Acronyms and Glossary of Key Terms

Draft New York State Energy Plan

July 2025

Acronyms

AC	alternating current
ACC	Advanced Clean Cars
ACET	Agricultural and Clean Energy Technology
ACT	Advanced Clean Trucks
AEDT	Aviation Environmental Design Tool
AEO	Annual Energy Outlook
AGM	New York State Agriculture and Markets
AI	artificial intelligence
AMEEP	Affordable Multifamily Energy Efficiency Program
AMI	advanced metering infrastructure
ANSC	Advanced State Nuclear Collaborative
ARL	adoption readiness level
ASHP	air source heat pump
ATSP	Active Transportation Strategic Plan
ATT	advanced transmission technology
bcf	billion cubic feet
BEEM	Building Efficiency and Electrification Model
BESS	battery energy storage system
BEV	battery-electric vehicles
BIL	Bipartisan Infrastructure Law
BILD	Building Information and Land Use Database
BOA	brownfield opportunity area
BOCES	Boards of Cooperative Education Services
BOEM	Bureau of Ocean Management
BRACE	Building Resilience Against Climate Effects

BRT	bus rapid transit
BTM	behind-the-meter
BTU	British thermal unit
CAC	Community Advisory Committees
CAIDI	Customer Average-Interruption Duration Index
CAM	Community Air Monitoring
CARIS	Congestion Assessment and Resource Integration Study
CBECS	Commercial Building Energy Consumption Survey
CBO	Community Based Organizations
ccASHP	cold climate air source heat pump
ccf	hundred cubic feet
CCGT	combined cycle combustion turbines
CCRP	Climate Change Resilience Plan
CCUS	Carbon capture utilization and storage
CCVS	Climate Change Vulnerability Study
CDG	community distributed generation
CDTA	Capital District Transportation Authority
CEF	Clean Energy Fund
CEMP	Comprehensive Emergency Management Plan
CEPA	County Emergency Preparedness Assessments
CES	Clean Energy Standard
CESER	Cybersecurity, Energy Security and Emergency Response
CEZ	clean energy zone
cf	cubic feet
CGPP	Coordinated Grid Planning Process
CHGE	Central Hudson Gas and Electric
CHIPS	Consolidated Local Street and Highway Improvement Program
CHP	combined heat and power
CHPE	Champlain Hudson Power Express
CISA	U.S. Department of Homeland Security Cybersecurity and Infrastructure Security Agency

CISBOT	cast iron sealing robot
CJWG	Climate Justice Working Group
Climate Act	Climate Leadership and Community Protection Act (2019)
CMAQ	Community Multiscale Air Quality Model
CNG	compressed natural gas
CO2	carbon dioxide
CO2e	carbon dioxide equivalent
COBRA	Co-Benefits Risk Assessment Health Impacts and Mapping Tool
COP	coefficient of performance
CPCN	Certificate of Public Convenience and Necessity
CRF	Climate Resilient Farming
CRIS	Capacity Resource Interconnection Service
CRL	Commercial Readiness Level
CRP	Comprehensive Reliability Plan
CSAPR	Cross-State Air Pollution Rule
CSC	Climate Smart Communities
CSRP	Commercial System Relief Program
CT	Combustion Turbines
CTOOLS	Community Tools
CUNY	City University of New York
DACs	disadvantaged communities
DADRP	Day-Ahead Demand Response Program
DAM	Day-Ahead Market
DC	direct current
DCFC	Direct Current Fast Charging
DEC	New York State Department of Environmental Conservation
DER	distributed energy resource
DG	distributed generation
DHSES	Division of Homeland Security and Emergency Services
DLM	dynamic load management

