to the Southern Tier through multiple established partnerships in the battery development space, will provide earlier-stage prototyping support prior to the manufacturing services provided by Battery-NY, as well as boost workforce development efforts. The spoke in Albany (Capital Region), while not a beneficiary or service area, will promote statewide connectivity through ESD and NYSERDA.



The Southern Tier is a diverse region of ~640k residents, with both urban and rural areas facing poverty and continuing population loss since 2010. Five of the counties are majority-rural, with >60% of the population living outside of metropolitan or micropolitan areas and occupying ~40 federal Opportunity Zones. Once a significant manufacturing region, the Southern Tier has faced decades of economic downturn following IBM's exit in the 1980s. Yet, the region has begun to witness an economic renaissance, driven by investments and developments around clean energy. Combined with the state's ambitious goals and strategic investments, the region became a key player in clean energy innovation through ground-breaking R&D efforts at Binghamton University led by 2019 Nobel Laureate M. Stanley Whittingham, the 2017 launch of the NYSERDA Southern Tier Clean Energy Incubator (SCI) by coalition members Binghamton University, NY-BEST, and

IncubatorWorks, and the launch of the iM3NY gigafactory in a qualified Opportunity Zone in Broome County. Many of the region's >700 SMMs and industry stakeholders have significant interests and activities aligned with the energy storage supply chain.

To support the growth of the industry cluster, NENY will leverage diverse resources of its coalition in the form of: premier academic institutions across a range of education levels; existing earlier-stage battery testing and development infrastructure at Binghamton, RIT, and NY-BEST; incubator services at IncubatorWorks, The Clean Fight, and the Southern Tier Clean Energy Incubator; statewide connections, sector expertise and financial resources of RF SUNY, ESD, and NYSERDA; and community connections and partnerships of Broome County government, Southern Door Community Land Trust, and the regional community colleges. The assembled coalition will ensure effective engagement of industry, government, and community stakeholders, from startups and SMMs to large corporations, from rural areas to low-income urban communities. Each coalition member brings unique assets to the table that will enable all aspects of the industry cluster, including technology development, manufacturing, workforce development, and, entrepreneurship, equity and inclusion. We also recognize that a successful regional industry cluster, entering national and international markets and attracting foreign direct investments, must be highly networked. Thus, the coalition is also partnering with national and international organizations, including the Electric Power Research Institute, Inc, the world's preeminent independent, non-profit energy research and development organization, and EIT InnoEnergy, the world's largest sustainable energy accelerator.

3. PRIVATE SECTOR ENGAGEMENT. The coalition has substantial connections, including major corporations, startups, venture capital, and other investors. NY-BEST membership includes >185 manufacturers, academic institutions, utilities, developers, startups, government entities, engineering firms, systems integrators, and end users throughout NYS and beyond. RIT's small-scale battery prototyping center has recently worked with 54 companies, Binghamton's Southern Tier Clean Energy Incubator has 40 member companies, The Clean Fight NY has support from 20 strategic and 13 venture partners, and NYSERDA supports and networks the clean energy industry across the state. During Phase I, the coalition engaged >50 companies in the battery sector to ascertain their development and investment plans, R&D and service needs, and current and future workforce needs, to inform the development of the component projects.

Many companies expressed significant workforce needs, totaling >3000 jobs over the next 5 years, with commitments to participate in the internship program and/or hire NENY trainees (*see letters of support*): **iM3NY** (110 engineers and technicians within the next year; 3000 when factory scales to 32 GWh); **Raymond Corporation** (electric forklifts; 50 manufacturing associates – 3 years); **C4V** (battery R&D; 50 engineers, and technicians – 5 years); **Nanoramic Laboratories** (energy storage and advanced materials; 200 manufacturing technicians and engineers – 5 years); **EaglePicher** (battery manufacturer; 30 chemical and electrical engineers – next year); **Electrovaya** (battery manufacturer; 200 technicians and engineers – 5 years); **Sionic Energy** (Series B battery startup; 20 hires in battery materials – 2 years); **Urban Electric Power** (alkaline batteries; 160 technicians – 4 years); **Bren-Tronics** (Military battery applications; 15 engineers – 1 year); **Kodak** (50-100 engineers and technicians – 5 years; commitment to pay NENY interns); **Frontier/Delta ModTech** (equipment manufacturer, committing to internship program).

