

**The State Energy Planning Board
Meeting will begin at 2:00 pm**



Energy Planning
Board

State Energy Planning Board Meeting

May 1, 2025

Welcome and Roll Call

Agenda

1. Opening remarks from the Chair
2. Minutes of the March 3, 2025 Board Meeting
3. To discuss select Energy Plan topic areas
4. To discuss perspectives from major energy end-use sectors
5. Other business

Opening Remarks

Doreen M. Harris

President & CEO, NYSERDA

State Energy Planning Board Chair



Clean Energy in Context



Global Context

Shifting priorities on climate action driven by global inflation, affordability concerns, and higher interest rates and energy prices, among other factors



Federal Policies

Rapidly changing federal policy landscape, with uncertainty in tariffs, tax credits, federal funding, federal agency staffing, and on specific resource areas



Economic Trends

Global context and federal policy uncertainty has driven declines in clean energy financing as well as the cancellation or downsizing of projects

Clean Energy in Context



Global Context

Annual global solar installations have more than doubled since 2021.

Renewables produced 92.5% of added power capacity worldwide last year.



Federal Policies

More U.S. electricity generation capacity additions were renewables than fossil fuels last year.

Federal support for innovation, manufacturing competitiveness, supply chain security, and resources like advanced nuclear.



Economic Trends

Annual investment in energy transition doubled to \$2 trillion in three years.

In March, more than \$1.6 billion announced in U.S. clean energy investments, with 5,000 new jobs.

New York Celebrates Earth Day

Governor Hochul Announces \$60 million in Environmental Bond Act funding

- Funding will go towards Green Resiliency Grants
- Grants supports vital stormwater management and resilient infrastructure projects in flood-prone communities across New York State.

New York ranks third “Greenest State”

- WalletHub’s scorecard found that New York has some of the lowest carbon dioxide, methane, and nitrous oxide emissions per capita, as well as the second-best soil quality in the country

New York ranked 3rd in the ACEEE State Energy Efficiency Scorecard

- The scorecard ranks states based on their energy efficiency policies and programs that save energy, advance equity, and produce environmental and economic benefits.
- Ranking recognizes energy-saving policies across various sectors and agencies, including NYSERDA, DPS, DOS, the state’s utilities, and more.



Agency Updates

SUNY Oneonta purchased Tier 1 Renewable Energy Certificates (RECs) from NYSERDA's voluntary sales program.

- The purchase will source enough locally-produced clean energy to fully power four, 200-bed residence halls on the SUNY Oneonta campus
- The transaction is the first of its kind and provides a replicable model for other large energy users to procure clean power

DEC Mandatory Greenhouse Gas Reporting Rulemaking

- In March, DEC advanced the Mandatory GHG Reporting rule, 6 NYCRR Part 253
- Public comments are due to DEC by July 1 and DEC will host a number of public engagement sessions

The Code Council advances new building energy codes

- The Code Council at DOS released proposed changes to the state energy conservation code.
- Changes reflects advancements in the international building code, that will lower consumer energy bills for New Yorkers and relieve demand on the energy system.
- Changes also include recommendations from the State's Inter-agency Fire Safety Working Group that will be among the strongest in the nation

Agency Updates

Build-Ready Benson Mines

- 12 MW solar PV project located on iron ore tailings pile on Benson Mines Inc. lands in Adirondack Park, St. Lawrence County Town of Clifton
- Payment-in-lieu-of-taxes agreement for town, school district and county
- Build-Ready received Development Fee of \$3.4MM to cover NYSERDA costs
- Project transferred to LSR Tier 1 to administer Tier 1 REC



NY-Sun “Beyond 10GW” PSC Order

- Of the \$302.7 million surplus currently available in the NY-Sun program, the PSC authorized NYSERDA to maintain \$150 million to procure additional solar resources beyond 10GW
- The PSC also directed NYSERDA to apply the remaining \$152.7 million from the NY-Sun surplus to support other NYSERDA programs and reduce ratepayer collections

Review Minutes of the March 3, 2025 Meeting of the Board

Topic Area: Energy Security Planning and Emergency Preparedness

Energy Security Planning and Emergency Preparedness

The objectives of energy security planning and emergency preparedness include:

- Protecting public health, safety, and welfare.
- Enhancing the resiliency of services while minimizing economic disruption.

New York State is well positioned and prepared to respond to energy emergencies – via multi-level and multi-agency energy preparedness, response, and mitigation activities in coordination with industry.

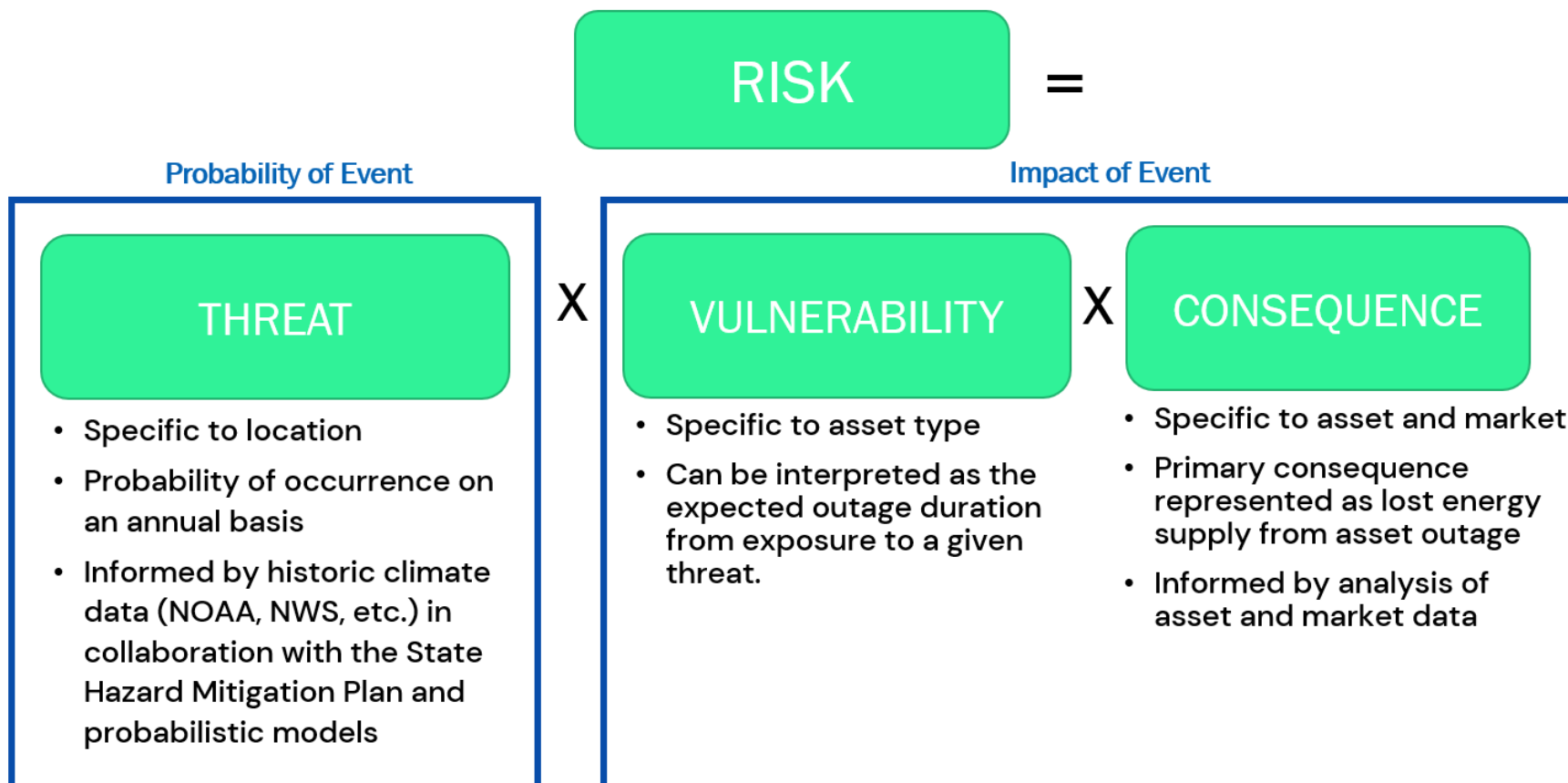
Key Existing State Actions

- State Energy Emergency Plan
- State Energy Security Plan
- Utility Emergency Response Plans
- Climate Change Resilience Plans
- Cybersecurity oversight, inspections, and audits
- Electricity system planning
- Winter Coordination Protocol
- Liquid Fuels Regional Resiliency Assessment Program

- **State Energy Emergency Plan:** Outlines energy emergency preparations and responses. Identifies State and federal energy management emergency structures, energy market intelligence, detailed response actions, and recovery plans for energy emergencies.
- **State Energy Security Plan:** Comprehensive assessment of New York's energy supply chain, energy risk profile, and energy emergency response and mitigation measures.