DLRP	Distribution Load Relief Program
DOB	Decommissioning Oversight Board
DOE	U.S. Department of Energy
DOH	New York State Department of Health
DOL	New York State Department of Labor
DOS	New York State Department of State
DOT	New York State Department of Transportation
DPS	New York State Department of Public Service
DR	direct response
DRV	Demand Reduction Value
DSASP	Demand-Side Ancillary Services Program
DSIP	Distributed System Implementation Plan
DSM	Demand-Side Management
Dth	decatherms
EAP	Energy Affordability Policy
EBC	Empire Building Challenge
EDA	US Economic Development Administration
EDRP	Emergency Demand Response Program
EE	energy efficiency
EEAC	Energy Emergency Assurance Coordinators Program
EE-BE	energy efficiency and building electrification
EEC	Energy Equity Collaborative
EEPS	Energy Efficiency Portfolio Standard
EHAP	Extreme Heat Action Plan
EIA	U.S. Department of Energy, Energy Information Administration
EITE	Energy-Intensive and Trade-Exposed
ELCC	Effective Load-Carrying Capability
EMAC	Emergency Management Assistance Compact
EMP	electromagnetic pulse
EPA	U.S. Environmental Protection Agency

EPD	Environmental Protection Declarations
EPF	Environmental Protection Fund
EPPAC	Energy Policy Planning Advisory Council
ERP	Emergency Response Plan
ESA	Endangered Species Act
ESB	electric school buses
ESCO	Energy Service Company
ESD	Empire State Development
ETP	Empire Tech Prize
EUE	expected unserved energy
EUI	energy use intensity
EV	electric vehicle
EVSE	Electrical Vehicle Supply Equipment
FCEV	fuel cell electric vehicle
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
GCEW	Growing the Clean Energy Workforce
GEIS	General Environmental Impact Statement
GET	grid-enhancing technology
GHG	greenhouse gas
GJGNY	Green Jobs-Green New York
GOTF	Grid of the Future
GPS	global positioning system
GSHP	ground source heat pump
GW	gigawatt
GWh	gigawatt-hour
GWP	global warming potential
HALEU	High-Assay Low Enriched Uranium
HCR	Homes and Community Renewal

HEAP	Home Energy Assistance Program
HFC	hydrofluorocarbon
HPD	New York City Department of Housing Preservation and Development
HPMS	Highway Performance Monitoring System
HVAC	heating, ventilation, and air conditioning
HVDC	high-voltage direct current
ICAP	installed capacity
ICE	internal combustion engine
ICS	New York State Reliability Council Installed Capacity Subcommittee
IDA	Industrial Development Agency
IEDR	Integrated Energy Data Resource
IIJA	Infrastructure Investment and Jobs Act
IOU	investor-owned utility
IPCC	Intergovernmental Panel on Climate Change
IRA	Inflation Reduction Act
IRM	install reserve margin
IRR	installed reserve requirement
ITC	independent transmission company
JU	Joint Utilities
KEDLI	National Grid Long Island
KEDNY	National Grid New York
kV	kilovolt
LBMP	locational-based marginal prices
LBW	land-based wind
LCA	life cycle analysis
LCOE	levelized cost of energy
LDC	local distribution company
LDES	Long Duration Energy Storage
LDV	light-duty vehicle
LECCLA	Low-Embodied Carbon Concrete Leadership Act

LEED	Leadership in Energy and Environmental Design
LiHEAP	Low-Income Home Energy Assistance Program
LIPA	Long Island Power Authority
LIRR	Long Island Rail Road
LMI	low- to moderate-income
LNG	liquified natural gas
LOEE	loss of energy expectation
LOLE	loss of load expectation
LPA	labor peace agreement
LPP	leak-prone pipe
LSE	load serving entity
LSR	large-scale renewables
LSRV	local system relieve value
LTO	landing and takeoff cycle
LTP	local transmission plan
LTP	long-term plan
LTPP	local transmission planning process
LWR	light water reactors
MBtu	thousand British thermal units
METARE	MET-eorologically-weighted Averaging for Risk and Exposure
MHDV	Medium- and Heavy-Duty Vehicles
MMBtu	million British thermal units
MMBtu/h	million British thermal units per hour
MMRV	International Measuring, Monitoring, Reporting, and Verification
MMT CO_2e	million metric tons of carbon dioxide equivalent
MOVES	U.S. EPA Motor Vehicle Emissions Simulator
MPO	Metropolitan Planning Organizations
MTA	Metropolitan Transportation Authority
MW	megawatt
MW/h	megawatt hour