Multiple companies expressed testing and manufacturing needs that they can address using Battery-NY services (*see letters*): **Dürr Megtec** (custom demonstrations, product benchmarking and ongoing product development); **Applied Materials** (product prototyping, testing, and validation of HVM lithium deposition technology) **Electrovaya** (qualification testing, development of specialty cells), **Nanoramic** (small-scale manufacturing, scale-up, and optimization of new battery cell chemistries and formats); **Dimien Inc.** (prototyping, materials qualification, and cell qualification of vanadium-based batteries); **Bühler Battery Solutions** (evaluation of experimental battery slurry formulations); **Bren-Tronics** (prototyping and testing of

current and planned power solutions for the U.S. and military allies); **EaglePicher** (production of 2-75 Ah pouch and cylindrical cells in the 100s-1000s per year quantity range). Notably, **C4V**, the battery development company that founded iM3NY and is supporting the launch of the gigafacotry, has indicated that it could use the Battery-NY center services at up to 25% of the available service capacity when it first launches.

Additional industry commitments and support include:

- **iM3NY** and **Raymond Corporation**, a Toyota Corporation producer of battery-powered material-handling equipment in the Southern Tier, have agreed to develop and execute Community Benefits Agreements using the DOE toolkit.
- **EIT InnoEnergy**, the world's largest sustainable energy accelerator, is providing a $1.2M discount for a full license of their comprehensive Battery Academy portfolio of training courses, with complimentary platform support, updates, and train-the-trainer sessions for all coalition member.
- **Siemens**, through its Digital Industries Software Americas Academic Enablement program and Xcelerator Academy will provide the Siemens Battery Design Studio access to NENY trainees and startups.
- **Phoenix Investors**, owners of the Huron Campus, the location of the iM3NY gigafactory and the future home of Battery-NY, are committing to covering the costs of the demolition activities for the construction.
- **Marquardt Switches, Inc.**, will offer preferred electronic pricing, validation services, engineering services, and production services to NENY members and Battery-NY clients.

Our partners are also investing in complementary projects to grow the state's energy storage ecosystem:

- **iM3NY** is committing $96M private and $13.25M government investments in the Endicott gigafactory.
- **Kodak** is making significant investments to expand its electrode manufacturing capacity in Rochester.
- **Electrovaya**, founded in Canada in 1996, is in the planning stages of building a cell manufacturing facility in the Southern Tier of New York, and has secured a sales agreement with the Raymond Corporation.
- **Nanoramic** plans to invest $100M to build a 1.5 GWh facility, and is considering NYS as a target.

GROWTH CLUSTER SUSTAINABILITY. With the growth of regional cell manufacturing facilities, such as iM3NY and Electrovaya, combined with synergistic projects to accelerate battery technology development and manufacturing innovation, connect and expand the battery supply chain, and ensure workforce preparedness, NENY will foster a sustainable, self-sufficient economic industry cluster, with a $50M match investment from NYS that extends beyond the EDA award for a total of 10 years (*see ESD letter*). The shared commitment to maintaining the NENY initiatives are evidenced by additional matching funds provided by the coalition members. While many of the proposed initiatives will deploy programs that will integrate with the regular operations of the coalition organizations, we will pursue specific strategies to ensure sustainability.

As appropriate, NENY will leverage user fees across some components to generate revenues to sustain and run facilities and programs. Supplier companies will pay fees for utilizing the supplier qualification program, making it self-sustaining from revenues. Battery-NY will be sustained by user fees for utilization of the center for cell manufacturing. The Southern Tier Clean Energy Incubator and NY-BEST have membership fees for participation and access to mentoring and resources. And the suite of higher-level, advanced courses, especially those to be utilized by our industry partners, will also be available subject to a fee. To ensure continued support of the equity and justice efforts, we will work to develop a NENY Equity Fund stemming from revenue-generating NENY activities, return on investment from startups, and contributions from industry partners such as iM3NY and Raymond Corporation, who have committed to working with NENY to develop and execute DOE-based Community Benefit Agreements.

Through the unmatched capabilities of the Battery-NY Center, the connections and qualification resources of the supply chain project, and training and incentives for startups of the innovation & entrepreneurship project, NENY will recruit the broadest set of storage and supply chain companies with vested interests to invest in

the region. Battery-NY will establish a robust and attractive manufacturing infrastructure. A well-formulated marketing and outreach strategy will help build Upstate New York as the premier location and hub for storage technology development, prototyping, and manufacturing, and set the foundation for regional financial sustainability. Coalition members Binghamton University, RF SUNY, and ESD all have investment funds, and by creating a robust startup ecosystem, NENY will attract additional investment funding that will generate a return from successful companies that will be reinvested into new companies.