Risk-based analysis of our energy systems is used to prepare and secure the energy systems.

Evaluation is coordinated across energy sectors for shared understanding of risks, hazards, and potential vulnerabilities for a variety of conditions.



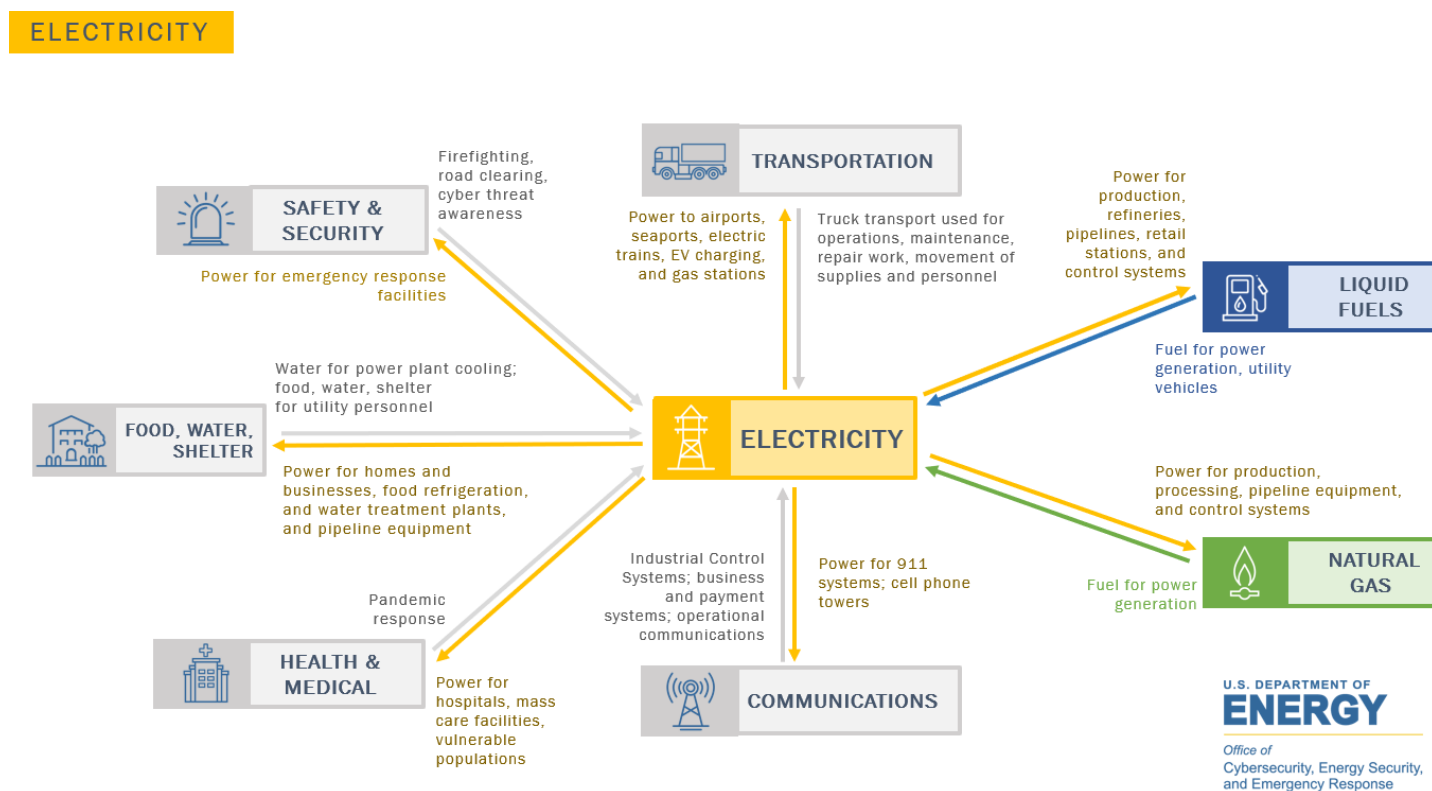
Major Risks of Energy System Sectors in New York.

NYS Energy Sectors	Power	Natural Gas	Liquid Fuels
Natural Hazards	• Flood (Riverine, Coastal, Lakeshore, Sea-Level Rise, Flash Flood) • High Winds, Tornados • Winter Storms and Extreme Cold	• Coastal Hazards (including Hurricanes) • Thunderstorm (Hail and Lightning) • Drought, Extreme Heat • Wildfire	
	Historic Examples: Superstorm Sandy, Hurricane Irene, Winter Storm Elliot, Lake Effect Snow		
Physical Threats and Vulnerabilities	• Physical disruption • Human Error • Sabotage / Criminal / Terrorism	• Maintenance Issues/Faulty Equipment • Pandemic • Dam Failure	
	Historic Examples: Pipeline disruptions, COVID-19, Northeast Blackout of 2003		
Cybersecurity Threats and Vulnerabilities	• Information Technology and Operational Technology systems • Social Engineering • Denial of Service	• Penetration Attacks • Viruses and Worms • Ransomware • Malware	
	Historic Examples: Colonial Pipeline ransomware, CrowdStrike outage, Volt Typhoon, Solar Winds		

Energy systems in New York State are interconnected in many direct and indirect ways, with these interdependencies having far-reaching effects.

Cross-Sector Interdependencies for Energy

- Electricity (see example)
- Natural Gas
- Liquid Fuels
- Intra-Sector Interdependencies
- Critical and Community Lifelines



The energy transition to a clean energy future in New York will introduce new and evolving risks to the energy systems.

- Increased electrification, the intermittency of renewable energy sources, and the need for clean firm and backup power are among the energy transition issues that are being monitored, evaluated, and addressed.
- Understanding and mitigating these risks, especially in the face of climate change, is essential to the transition to a clean energy future.

Continue to prioritize and support energy emergency preparedness in New York State.

Related Recommendations

- Continue to prioritize energy emergency preparedness and support multi-level, multi-agency energy emergency management in the State.
- Continue applying risk-based assessments to monitor and evaluate the changing threats upon the evolving energy system in New York.
- Continue to support energy emergency planning and the implementation of response and mitigation efforts with relevant stakeholders.
- Encourage the owners/operators of energy infrastructure to continue to invest in the security of these assets in response to the changing risks to our energy systems.

Topic Area: Smart Growth

Smart Growth is an approach to land use planning and development that supports and integrates the "4 Es" – equity, economy, environment, and energy– to create livable, inclusive and sustainable communities for people of all ages, incomes, backgrounds and abilities.



The key planning principles guiding **Smart Growth** support:

- A compact mix of land uses, focused on downtowns and existing neighborhoods.
- Diverse transportation options and walkable, bikeable, transit-accessible streetscapes.
- A variety of housing types, designs, and price points.
- Climate resiliency, adaptation, and mitigation.
- Well-planned and accessible public spaces.
- Preservation of open space, including natural and working lands.

All planned through an inclusive, community-based outreach and engagement process.

Smart growth practices create walkable, bikeable and transit-accessible infrastructure and land use patterns that are less dependent on more energy-intensive transportation.

Key Existing State Actions

- Downtown Revitalization Initiative, NY Forward, Restore NY, and NY Main Street
- Smart Growth Planning Programs
- Clean Transportation Prizes and Clean Mobility Program
- Master Plan for Aging

Related Recommendations

- **Prioritize and coordinate investments in location-efficient areas to enable compact development and reduce private automobile usage.** This would include coordinating and incentivizing investments, such as housing and mixed-use developments and non-vehicular mobility investments, and land conservation.
- **Support local governments with smart growth planning** by providing funds and technical assistance to support smart growth land use planning, zoning, land conservation, and community design.

Greater building density, compact infrastructure, and green infrastructure yields energy savings and revitalizes neighborhoods.