MWBE	Minority/Women-owned Business Enterprises
MWe	Megawatt Electrical
NAAQS	National Ambient Air Quality Standards
NARUC	National Association of Regulatory Utility Commissioners
NASEO	National Association of State Energy Officials
NEI	National Emissions Inventory
NEMA	National Emergency Management Association
NEMS	National Energy Modeling System
NERC	North American Electric Reliability Corporation
NERC-CIP	North American Electric Reliability Corporation Critical Infrastructure Protection
NESCAUM	Northeast States for Coordinated Air Use Management
NFG	National Fuel Gas Distribution Corporation
NFTA	Niagara Frontier Transportation Authority
NGA	National Governors Association
NH3	ammonia
NHTS	National Household Transportation Survey
NIETC	National Interest Electric Transmission Corridor
NIST	National Institute of Standards
NMPC	National Grid Upstate
NOAA	National Oceanic and Atmospheric Administration
NOx	nitrogen oxide
NPA	non-pipeline alternative
NPCC	Northeast Power Coordinating Council
NRC	Nuclear Regulatory Commission
NREL	National Renewable Energy Laboratories
NSF	National Science Foundation
NSPS	new source performance standards
NWA	non-wires alternative
NYCA	New York Control Area
NYCEDC	New York City Economic Development Corporation

NYCHA	New York City Housing Authority
NY-CHAPPA	New York Community-Scale Health and Air Pollution Policy Analysis
NYCRR	New York Codes, Rules and Regulations
NYCRRA	New York Community Risk and Resiliency Act
NYGATS	New York Generation Attributes Tracking System
NYISO	New York Independent System Operator
NYPA	New York Power Authority
NYSARP	New York Statewide Adaptation and Resilience Plan
NYSCH	New York State Clean Heat
NYSCIA	New York State Climate Impacts Assessment
DHSES	New York State Department of Homeland Security and Emergency Management
NYSEEP	New York State Energy Emergency Plan
NYSEG	New York State Electric and Gas
NYSERDA	New York State Energy Research and Development Authority
NYSESP	New York State Energy Security Plan
NYSRC	New York State Reliability Council
NYSTAR	New York State Division of Science, Technology and Innovation
NYTVIP	New York Truck Voucher Incentive Program
O&R	Orange & Rockland Utilities, Inc.
OCT	NYS Office of Counter Terrorism
OEM	New York State Office of Emergency Management
OEM	original equipment manufacturer
OGS	New York State Office of General Services
OJET	Office of the Just Energy Transition
OREC	Offshore Wind Renewable Energy Credit
OREP	Office of Resilience and Emergency Preparedness
OREP USS	OREP Utility Security Section
ORES	Office of Renewable Energy Siting and Electric Transmission
OSW	Off-Shore Wind
OSWD	Office of Strategic Workforce Development

OTDA	New York State Office of Temporary and Disability Assistance
OWTI	Offshore Wind Training Institute
PAD	Program on Applied Demographics at the Cornell Jeb. E. Brooks School of Public Policy
PEM	Performance Engineered Mixture
PEV	plug-in electric vehicles
PFC	perfluorocarbons
PHEV	plug-in hybrid EVs
PHMSA	U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration
PII	personally identifiable information
PLA	project labor agreement
PM2.5	Particulate Matter less than 2.5 micrometers
PPTN	public policy transmission need
PPTPP	public policy transmission planning process
PSC	New York State Public Service Commission
PSL	Public Service Law
PTC	Production Tax Credit
PV	photovoltaic
RABA	Regional Assessment and Barriers Analyses
RAPID	Renewable Action through Project Interconnection and Deployment
RD&D	research, development, and demonstration
REC	renewable energy certificates
RECAP	Renewable Energy Capacity Planning Model
RECS	Renewable Energy Consumption Survey
RED	resource efficient decarbonization
REDC	Regional Economic Development Council
REP	Radiological Emergency Preparedness
RES	Renewable Energy Standard
RETI	renewable energy training initiatives
REV	Reforming the Energy Vision