NENY will continue to leverage and share the assets of its partners to sustain the ecosystem, with each partner offering varied and complementary resources to provide support for each project. This leveraging of shared assets will lessen the need for external support and provide a shared identity for the cluster. NENY will build strong relationships with our industry leadership partners, as experience has demonstrated that synergies created by promoting technological developments and talent pipeline building that align with the needs of our regional companies often lead to investments by those companies into respective programs.

NYS has called for increased investment in battery technology to meet its goals for energy based on renewables. NENY will leverage the state's interest by submitting proposals for grants and working with state agencies to promote investments in technology, infrastructure, and social programs related to the cluster. The prospect of state government support is further underscored by the commitment of two main economic development agencies, NYSERDA and ESD/NYSTAR, to serve as coalition members and to realize NENY's vision of positioning the state as a leader in energy storage development and manufacturing.

The recently-released DOE supply chain strategic plan is setting aside $6B to fund "domestic battery materials processing, manufacturing, and recycling," for "companies to expand and build new American factories with quality job opportunities in regions throughout the country". The DOE plan underscores the timeliness of the proposed projects to establish a regional industry cluster around the new gigafactory, as NENY initiatives will jumpstart the ecosystem development to create capacity, infrastructure, and industry readiness to leverage the DOE funding to the fullest extent for maximum national impacts.

5. ENGAGEMENT PLAN. While focusing on the goals of establishing a battery manufacturing cluster with national impacts, we recognize the integral role of the region and the local communities, and have prioritized strategies to ensure that the emerging benefits are propagated to the local residents. As an academic institution lead, we are making concerted efforts to ensure that NENY projects benefit not only high-tech R&D and advanced manufacturing, but ensure lasting community impacts. The coalition includes organizations that span the entire project region and that actively engage with various populations, from the many rural areas of the Southern Tier to the low-income urban communities. The coalition is committed to actively engaging regional communities to drive the conversations and decisions around NENY, as exemplified by our February 24th *New Energy New York Regional Convening* that brought together local politicians, industry leaders, and community organizations to provide feedback and input on the planned proposals.

With the government of Broome County as a coalition member, NENY has given considerable attention to the challenges faced by area residents, the current and planned initiatives to address them, and how the coalition activities can amplify or build on these initiatives. Phase I community engagement has identified barriers to training and labor force participation as major challenges in maintaining existing and implementing new training programs. Consistent with this, the Southern Tier lags the U.S. average labor participation rate by almost 10% (51.8% vs. 61.7% for 2021). It is thus essential to address the barriers to participation to ensure effective workforce development initiatives in the regional industry cluster. Consequently, through Broome County, the coalition began collaborating with the Broome-Tioga Workforce (BTWF), the largest workforce organization in the Broome-Tioga area of the Southern Tier, on the *Workforce Development* and *Equity & Justice* component projects to address the barriers to participation, including transportation and

childcare. As part of the NENY projects, BTWF is expanding its operations to increase outreach directly to community leaders and organizations. Through Broome County, the coalition has also added as a member the Southern Door Community Land Trust (SDCLT), a non-profit serving minority and disadvantaged populations to promote housing and environmental justice, and is also creating ties with the local BIPOC community through the grass-roots Support Black Business 607 group.

The coalition also engaged with the government of the Village of Endicott, home of the Huron Campus, which houses the iM3NY gigafactory and the proposed site of the Battery-NY Center, to develop synergies with the $10M Endicott Downtown Revitalization Initiative (DRI) and to set priorities for maximizing the benefits and minimizing the risks associated with the expansion of manufacturing. With a history of an industrial spill around the Huron Campus area in 1979 and the subsequent environmental and healthcare risks and prolonged clean-up efforts, many local residents remain skeptical towards new industrial operations. This underscores the need for strong community engagement to demonstrate transparency and to build residents' trust and understanding of the benefits of the industry cluster. To date, we have participated in a DRI Public Input Workshop, and have agreed to partner with the Village on their Brownfield Opportunity Area nomination study with a focus on environmental justice.