Key Existing State Actions

- Brownfield Opportunity Areas, Brownfield Cleanup Program
- Green Resiliency Grants
- Climate Smart Communities
- Local Waterfront Revitalization Program, South Shore Estuary Reserve

Related Recommendations

- **Develop guidance for local incorporation of environmentally-sustainable design (e.g., green infrastructure, passive neighborhood design)** into comprehensive plans, zoning ordinances, capital plans, and other local government activities.
- **Define and measure the energy and fiscal impacts** of Smart Growth development and green infrastructure.
- **Design and adapt incentives** to encourage locating housing, commercial, mixed-use development, and energy-efficient infrastructure in location-efficient areas.
- **Expand opportunities to redevelop distressed, vacant, abandoned, contaminated and brownfield areas to facilitate efficient infill development.**

Integrating renewable energy into local land use planning and zoning can result in more coordinated opportunities to produce and store energy and enhance community resilience.

Key Existing State Actions

- Smart Growth Planning Programs
- Climate Smart Communities
- Clean Energy Communities

Related Recommendations

- **Develop local land use best practices, tools and ordinances** for planning for and siting renewables, battery storage, EV charging stations and clean distributed energy in developed areas.
- **Enhance technical assistance, outreach, and education** on minimizing impacts of renewable energy siting on natural and working lands.
- **Collaborate with regional planning boards and counties** to help localities plan, zone and review renewable energy projects, including methodologies for assessing appropriate locations and conditions.

Inter-agency and inter-governmental collaboration are essential to realizing Smart Growth energy outcomes.

Key Existing State Actions

- Smart Growth Planning Programs
- Climate Smart Communities
- Clean Energy Communities
- Inter-agency collaboration on Statewide initiatives (DRI/NYF, NYSARP, EHP, etc.)

Related Recommendations

- **Expand Smart Growth planning and zoning programs.**
- **Convene an inter-agency working group** to create a statewide planning framework for Smart Growth, building off the Smart Growth Public Infrastructure Policy Act, to include a user-friendly data portal and other resources to support Smart Growth development patterns.
- In collaboration with counties and municipalities, **evaluate opportunities to use and potentially expand General Municipal Law Section 239** to consider Smart Growth in local land use decisions.

Presentation: Laurie Wheelock, Public Utility Law Project of New York (PULP)

About PULP

- The **Public Utility Law Project (“PULP”)** is New York’s only independent non-profit/law-firm whose sole interest is to advocate on behalf of low- and fixed- income utility consumers.
- PULP participates in rate cases and policy work, and we offer direct services support to low-income residential utility customers.



Barriers to NY's Energy Transition

Understanding the challenges facing low- and fixed-income households:

- Program eligibility and access issues
- Financial barriers
- Policy/federal uncertainty
- Structural barriers



PULP's Recommendations

- Greater inter-agency communication;
- Expand opportunities for data-matching;
- Gap funding for pre-electrification work;
- Expand energy affordability programming;
- Rethink income eligibility requirements for financial assistance programs; and
- Expanded and ongoing outreach, education, and support for LMI households.



Presentation: Jeffrey Perlman, Bright Power



Affordable Decarbonization of Multifamily Buildings

NYS Energy Planning Board

May 1, 2025

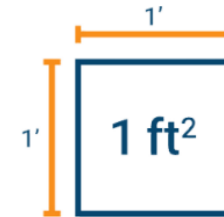
Jeffrey Perlman, Founder & Chief Strategy Officer

About Bright Power

Bright Power is the premier provider of energy and water management services for real estate owners, investors, and operators.



- Founded **2004**
- **150+** employees across the U.S., majority in NYC
- Completed **2,800+ energy audits, 600+ energy efficiency retrofits, and 500+ high-performance building certifications**
- Works with all types of buildings
 - **specializes in multifamily residential**



2.9M

Square Feet



2.5M

Units



158,000

Buildings



Multifamily Is Abundant

- 35% of NYS homes
 - 62% of NYC homes
- (77% of NYS multifamily homes are in NYC)

Multifamily = structures of 5 or more apartments

Multifamily Is Diverse



Image Source: <https://swiftlane.com/blog/mid-rise-apartments/>

Garden Style, Townhome, Low-rise, Mid-rise, High-rise, Skyscraper



Multifamily Is Diverse

Occupancy

- Singles, families, students, seniors, supportive housing

Income Level

- Low/moderate income, middle income, high income/luxury

Ownership

- Tenant-occupied vs Owner-occupied

Corporate Entity

- Non-profit, for-profit, coop, condo

Rent Type

- Rent subsidized, rent controlled, rent stabilized, free market



Multifamily Owners/Managers Are Distracted

Urgent Demands

- Move-ins/Move-outs
- Tenant complaints
- Maintenance issues
- Regulatory paperwork
- Staff management

Energy doesn't make the top 5!



An aerial photograph of a city street scene. The central focus is a modern, multi-story multifamily building with a flat roof covered in solar panels. A rooftop garden with green plants is visible on one of the upper levels. The building has a mix of brick and modern materials. Surrounding it are older, traditional brick buildings. A street with a crosswalk is visible at the top left, and a fire escape is visible on the right side of the main building. The entire image has a blue tint.

Driving Affordable Decarbonization in Multifamily Buildings

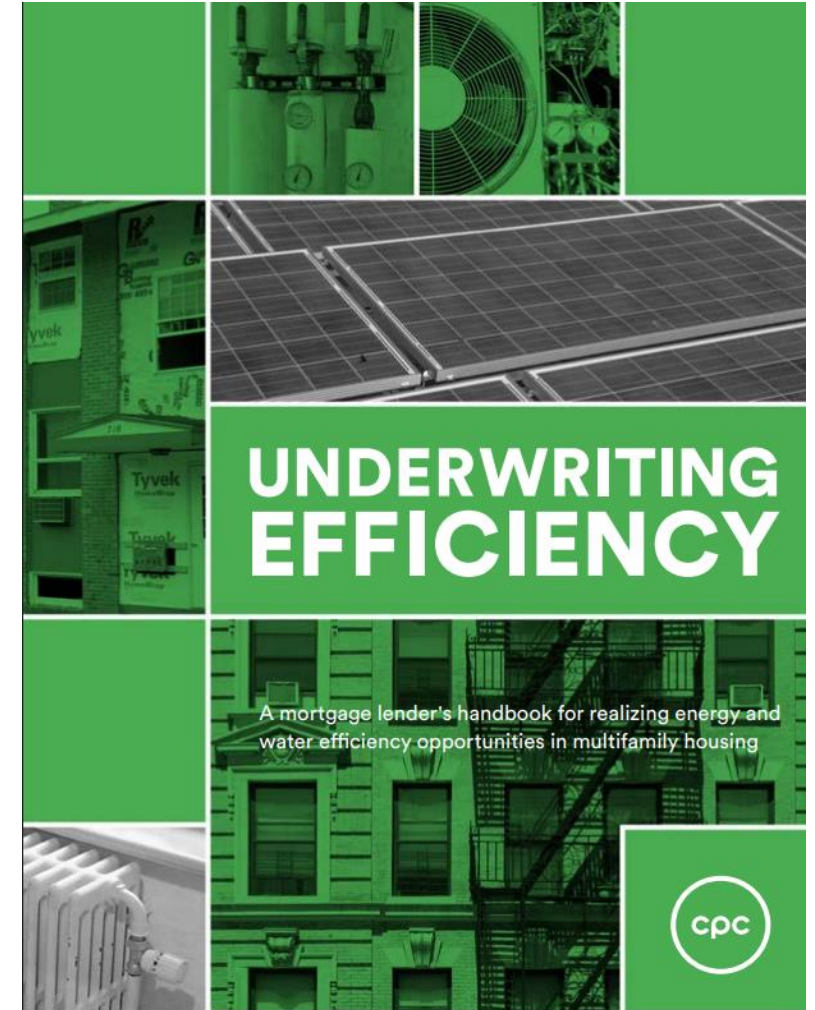
Piggyback on Other Building Lifecycle Events

Time of Refinancing or Sale

- Incorporate energy and carbon performance, upgrades, and savings into:
 - Mortgages – *lowest cost debt!*
 - Appraisals
 - Brokerage Offering Memoranda

Equipment replacement

- Requires advance investment to upgrade electric infrastructure BEFORE equipment fails
- HVAC contractors must be trained and incentivized (make carbon reduction profitable)



Economics Matter

Up Front (Capital) Cost – *Price Drives Purchasing Decisions*

- Provide incentives/rebates to lower purchase price
- Use bulk purchasing to drive down costs and ensure availability

Ongoing (Operating) Cost – *Rates Drive Behavior*

- Provide future electric rate certainty
 - e.g. 5 or 10-year rate lock for electricity vs volatile gas prices
- Make the low-carbon choice the economical choice
 - e.g. community solar at a discount to conventional power
- Align rate structures with real system costs
 - e.g. electric heat rates with nominal T&D charges



Promote Hybrid Electrification

Hybrid Electrification

- Lowers capital cost
- Hedges operating cost
- Avoids utility infrastructure investment

Fully utilizing existing electric infrastructure

- Drives down unit cost of electricity
- Minimizes utility capital expenditures
- Uses fossil as backup (can be delivered fuels!)