RFI	request for information
RFP	request for proposals
RFS	Renewable Fuel Standard
RGE	Rochester Gas and Electric Corporation
RGGI	Regional Greenhouse Gas Initiative
RGRTA	Rochester-Genesee Regional Transportation Authority
RMD	Residential Methane Detector
RNA	reliability needs assessment
RNG	renewable natural gas
ROP	Reactor Oversight Process
RPM	reliability performance mechanisms
RPP	reliability planning process
RPS	renewable portfolio standard
RRAP	Regional Resiliency Assessment Program
RTM	real-time market
RTO	regional transmission operation
SAF	Sustainable Aviation Fuel
SAIFI	System Average-Interruption Frequency Index
SBC	system benefits charge
SCADA	Supervisory Control and Data Acquisition
SCR	special case resource
SDVOB	Service-Disabled Veteran-Owned Businesses
SEPA	State Emergency Preparedness Assessment
SEPB	State Energy Planning Board
SEQRA	State Environmental Quality Review Act
SGIPA	Smart Growth Infrastructure Policy Act
SHMP	State Hazard Mitigation Plan
SIR	Standardized Interconnection Requirements
SMR	Small Modular Reactors
SMS	Statewide Mobility Services

SNAP	Supplemental Nutrition Assistance Program
SO2	sulfur dioxide
SOV	single-occupant vehicles
SPR	State Preparedness Report
STARS	Short-Term Assessment of Reliability
SUNY	State University of New York
SWAP	State Action Wildlife Plan
SWC	Soil and Water Conservation
TANF	Temporary Assistance for Needy Families
tBtu	trillion British thermal units
TCL	Transportation Corporations Law
TCO	Total Cost of Ownership
TEN	thermal energy network
th	therms
THIRA	Threat and Hazard Identification and Risk Assessment
TIM	Traffic incident management
TMA	Transportation Management Area
TO	transmission owner
TOD	transit-oriented development
TOP	transmission operator
TOU	time of use
TRL	technology readiness level
TSMO	Transportation System Management and Operations
TW	terawatt
TWG	Technical Working Group
TWh	terawatt hour
UAS	unmanned aircraft systems (aka drones)
ULSD	ultra-low sulfur diesel
UNC	University of North Carolina
UNFCCC	United Nations Framework Convention on Climate Change

UPV	Utility-Scale Solar Photovoltaics
USACE	US Army Corps of Engineers
USCA	United States Climate Alliance
USDA	United States Department of Agriculture
USGBC	U.S. Green Building Council
USGCRP	U.S. Global Change Research Program
USS	utility security section
UTEN	United Thermal Energy Network
UTENJA	Utility Thermal Energy Network and Jobs Act
V2B	Vehicle to building
V2G	vehicle to grid
VDER	value of distributed energy resource
VGI	vehicle grid integration
VMT	vehicle miles traveled
VOC	volatile organic compound
VPP	virtual power plant
WAP	Weatherization Assistance Program
WARN	Worker Adjustment and Retraining Notification
WQC	water quality certification
ZAPPA	Zip-Code Air Pollution Policy Analysis Tool
ZEC	zero-emissions credit
ZEV	zero-emission vehicle

Key Terms

Active Transportation

Active Transportation is both human-powered modes of transportation—walking, bicycling, and operating a wheelchair—along with small-scale electric vehicles such as e-bikes and e-scooters (also known as “micromobility”)

Adaptation

In human systems, the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; the process by which a system moves toward resilience.

Agricultural sector

Grows crops, raises livestock, and harvests plants and animals from their natural habitats.

Agrivoltaics

The simultaneous use of land for solar photovoltaic power generation and agricultural production of "crops, livestock, and livestock products”

Alternative Fuels

Alternative Fuels: Liquid or gaseous fuel derived from biomass or clean energy such as biodiesel, renewable natural gas (RNG), renewable diesel, hydrogen, and sustainable aviation fuel (SAF).

Apprenticeship utilization

A program that requires a certain percentage of labor hours for a given project be performed by participants of approved apprenticeship programs.

Biogas

Biogas is gas resulting from the decomposition of organic matter, most commonly under anaerobic conditions (such as in a landfill, manure storage, or wastewater recovery facility). The main constituents are methane and carbon dioxide. Some end-uses can use biogas directly as a fuel source with minimal processing, but its lower energy density and purity compared to conventional natural gas or renewable natural gas precludes it from most end-uses.