To ensure continued and relevant engagement of community organizations for the development of meaningful and impactful strategies, the coalition is creating a dedicated Equity and Workforce Development Workgroup with representation from regional industry partners, local governments, community colleges, and community organizations, including the SDCLT. The Workgroup will help NENY define strategies for asset-based community development around the industry cluster, and will also work with iM3NY and Raymond Corporation to develop Community Benefits Agreements based on the DOE toolkit (*see letters of support*).

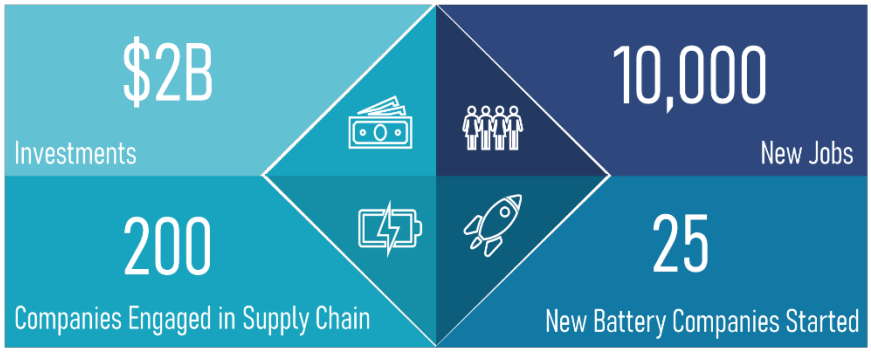
6. EQUITY & JUSTICE. The energy storage sector is providing jobs, economic access, and environmental benefits to many. Yet, this growth is not equally distributed. Reports show that most of the clean energy workforce is male and racially white, with a lack of representation from BIPOC and rural communities. Despite recognition of the huge disparities in the exposure to environmental challenges and pollution, low-income and BIPOC communities are still subject to disproportionate exposure to industrial pollutants and environmental hazards. Underserved and BIPOC groups are often overlooked, if not even harmed, as a result of regional manufacturing expansions. With the Opportunity Zones (36007013400, 36007013500) around the Huron Campus in Endicott, NY, demonstrating substantially higher levels of BIPOC residents (up to 30% *vs.* 4% for the rest of the County), the expansion of the iM3NY gigafactory presents both risks and opportunities for minority resident populations. Equitable access to health, environmental, and economic benefits of a sustainable, clean energy economy can only be accomplished by increasing representation across innovation, entrepreneurship, workforce, and leadership roles. Thus, we are committed to working to identify and overcome the structural, historical, and institutional barriers in our region to create an industry cluster based on a foundation of equity and justice.

Battery-NY will bring investment to the Opportunity Zones in Endicott. The Center will establish direct and indirect jobs in the region, and will expand opportunities for businesses in the energy storage space. Equitable hiring practices, coupled with other project-specific strategies, will ensure the propagation of the center benefits and opportunities to disadvantaged populations. The ***Supply Chain*** project will promote DEI within the energy storage sector by lowering technical and financial risks and barriers to market entry, making it easier for BIPOC-owned businesses to compete, while also ensuring more affordable access to clean energy for all communities, specifically in rural and high-poverty urban areas. The supply chain database will include guidance on Minority/Women-owned Business Enterprises (MWBE) and veteran-owned organizations to promote awareness and business with these companies. The team will also engage MWBE manufacturers looking to pivot and empower them to enter the battery manufacturing value chain. Through the ***Workforce***

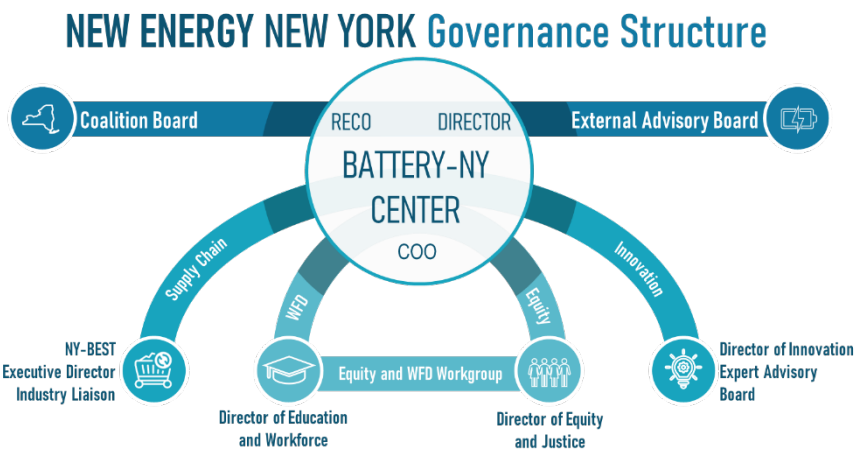
Development project, the coalition will work to ensure equitable access and diverse participation in training programs that will address the workforce needs of the industry cluster. Fundamental to establishing regional economic equity is providing access to workforce training at multiple levels through various age-, level-, and community-specific programs. We are thus proposing a comprehensive, multi-partner approach involving technical training programs, community colleges, universities, workforce boards, and industry partners to provide a suite of training opportunities at multiple levels, supported by wraparound services and stipends, to enable underserved, rural, and minority groups to join the clean energy economy. The ***Innovation*** project team will actively conduct outreach to attract companies with DEI executive team members and with solutions positioned to have a significant impact on disadvantaged communities or to serve such communities in NYS. The team will seek to deliver more inclusive programs through ensuring diversity in evaluators, contractors, speakers, content specialists, and regional resource pool.