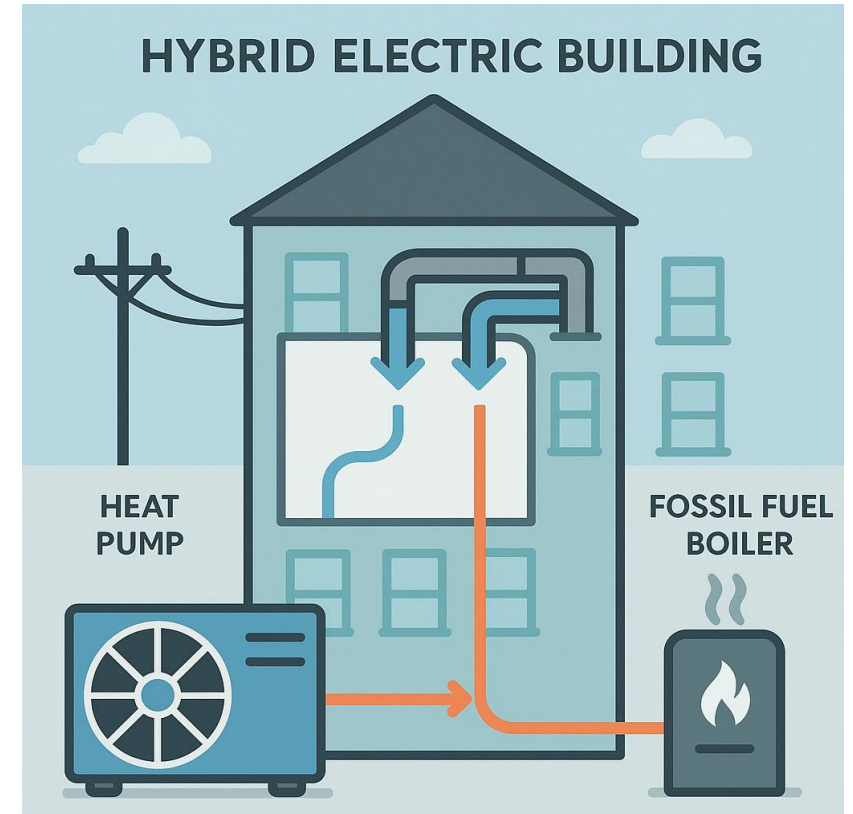


Image Generated by ChatGPT

Overcome Split Incentives

Align System Control, Payment, and Beneficiary

- Room Control + Occupant Pay = Incentive to Save

Encourage conversion from central systems to efficient unitized systems, while protecting tenants, e.g. through:

- Utility Allowances
- Reduction in regulated rent, or
- Energy bill subsidy

Training

- For Contractors, Building Operators, and Occupants



Change the Defaults

1. **Create statewide Energy Benchmarking and Energy Performance Standards**
2. **Upgrade infrastructure at a neighborhood-scale rather than a building scale** (more efficient deployment of resources)
3. **Provide easy ways to lower costs for building efficiency upgrades** (not paperwork-intensive programs)
4. **Stop incentives for converting to natural gas or expanding the gas grid**
5. **Scrutinize and minimize costs of maintaining the existing gas grid**



Summary: Strategies for Affordable Decarbonization

Piggyback on other building lifecycle events

- Building financing/mortgage
- Equipment replacement

Use economics to drive behavior

- Upfront Cost – incentives/rebates and bulk purchasing
- Ongoing Cost – price certainty and rates that encourage low-carbon decisions

Promote hybrid electrification

- Fully utilize existing infrastructure for cost-efficient carbon reduction

Overcome split incentives

- Apartment-level control and energy payment, with Tenant Protection





Thank You!

Jeffrey Perlman
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Presentation: Zachary Steinberg, Real Estate Board of New York (REBNY)



New York Energy Board

May 1, 2025

REBNY
Real Estate Board of New York

- The Climate Act sets ambitious goals for New York that cannot be achieved without building decarbonization
- NYSERDA and industry leaders have demonstrated the steps that buildings need to take to decarbonize
- Electrification and efficiency investments are challenging due to cost and other considerations
- Building owners rely on electricity and other and district energy sources to be carbon free, affordable, and reliable
- Policy and regulation needs to provide a predictable and efficient structure that recognizes how and when building owners make investments

Building Decarbonization Is Possible

- The technical knowledge exists to decarbonize buildings and there are successful State programs helping to lead the way
- Decarbonization requires replacing on-site fossil fuel equipment with efficient electric/district alternatives and efficiency upgrades that reduce overall consumption
- However, there have been relatively few building retrofits that resulted in significant energy savings so far

Governor Hochul Announces Playbook for Advancing Carbon Neutrality in High Rise Buildings

Playbook Created in Partnership with NYSERDA and Four Leading Real Estate Developers - Empire State Realty Trust, the Durst Organization, Hudson Square Properties, and Vornado

April 21, 2022



What's Going On in the Office Sector?

Office Sector:

- ✓ Generally less-reliant on on-site natural gas
- ✓ Corporate commitments of owners and tenants can drive action
- ✓ Greater ability to generate resources to pay for investment on a capital cycle
- × Economics of major projects very challenging
- × Tenants and owners don't want to pay for benefits they don't receive and have different payback expectations
- × Questions about electric grid and supply reliability and Con Ed District Steam

Common Challenges to Decarbonization Efforts



Challenge 1:

A tenant does not feel responsible for complying with building performance standards, such as LL97.

Challenge 2:

Improving the performance of a leased office space after a tenant has moved in is a logistical burden.

Challenge 3:

Owners and tenants find high-performance office fit-outs to be cost-prohibitive or complicated.

Challenge 4:

Energy consumption data is underutilized or not being shared in an accessible manner with the parties best suited to interpret the data.

Challenge 5:

Team members with relevant expertise are not effectively engaged during the decision-making process.

https://be-exchange.org/wp-content/uploads/2024/07/2024_DNYO_Strategies-for-Success.pdf

What's Going On in the Residential Sector?

Residential Sector:

- ✓ Solutions are more easily scaled
- ✓ More incentives
- ✓ Owners can move utility costs to tenants to defray costs
- × Economics of major projects very challenging
- × Projects can be very disruptive to existing residents
- × Electrification results in utility cost increases for residents
- × Different ownership types pose different challenges



Deep retrofits tend to be invasive and require major system replacements, which is very challenging to do in an occupied building

It is much easier to renovate an empty building, but those are very rare in the residential sector.

Residential deep retrofits completed prior to 2023 were mostly boiler replacements and facade improvements

Electrification is in early innings.

Electrification is key to deep decarbonization, but the economics of electrification need to evolve before we see conversions at scale

The cost of natural gas relative to electricity makes it hard for full load electrification to make economic sense as a standalone measure.

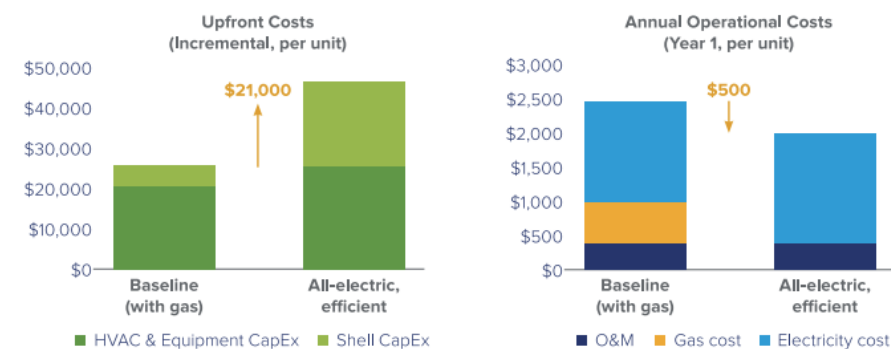
<https://be-exchange.org/report/hi-rise-low-carbon-multifamily/>

The Economics Are Challenging

Energy cost savings, avoided LL97 fines, and existing incentive programs are not sufficient for a typical owner to recoup upfront capital costs on reasonable time periods

“In existing multifamily buildings that heat with gas, analysis has shown decarbonization retrofits can have long paybacks if just looking at energy savings (up to 40 years) due to high capital costs and low operational cost savings.”