Brownfield Opportunity Area Program

Created to support community planning for the reuse and redevelopment of known or suspected contaminated areas.

Brownfield

A former industrial or commercial site where future use is affected by real or suspected environmental contamination.

Bulk Power System

Operated by the NYISO, which generally consists of transmission lines operating at 230 kilovolt (kV) and above and certain lower voltage facilities, which the NYISO manages to ensure system reliability.

The bulk power system in New York State consists of approximately 4,100 miles of high-voltage transmission lines.

Bulk Terminal

Petroleum facility designed for the storage and distribution of refined petroleum fuels such as heating oil, motor gasoline, diesel and other products.

Carbon capture utilization and/or storage (CCUS)

Technologies capture carbon dioxide (CO2) emissions from large sources, like power plants and industrial facilities, or directly from the atmosphere, which is then either repurposed or stored. Also called carbon capture and sequestration (CCS).

City gate

The point at which gas utilities or local distribution companies take operational responsibility for safely and reliably transporting gas to customers.

Clean energy worker (job)

Defined as any worker (job) that is directly involved with the research, development, production, manufacture, distribution, sales, implementation, installation, or repair of components, goods, or services related to the following sectors of the clean energy economy.

Climate Act

New York's Climate Leadership and Community Protection Act (Climate Act) was signed into law in July 2019.

Climate mitigation

A human intervention to reduce emissions or enhance the sinks of greenhouse gases. (See also "Greenhouse Gas Mitigation").

Climate resilience

A system's ability to anticipate, prepare for, respond to, recover from, and adapt to a disruption, such as an extreme climate hazard, with minimum damage to social well-being, public health, the economy, and the environment.

Commercialization

Commercialization programs help bring beneficial energy technologies and services to market through technical assistance, financing, customer discovery, and further product development.

Community Lifelines

The most fundamental services in the community that, when stabilized, enable all other aspects of society to function; they include Safety and Security; Health and Medical; Energy; Communications; Transportation; Food, Hydration, Shelter; Hazardous Materials and Water Systems.

Consequence

The effect of the loss or degradation of an energy infrastructure asset on energy supply or service, and the associated indirect impacts of those losses on society.

Conventional Fuels

The fossil fuel that is typically used today. E.g., conventional diesel, conventional jet fuel, conventional natural gas.

Co-Pollutant Emissions

Air pollutants that are a byproduct from combustion of fossil fuels and most alternative fuels. These include fine particulate matter (PM2.5), nitrogen oxides (NOx), volatile organic compounds (VOC), sulfur dioxide (SO2), and various toxic compounds. These pollutants contribute to a range of health issues, including respiratory conditions, asthma, heart attacks, and other serious illness.

Cross-Sector Interdependency

One energy sector (Electric, Gas or Liquid Fuel) relying on another energy sector; for example, the electric sector has a cross-sector interdependency with the natural gas sector.

Decommissioning

The radiological clean-up and dismantling of a nuclear facility, has four basic aspects: radiological cleanup and removal, fuel storage, non-radiological cleanup and removal, and site restoration.

Direct Entry Program

A New-York-State-approved apprenticeship preparation program that can help workers get the skills they need to meet the minimum requirements of a New-York-State Registered Apprenticeship program. Successful participants have a direct opportunity to interview with a sponsor of a New York State Registered Apprenticeship Program. Direct Entry providers are required to have agreements with New York State Registered Apprenticeship program sponsors to ensure the availability of jobs with those sponsors. New York State Direct Entry Programs cannot charge tuition.

Distributional equity

Refers to the fair distribution of the benefits and burdens of energy policies and programs. In an equitable energy system, all communities receive a fair share of clean energy investments, job opportunities, cost savings, and pollution reductions.

Disadvantaged communities

The Climate Act defines disadvantaged communities as communities that bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise of high-concentrations of low- and moderate-income households. DACs are identified using criteria as established by the Climate Justice Working Group.