The NENY ***Justice and Equity*** project is explicitly dedicated to advancing racial, economic, environmental, and climate justice in the region through collaborations with grassroots community organizations and a focus on asset-based community development. In addition to supporting designation and development efforts around a candidate Brownfield Opportunity Area, the project will increase engagement of disadvantaged communities through community ambassador, youth corps, and community café programs. We will also further engage and empower the underserved communities by creating a region-wide entrepreneurship and small business support network dedicated to the needs of these individuals. Together, these initiatives seek to build trust and transparency with communities that have been historically overlooked to enable them to become active members of the growing industry cluster, benefitting from its emerging opportunities.

7. EXPECTED OUTCOMES. NENY will leverage transformational investments from the EDA and the collective capacity of regional energy storage stakeholders to strengthen the emerging energy storage cluster in the Southern Tier of New York, position the region as an international leader in energy storage, and empower the American battery supply chain. NENY's coordinated approach, centered on equity and equal opportunity, will spur economic development by enabling the growth of incumbent energy storage entities through the construction and operation of a world-class energy storage production and research facility, identification, and enablement of energy storage workforce pathways, and acceleration of industry innovation while attracting nascent energy storage businesses and legacy manufacturing corporations to participate in the emerging material supply chain. Based on industry and coalition partner planned investments, past development and utilization trends for similar facilities and programs, current partnerships and engagements, industry trends and estimates, and the planned future investments in the sector by NYS and the DOE, the coalition anticipates that proposed activities will result >4000 trainees, >200 new supplier companies, >25 companies started, >25 new training and support programs launched, >$2B in investments, and >10,000 new jobs to the region within the next 10 years.



8. GOVERNANCE. Through a strategy of collaborative governance that brings together public, private, and nonprofit sector organizations, NENY will design a responsive and resilient regional cluster that will align traditionally siloed functions into one coordinated initiative that will maximize potential outcomes and impact.



Each NENY component project is inextricably connected to one another. The Battery-NY facility, at the center of the NENY industry cluster, will be a connecting nexus for the coalition projects and initiatives. An External Advisory Board (*see letters*) of national-level experts in the sector and project-relevant areas will be convened by Director of Battery-NY, Dr. M. Stanley Whittingham, to provide high-level guidance and analysis to inform the vision, mission, and goals of NENY and Battery-NY. The BBBRC Regional Competitiveness Officer (RECO), Per Stromhaug, Associate Vice President of Innovation and Economic Development at Binghamton University, will convene the regional Coalition Board with representation from all coalition members to set priorities, develop strategic plans, and evaluate the progression of the projects. The Battery-NY Center will be managed by a Chief Operating Officer (COO), with extensive experience in the battery industry sector reporting to the Battery-NY Director. Each of the components of the coalition's cluster work will have a dedicated position reporting to the RECO and the Coalition Board and overseeing the respective component project: NY-BEST Executive Director, working with and Battery-NY Industry Liaison Officer (*component #3 Supply Chain*), Director Education and Workforce Development (*component #4 Workforce Development*), Director of Equity and Justice (*component #5 Equity and Justice*), and Director of Innovation (*component #6 Innovation*). With the goals of *Workforce Development* and *Equity & Justice* inextricably linked, NENY will also establish an Equity and Workforce Development Workgroup, with representation from industry partners, educational institutions, and community organizations to ensure the development of industry- and community-responsive strategies and programs.