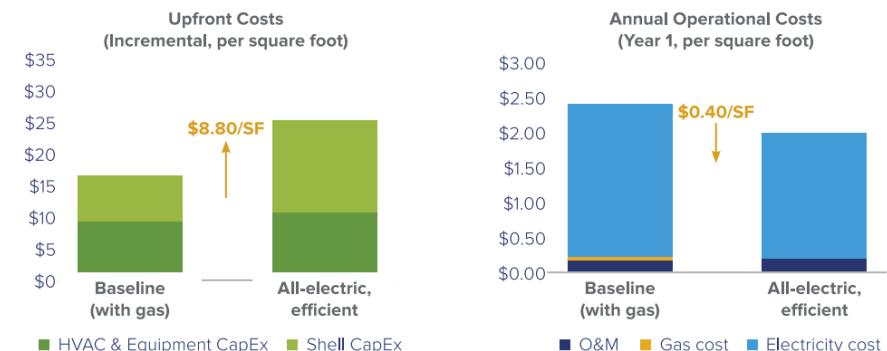
FIGURE 8.3: RETROFIT OF A 7-STORY, GAS HEATED, PRE-1980 MULTIFAMILY BUILDING IN DOWNSTATE NY



Retrofit includes a distributed cold climate air source heat pump system, heat pump water heating, code compliant shell, LED lighting, and smart, electric appliances.

FIGURE 8.7: RETROFIT OF A PRE-1980 500,000 SQUARE FOOT, 12 STORY OFFICE BUILDING IN DOWNSTATE NEW YORK

Retrofit includes a distributed cold climate air source heat pump system, heat pump water heating, code compliant shell, LED lighting, and smart, electric appliances.



<https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Programs/Carbon-Neutral-Buildings/carbon-neutral-buildings-roadmap.pdf>

Project Implementation Challenges Exist Too

- For residential buildings, removing natural gas boilers and piping to replace with electric systems requires significant work inside of the building – including in occupied apartments
- In office buildings – particularly larger buildings – there is limited space to locate additional equipment and owners are very unwilling to give up rentable space
- Electrification often requires significant upgrades to building-wide electrical infrastructure which can be difficult in occupied/tenant spaces
- Electrification often requires significant electrical distribution network upgrades that can make projects more expensive and harder to execute

Building Owners Invest At Particular Moments

- Building owners make capital plans 5-10 years in advance and make investments in new equipment/systems when existing systems reach the end of their useful life
- Capital is set at the time of refinancing and once financing is complete it is often very difficult to place additional financing on a building
- In office buildings, tenants control their spaces and the owner typically does not make changes to that space once the tenant signs the lease and takes occupancy
- The most efficient moment for owners to make upgrades is when they are going to spend money:
 - When equipment reaches end of lifecycle
 - Before a tenant occupies space
 - When an emergency (i.e. a gas leak) requires owner to invest

Building Decarbonization Requires Renewable Energy Generation

- NYC electricity is over 90% fossil fuel generated and district steam is entirely fossil fuel generated
- Renewable electricity generation and transmission projects are not proceeding rapidly enough
- The future of district steam is uncertain but it is vitally important in NYC:
 - It is unclear how Con Ed will generate steam from non-carbon sources
 - It is very expensive and requires significant additional electric load to switch from steam to electric
 - Buildings do not have space for replacement equipment

"Indian Point Is Shutting Down. That Means More Fossil Fuel."

The New York Times April 2021

"New York likely to miss 70 percent renewable target"

POLITICO *July 2024*

New York's \$2.5 billion offshore wind farm halted by Trump administration

©CBS NEWS *April 2025*

Electricity Is Very Expensive and Major Increases are Coming

- Electricity costs in New York are high and rising faster than inflation
- Con Edison initial electric rate increase proposals, for example, are growing rapidly
- Electrification in buildings, transport, data centers, and others will result in more demand for electric infrastructure, necessitating more investment
- Ratepayers are not yet funding the major scale up in renewable generation and transmission required to meet CLCPA
- Nor are ratepayers yet to see major cost increases from local utility infrastructure upgrades that will be required to meet load growth

Con Edison Requested Electric Rate Increases	
Year	Cost
2025	\$1.6 billion
2022	\$1.2 billion
2019	\$485 million
2016	\$482 million
2013	\$375 million

Electric Grid Reliability Leaves Building Vulnerable

- Owners are very concerned about electric reliability
- Electrified buildings without reliable electricity – *particularly when we switch to a winter peak* – raises significant risks for businesses and residents

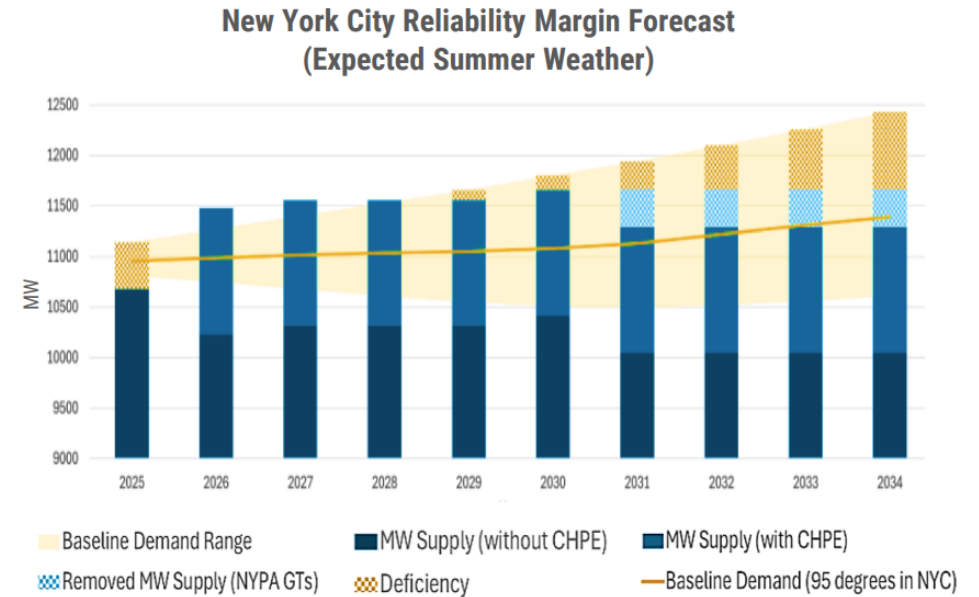


2024 Reliability Needs Assessment (RNA)

A Report from the New York
Independent System Operator

Executive Summary

This 2024 Reliability Needs Assessment (RNA) evaluates the reliability of the New York bulk electric grid from 2028 through 2034, considering forecasts of peak power demand, planned upgrades to the transmission system, and changes to the generation mix over the next ten years. The RNA assesses a “base case” set of assumptions to identify actionable Reliability Needs if there is a violation of applicable reliability criteria. This RNA identifies a Reliability Need within New York City beginning in summer 2033,



Policy Can Align Incentives and Address Challenges

Building owners need a predictable, rational policy and regulatory environment;

- Regulation should recognize that owners will invest when equipment reaches end-of-life as the marginal cost of electrification/efficiency work is much lower
- Regulation should not hold owners responsible for the carbon content of energy that is not combusted on-site
- Ratepayers cannot be wholly responsible for funding the renewable generation, transmission, and reliability investments needed to achieve CLCPA
- Greater incentives and funding sources will be needed to address the significant capital costs of electrification and efficiency in many buildings
- Rewarding energy efficiency can reduce emissions and help reduce electric load growth
- 50% of building sector emissions come from large buildings (>20,000 sq. ft.), but the other 50% comes from small and mid-sized buildings



Thank You!

Any Questions?

REBNY
Real Estate Board of New York

Presentation: Randy Wolken, The Manufacturers Association of Central New York (MACNY)

New York State Energy Planning Board

Presentation by
MACNY

– The Manufacturers Association





Rochester
www.rtma.org



Central New York, Mohawk Valley
& North Country
www.macny.org



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www.greaterbinghamtonchamber.com



BROOKLYN
CHAMBER OF COMMERCE

Brooklyn
www.brooklynchamber.com



The Council of Industry
The Manufacturers Association of the Hudson Valley

The Hudson Valley
www.councilofindustry.org



The Manufacturing Consortium of Long Island

Long Island
www.ignitelongisland.org

Current Energy Landscape: Perfect Storm of Challenges and Opportunities

- 1 **Record Demand**: First time in decades, New York is seeing a rapidly increasing energy demand in the manufacturing sector.
- 2 **Massive Investment**: With an aging electrical T&D system and gas network, new capital investment for existing systems and generation facilities along with new generation will be necessary.
- 3 **CLCPA adds large shadow of uncertainty**: CLCPA adds cost increase pressures in three ways: pressure to decarbonize in cost effective manner; keep utility rates low; and maintain availability of traditional energy resources.