Ecosystem

A dynamic complex of plant, animal [including human], and microorganism communities interacting with each other and the nonliving environment as a functional unit

Efficient electric heat pumps

Include ground source heat pumps and heat pump water heater systems that meet or exceed the U.S. Environmental Protection Agency's ENERGY STAR specification, and cold climate air-source heat

pumps, packaged terminal heat pumps, and variable refrigerant flow products that meet or exceed standard specifications for heat pumps that are best suited to heat efficiently in cold climates.

Efficient electrification

Electrification of a building with an adequately efficient thermal envelope to conserve energy use, keep occupants comfortable, and enable an efficient electric heat pump system to operate effectively.

Electric Peak Demand

The highest actual average hourly load that occurred during a calendar year. Given that the electric transmission and distribution systems are designed and built to serve peak load, reducing peak demand is important for improving system efficiency, reducing wholesale electricity prices, and delaying the need for additional infrastructure.

Electric Vehicles (EVs)

Vehicles powered by electricity from an external source stored onboard in a battery, including both battery-electric vehicles (BEVs), which run exclusively on electricity, and plug-in hybrid electric vehicles (PHEVs), which run exclusively on electricity for a limited range and then are powered by an internal combustion engine.

Embodied emissions

The total greenhouse gas emissions generated throughout the entire life cycle of a product, particularly emphasizing the stages before its operational use. This includes the extraction of raw materials, manufacturing, transportation, construction, and disposal at the end of its life.

Emergency

A serious, unexpected, and often dangerous situation requiring immediate action.

Energy Burden

Percentage of gross income that a household spends on energy. It is calculated by dividing the average housing energy cost by the average annual household income. When a household is described as energy burdened, that generally means it spends more than six percent of household income on energy.

Energy Insecurity

The inability to meet basic energy needs. It may mean having to choose between energy and other expenses, keeping your house at an unsafe or unhealthy temperature to save expenses, or being unable to pay energy bills.

Energy Justice

The goal of achieving equity in both the social and economic participation in the energy system, while also remediating social, economic, and health burdens on those communities historically disadvantaged by the energy system. Energy justice in New York centers the concerns of disadvantaged communities and aims to make energy more accessible, affordable, clean, and

democratically managed for all communities. The practitioner and academic approaches to energy justice emphasize these process-related and distributive justice concerns.

Environmental Justice

The fair treatment and meaningful involvement of all people regardless of race, color, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies

Energy Security Planning and Emergency Preparedness

Plans and actions that ensures a reliable and resilient supply of energy that protects public health, safety, and welfare while minimizing economic disruption. Energy Security Planning identifies, assesses, and mitigates risks to energy infrastructure, and plans for, responds to, and recovers from events that disrupt energy supply. New York State Energy Emergency Preparedness includes energy emergency planning and response as well as energy security risk and mitigation planning through the New York State Energy Emergency Plan and the New York State Energy Security Plan.

Fine Particulate Matter (PM2.5)

Airborne particles less than 2.5 micrometers in diameter, can travel into the lungs, infiltrate the bloodstream, and cause cardiovascular and respiratory health effects. PM2.5 is directly emitted from combustion sources (primary PM2.5) and also forms in the atmosphere through reactions of precursor pollutants, including nitrogen oxides (NOX), sulfur dioxide (SO2), ammonia (NH3), and volatile organic compounds (VOCs).

Fossil fuel workers (jobs)

Any worker (job) that is directly involved with the research, development, production, manufacture, distribution, sales, implementation, installation, or repair of components, goods, or services related to energy derived from fossil fuels, including electric generation, delivered fuels, internal combustion vehicles, and natural gas distribution.

Fossil Fuels

Fuels produced from the decay of prehistoric organic materials. These fuels can be liquid (example: petroleum) or gaseous (example: natural gas).

Green Infrastructure

Measures that strategically utilize plantings, soils, and other media to capture and treat stormwater by relying on the natural processes of filtration, infiltration, and evapotranspiration. Green Infrastructure can also help cool communities and mitigate the urban heat island effect.