9. PHASE I WORK. With the support of the EDA's Phase I award, NENY engaged in the following activities:

- Facilitated the convening of a workforce development workgroup including Binghamton University, SUNY Broome and Corning Community Colleges, Broome-Tioga Workforce, RIT, AM&T, and IncubatorWorks. This group compiled a regional inventory of training programs and gaps based on industry needs, and worked to propose strategies to support the labor force needs of the energy storage cluster.
- Conducted "customer discovery" with ~50 battery sector companies to discuss their development plans, prototyping, testing, and manufacturing needs, and workforce needs, as reflected in *Section 3* above.
- Launched the New Energy NY website to promote the visibility and awareness of the initiative.
- Connected with European battery ecosystem leaders (UK BIC and InnoEnergy) to investigate best practices in the establishment of services, partnerships, supply chains, and training initiatives, while also creating networks with potential European partners for collaborations and recruitment.
- Introduced two new coalition members: AMT, the Manufacturing Extension Partnership (MEP) covering the Southern Tier and its ~700 manufacturers, and the Southern Door Community Land Trust (SDCLT), a non-profit in Broome County that is focused on combating racial injustices and promoting housing and environmental equity. SDCLT will directly connect NENY to the minority and underserved populations in Broome County, while increasing access to the proposed programs, and ensuring participation in the emerging training and job opportunities.
- Contracted with an engineering firm to prepare preliminary construction reports for Battery-NY, and began planning actionable steps to be taken towards preparedness in the event of the EDA award.

- Contracted with Bob Galyen (retired CTO of CATL, the world's largest Li-ion battery manufacturer) to prepare technical and strategic plans for the Battery-NY Center.
- On February 24th, NENY held a Regional Convening at Binghamton University, bringing together local and state politicians, regional companies, academic institutions, community organizations, and other non-profits to discuss the projects and vision of NENY, get feedback from relevant stakeholders, bolster and expand partnerships, and raise awareness of the initiative.

10. VISION CHANGES. Through intensive engagement with the public and private sector during Phase I, we identified several important considerations for specific projects and the industry cluster as a whole.

Battery-NY. During the "customer discovery" calls with relevant companies, we have identified a larger than expected need for domestic manufacturing for the defense industry including a greater need for "legacy" format cells for defense, which led to the addition of flexible cylindrical cell equipment. In contacting battery equipment manufacturers, we came to appreciate the very limited number of U.S. companies, underscoring the coalition's commitment to building out a domestic supply chain.

Supply Chain. The supply chain disruptions caused by the COIVD-19 pandemic stand to be exacerbated in light of the war in Ukraine, further highlighting the need for a robust and resilient domestic supply chain as a matter of national security. With the already-high demand for batteries for military applications, the recent developments may drive the need even higher. While recognizing the need to integrate SMMs for a truly independent, fully functioning supply chain, we identified the inherent barriers and challenges SMMs face around conservative industry practices and limited resources and connections. Consequently, the coalition added AMT, the MEP for the Southern Tier, to facilitate engagement with the SMMs. Another significant change around this project has been to increase the amount of proactive work to grow the ecosystem within the supply chain project. We have added more effort in company attraction, recognizing the increased desire of foreign companies to expand into the U.S. to contribute to the U.S. domestic supply chain.

Workforce Development (WFD). Activities around the WFD component revealed several region- and state-specific challenges, including NYS companies' hesitancy towards apprenticeship models, exceedingly long NYS certification and approval processes for the creation of new degree programs, and a disconnect between the industry WFD demands and the educational institutions' supply. We have identified the need for stronger coordination between colleges and other WFD organizations, leading to the creation of the WFD Director position and the associated workgroup. Through relevant community conversations, we recognized that simply designing and deploying new industry-responsive training programs is not sufficient due to persistent barriers to participation that need to be addressed to ensure effective industry cluster WFD. We are thus now focusing on providing incentives and wraparound services, as well as performing asset-based community development to further identify and combat barriers to participation.

Finally, with the February 2022 publication of "*America's Strategy to Secure the Supply Chain for a Robust Clean Energy Transition*" by the DOE, we view the EDA's and the state's investment into New Energy New York, Battery-NY, and the Southern Tier as more timely and important as ever, to seed the establishment of a battery industry cluster that is prepared to leverage and amplify future federal investments to catalyze U.S. leadership in battery manufacturing.