Why is Energy Critical to Manufacturing?



- 1 **Manufacturing Investment** is a three-legged stool: Availability of vital resources (energy and water), tax rates and workforce.
- 2 **Scale**: Energy costs as a ratio of operational costs are higher for manufacturers. This creates an increased sensitivity to energy availability and costs.
- 3 **Growth**: Energy certainty enables new economic development. Uncertainty and lack of predictability slows investment and growth.
- 4 **Competitiveness**: New York competes internationally. New and legacy companies must justify making new investments.
- 5 **Leakage**: New York must prevent companies from re-locating to other states. Leakage is also missed in-state investment opportunities.

What do manufacturers need to succeed?

- 1 **Uninterrupted energy**: Safe, reliable, and high quality energy is required. Even millisecond interruptions cause millions of dollars in damage to products and equipment. Often facilities require precise temperature and ventilation control.
- 2 **Variety of resources**: Many industrial processes require natural gas for smelting or chemical reactions. Alternatives, if available, require significant costly capital upgrades or ramp-up and ramp-down times.
- 3 **Energy infrastructure installation**: Delays cause logistical challenges and put pressure on supply chains and reduce competitiveness.
- 4 **Regulatory certainty**: New regulations or restrictions on energy use reduce companies ability to make new capital investments.



Workforce Development Initiatives



- 1 **Manufacturing provides well-paying, secure jobs:** MACNY and the Manufacturers Alliance of New York work with community partners, such as NYSDOL and SUNY, to provide job training programs and services that support career pathways.
- 2 **Manufacturing offers a strong economic multiplier effect:** Investments lead to job growth in supply chain and support companies. (An investment ripple effect of a 5-7X multiplier)
- 3 **Registered Apprenticeships:** The Manufacturers Intermediary Apprenticeship Program (MIAP) provides paid apprenticeship work leading to job growth and new opportunities.
- 4 **Pre-Apprenticeships:** Real Life Rosies offers women a direct-entry, pre-apprenticeship opportunity to access job training, upskilling, and wrap-around services. This first-ever program continues to expand.

Presentation: Jordan Stutt, CalStart



NYS Energy Planning Board

Transition to Zero-Emission Transportation

Jordan Stutt
Senior Director, Northeast Region
May 1, 2025



ABOUT CALSTART

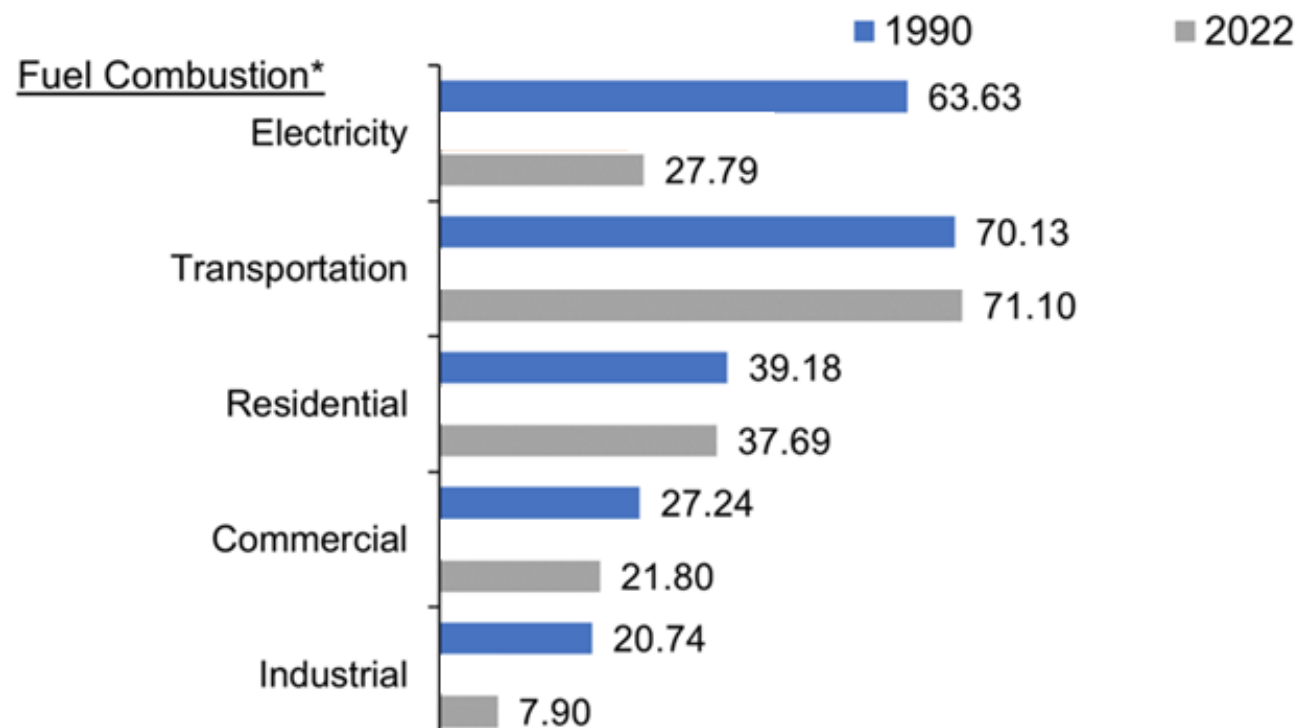
For more than 30 years, CALSTART's mission has been to build the clean transportation industry to curb climate change, ensure clean air for all, and support economic growth.

CALSTART works across public and private sectors to advocate for clean air policies and implement vehicle, infrastructure, and mobility solutions at scale. With more than 300 member companies spanning the clean transportation value chain and offices in California, Colorado, Florida, Michigan, New York, and Europe, CALSTART is a globally recognized leader in transport decarbonization research, policy, and practice.

Transportation Emissions

- **Transportation is one of NY's largest, and most stubborn, sources of pollution**
- **Reducing transportation emissions requires two-pronged approach:**
 - Reduce vehicle-miles-traveled (VMT)
 - Transition to zero-emission vehicles

Figure 5: Trends in Energy Sector Emissions



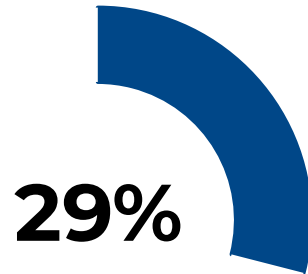
[2024 Statewide GHG Emissions Report](#), NYS DEC

Medium- and Heavy-Duty Vehicle (MHDV) Pollution

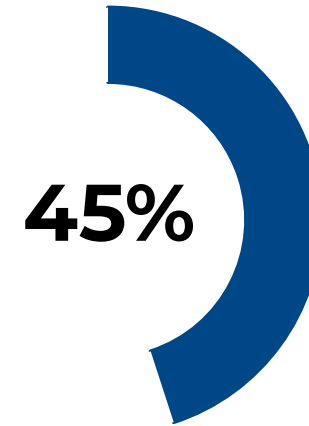
MHDVs account for <10% of vehicles on the road.



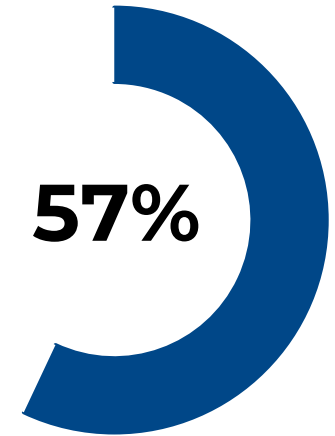
MHDVs account for nearly one-third of on-road vehicle GHG emissions.



MHDVs account for 45% of on-road NOx emissions.