Greenhouse gas mitigation

A human intervention to reduce emissions or enhance the sinks of greenhouse gases. (See also “Climate Mitigation”)

Greenhouse gases

Gases that trap some of the Earth's outgoing energy, thus retaining heat in the atmosphere. This heat trapping, known as the greenhouse gas effect, alters climate and weather patterns at global and regional scales. Greenhouse gases include carbon dioxide, methane, nitrous oxide, and certain synthetic chemicals, such as fluorocarbons and sulfur hexafluoride.

Hazard mitigation

Any sustained action taken to reduce or eliminate long-term risk to life and property from hazard events. It is an on-going process that occurs before, during, and after disasters and serves to break the cycle of damage and repair in hazardous areas.

Home Rule

The Home Rule form of government establishing cities, towns, and villages is embedded in New York's Constitution, Article IX (Section) 2. The Legislature has granted local governments certain powers, including local legislation, land use authority, ownership and maintenance of municipal property and roadways, and powers of local taxation. Due to local control over land use, the State often plays an advisory role.

Indigenous knowledge

A body of observations, oral and written knowledge, innovations, practices, and beliefs developed by Indigenous peoples through interaction and experience with the environment. It is applied to phenomena across biological, physical, social, cultural, and spiritual systems. Indigenous knowledge can be developed over millennia, continues to develop, and includes understanding based on evidence acquired through direct contact with the environment and long-term experiences, as well as extensive observations, lessons, and skills passed from generation to generation. Coordination with Indigenous Nations, and the respectful incorporation of Indigenous knowledge should honor Indigenous Nation sovereignty.

Industrial sector

Businesses focused on the mass production of goods, often involving machinery, technology, and a significant workforce.

Innovation Ecosystem

Innovation ecosystems are communities of interacting stakeholders engaged in producing, enhancing, and creating novel methods, products, and processes.

Installed Capacity

The amount of electric power that can be generated in the state.

Installed Reserve Margin

The amount of generation capacity that must be in place to ensure an acceptable level of reliability. The IRM is measured by the amount of generation and other capacity resources above 100% of forecasted peak load that must be available to serve all customers without interruption.

Intra-Sector Interdependency

One part of an energy sector (Electric, Gas or Liquid Fuel) relying on or controlled by another part of the energy system within the same sector; for example, the liquid fuel inventory in NY has an intra-dependency with refinery production and pipeline operations in the Gulf states.

Joint Utilities (JU)

The Joint Utilities are comprised of Central Hudson Gas and Electric Corporation, Consolidated Edison Company of New York, Inc. ("Con Edison"), New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid"), Orange and Rockland Utilities, Inc. and Rochester Gas and Electric Corporation. Together, the Joint Utilities provide electric service to over 13 million households, businesses, and government facilities across New York State.

Labor peace agreement

An agreement between employers and a union limiting certain actions from both sides for a specified period of time. Labor peace agreements may require management to remain neutral and not interfere in any union organizing, and the union to avoid strikes or other activities that could seriously interrupt workplace operations.

Life cycle analysis (LCA)

Evaluates the potential environmental impacts associated with a product, process, or service throughout its entire life cycle.

Light Water Reactors (LWRs)

A term used to describe reactors using ordinary water as a moderated coolant.

Light-Duty Vehicles

On-road vehicles under 8,500 lbs. gross vehicle weight rating (GVWR), Class 1 and 2a, per the U.S. Environmental Protection Agency (US EPA) classification system.

Liquid Fuels

Another name for delivered fuels. A group of fuels that, at surface temperatures, are in the liquid phase with little or no pressurization, as a result, these fuels can be transported by a variety of modes.

Load Factor

A measure of the degree of uniformity of demand over a period of time, usually one year, and equivalent to the ratio of average demand to peak demand expressed as a percentage. It is calculated by dividing the total energy provided by a system during a period by the product of peak demand during the period and the number of hours in the period.

Load Serving Entity

A retail electric service provider (e.g., a utility) that is obligated to procure or purchase wholesale electricity to serve its end-use customers.

Local distribution company

An entity responsible for procuring gas supply on behalf of their customers, delivering gas to end users from the city gate, and keeping their distribution systems balanced by matching demand with supply.

Location-efficient areas

Compact and resilient neighborhoods that offer walkability, a mix of uses, proximity to daily destinations, and reduced reliance on automobiles.