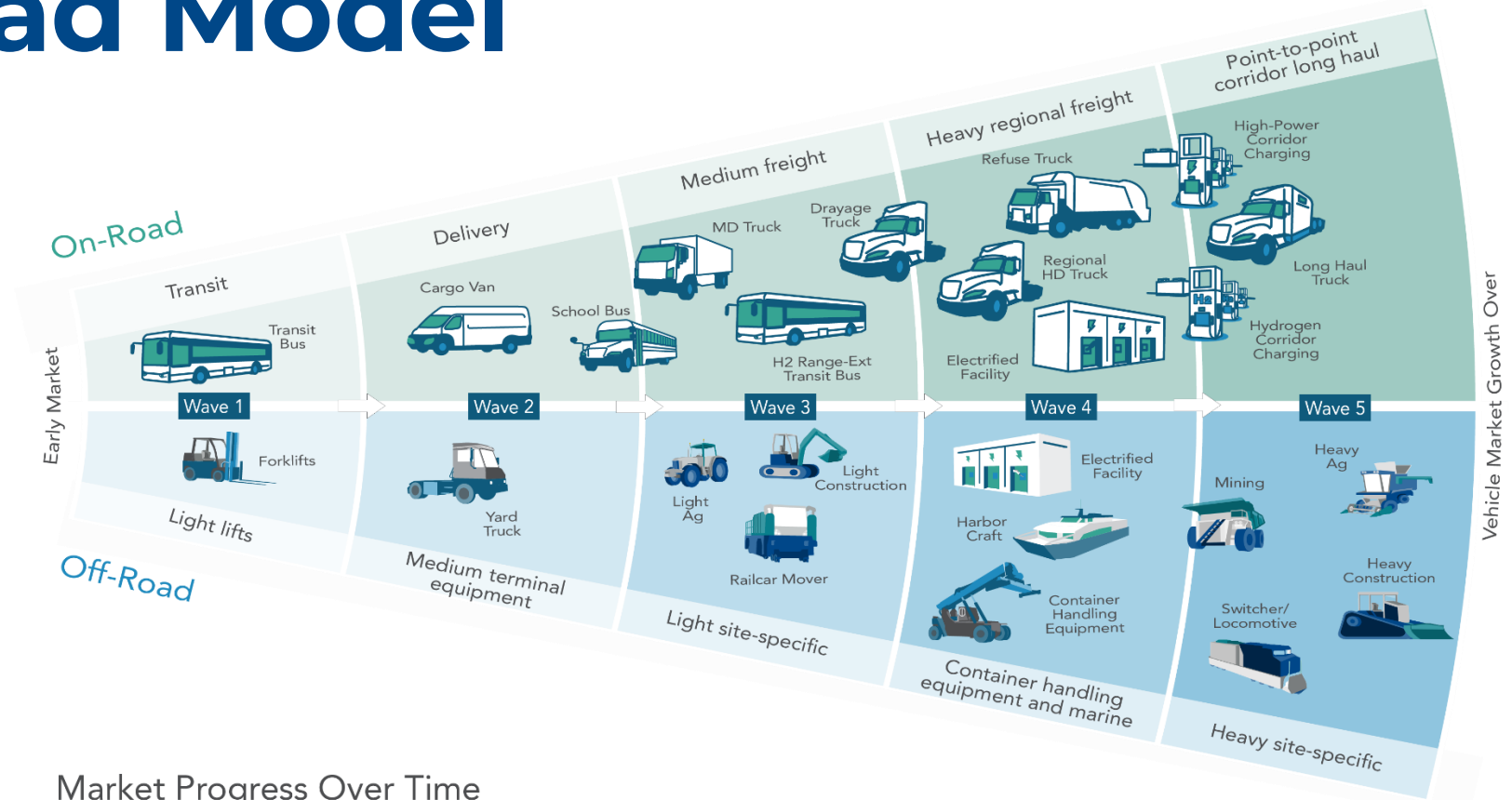
MHDVs account for 57% of on-road, direct PM2.5 emissions.



Source: UCS

Beachhead Model

Strategic phase-in of medium- and heavy-duty (MHD) zero-emission vehicles (ZEVs)



Market Progress Over Time

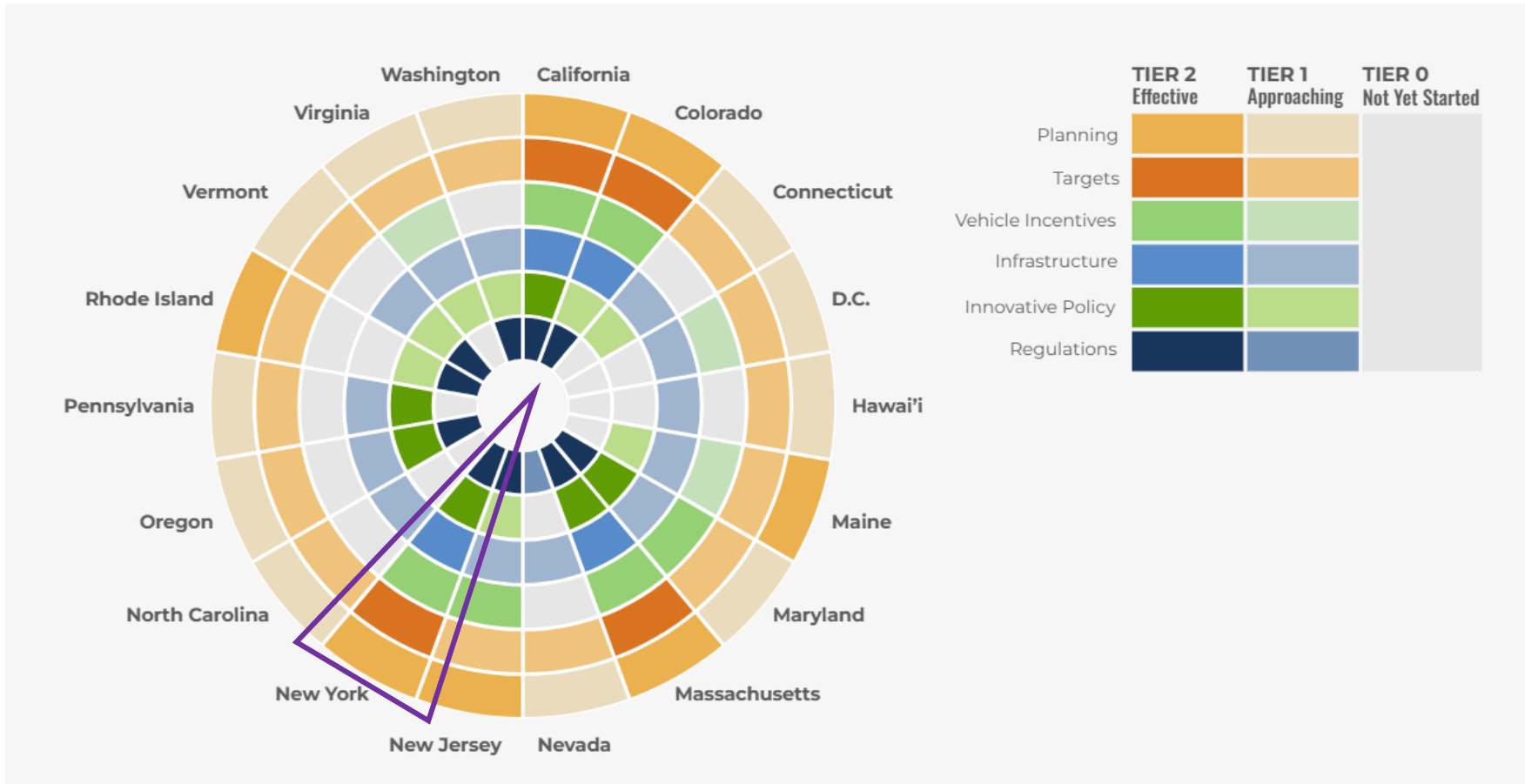
Similar drivetrain and component sizing can scale to early near applications

Expanded supply chain capabilities and price reductions enable additional applications

Steadily increasing volumes and infrastructure strengthen business case and performance confidence

Source: CALSTART

NEW YORK IS BUILDING A MHD ZEV ECOSYSTEM



- There are over 3,000 zero-emission trucks (ZETs) on the road in NY
- NY is 4th in the nation in total ZET deployments
- ZETs on the road in nearly every vehicle segment, from cargo vans to heavy-duty trucks

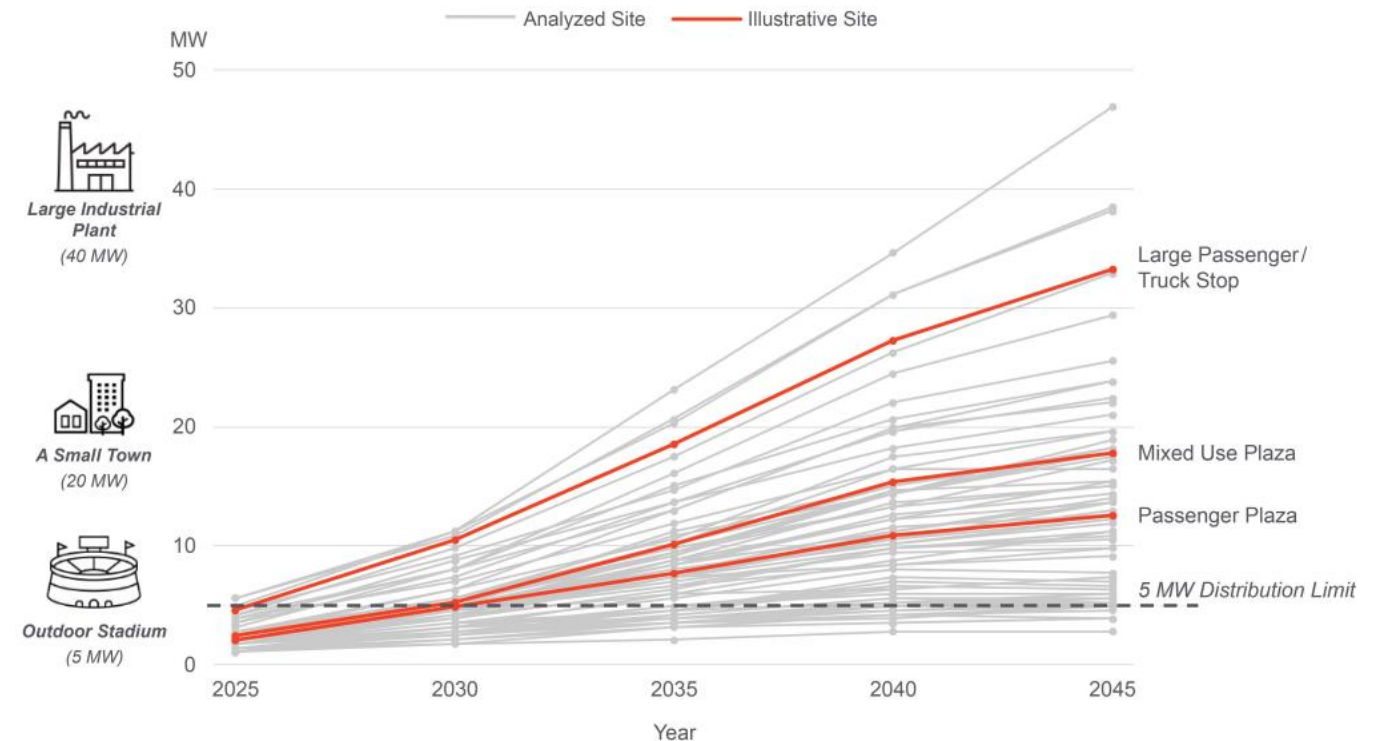
CALSTART (2024). State Action Driving to Zero the ZET Ahead Dashboard. Retrieved from: <https://calstart.org/zet-ahead/>

Planning for Future Charging

Planning underway to prepare for EV charging demand

- Proactive Planning proceeding:
 - Urgent upgrades identified
 - Long-term planning process
- MHD Make-Ready Pilot
- MHD Grid Impacts Analysis

Figure ES-1. Capacity Required to Meet Annual Peak Demand at Each Site Compared to Other Large Energy Users



[Electric Highways Study](#), National Grid, CALSTART, RMI, Stable Auto and Geotab (2022)

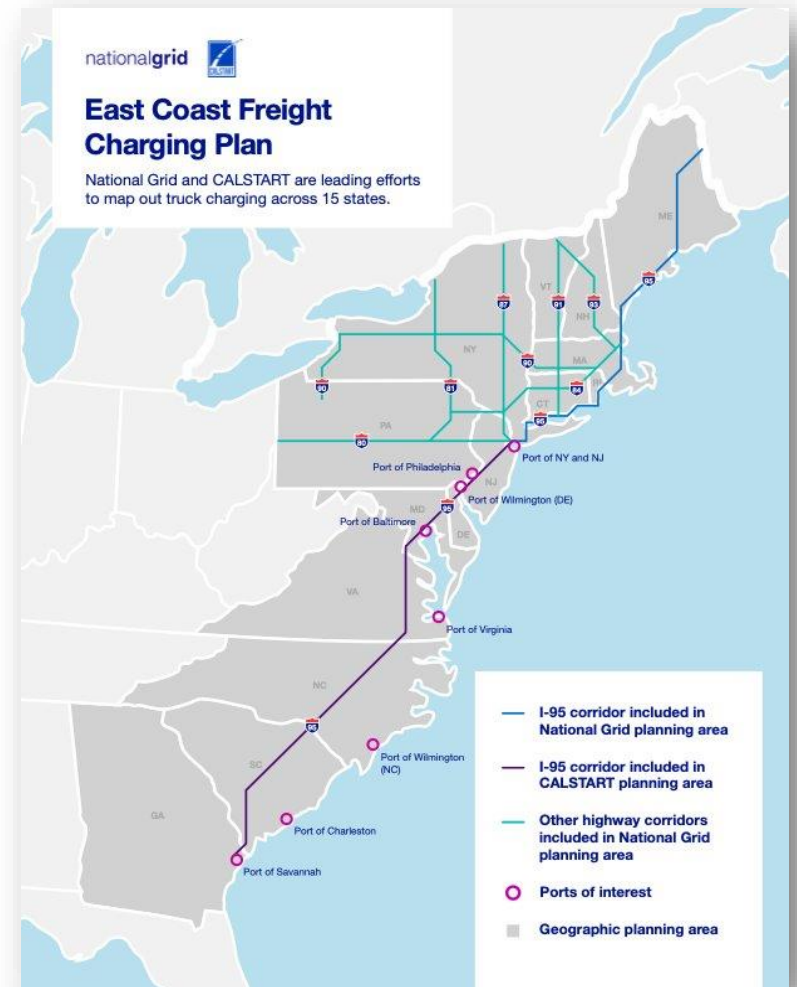
Truck Charging Hubs

- **FM Harbor (Port of Long Beach, CA)**
 - 25 fast chargers, each 360 kW
 - Designed to charge 200 drayage trucks per day
 - 9 MW site
- **Terrawatt Charging Hub (Rancho Dominguez, CA)**
 - 20 fast chargers, each 350 kW
 - 7 MW site
- **Greenlane Center (Colton, CA)**
 - 41 fast chargers ranging from 180 kW to 400 kW
 - 10 MW site



MHD ZEV Corridors

- **7 corridor planning projects aligned with Joint Office's National Zero-Emission Freight Corridor Strategy**
- **Two projects cover East Coast:**
 - Northeast Freight Corridors Charging Plan
 - Led by National Grid
 - East Coast Commercial ZEV Corridor
 - Led by CALSTART
 - Industry & Fleet Needs Working Group serves both projects
 - Convened by CALSTART
- **Objectives:**
 - Identify high-priority zones to enable freight electrification
 - Collaborate with industry, communities, and infrastructure experts on needs, demands, and equity implications
 - Align with utilities on capacity, strategy, and timelines
 - Secure Federal funding for infrastructure deployment



Solutions to Accelerate the Transition

- **Residual Value of MHD ZEVs**

- **Challenge:** Limited low-cost financing available due to questions around used vehicle value
- **Solution:** Government-backed loan guarantees mitigate risk

- **Fleet Demand Aggregation**

- **Challenge:** Truck charging Efficient buildout of truck charging hubs requires cost sharing
- **Solution:** Aggregate demand to build shared charging hubs

What are different types of shared charging sites?

1

A third-party site (blue) offers scheduled access to any charger on the site to be used by fleets (green, orange).



2

A third-party owned/operated site (blue) offers specific chargers for two fleets (green, orange).



3

A fleet (green) allows a third party to operate a charger for another fleet (orange) on its owned site.



[Shared Charging Sites: Accelerating the ZEV Market and Delivering Public Benefits](#), CALSTART (2024)

Questions?



Jordan Stutt

May 1, 2025

CALSTART

THANK YOU

We change transportation for good.

Board Discussion

Other Business

Thank you for your participation in this meeting of the State Energy Planning Board

For more information, please visit the
State Energy Plan website:

energyplan.ny.gov