Low-carbon fuels and energy sources

Produce significantly fewer greenhouse gas emissions during their lifecycle compared to traditional fossil fuels.

Managed Charging

The practice of controlling the speed and/or time at which an EV is charged for the purpose of minimizing charging during times of peak electricity usage and minimizing charging costs for the EV driver.

Manufacturing sector

Encompasses firms that transform raw materials into finished goods.

Medium- and Heavy-Duty Vehicles

On-road vehicles over 8,500 lbs. gross vehicle weight rating (GVWR), Class 2b through 8, per the U.S. Environmental Protection Agency (US EPA) classification system.

Megawatt Electrical

The electric output capability of the nuclear power plant.

Microcredentials

Flexible and compact academic credentials created to meet specific workforce needs that are taught by faculty. Often credit bearing, these empower individuals with essential skills, knowledge and practical experience in high-demand fields and are designed to be stackable and build into degrees.

Micromobility

Any low-speed, human or electric-powered transportation device, including bicycles, scooters, electric-assist bicycles (e-bikes), electric scooters (e-scooters), and other small, lightweight, wheeled conveyances.

Mitigation

The action of reducing the severity, seriousness, or painfulness of a risk.

New York State Energy Emergency Plan

An emergency response plan outlining State activities and responsibilities in response to an energy emergency. The scope includes emergency response planning and coordination with Federal and industry partners, it does not identify the major risks to the current energy system or include longer

term resilience or mitigation activities. It is an annex to the State's Comprehensive Emergency Management Plan.

New York State Energy Security Plan

A plan focused on identifying and protecting the state energy systems by providing a detailed, comprehensive risk assessment of critical energy infrastructure and cross-sector interdependencies and providing a framework for evaluating risk mitigation approaches to enhance reliability and end-use resilience.

Nuclear Generations

Nuclear technology discussions often refer to "generations" of nuclear designs, with current operating large LWRs referred to as "Gen II" or "Gen III." Newer advanced technologies are categorized as either "Gen III+," defined as large or small modular light water reactors that offer improved economics and safety over conventional large light water reactors, or "Gen IV," defined as small modular reactors (SMRs) or microreactors that offer improved sustainability, economics, safety, and proliferation and use non-water coolants. Gen IV technologies include high temperature gas reactors, liquid sodium metal reactors, and molten salt reactors.

Operational flow order

A mechanism used in the natural gas industry to manage and maintain the operational integrity of a pipeline system. It requires shippers to balance their gas supply with their customers' usage on a daily basis, within a specified tolerance band, to prevent system imbalances and potential operational issues.

Ozone

A respiratory irritant when it reaches elevated concentrations in surface air. Ozone is not emitted directly into the air, rather it is produced by chemical reactions between NOx and VOCs in the presence of sunlight. Ozone is most efficiently formed on hot sunny days in areas with high concentrations of emission sources.

Petroleum Fuels

Another name for crude oil. This liquid extracted from wells is a mixture of organic molecules that can be separated into specific fuels through a refining process. Petroleum fuels include fuels such as diesel, gasoline, kerosene, and propane.

Phased electrification

Projects wherein the building electrification process is carried out over time. This staged approach aims to electrify most or all a building's energy systems while minimizing disruptions to building operations and occupant experience. This may be a multifamily or commercial building where certain units of the building are converted to electric heat pumps for space heating (e.g., at the time of tenant turnover), or as part of a phased more comprehensive renovation project. This may also result in instances where full electrification of the building may not be possible due to available electric capacity or limitations related to customers' capital cycles.

Pre-apprenticeship program

A program that recruits and orients new workers, helps them identify the apprenticeship program most suited to them, prepares them to take the test, and supports their initial career efforts. They can also provide life skills and job readiness training.

Prevailing wage

The wage standard required by federal and state law for publicly funded or publicly assisted projects. Prevailing wages represent the hourly wages, benefits, and overtime paid to the majority of workers in a particular area, for a particular trade, as determined by a survey conducted by the federal Department of Labor. In New York State, the Department of Labor Bureau of Public Work & Prevailing Wage Enforcement handles the enforcement of state prevailing wage rules.

Priority Populations

Consistent with NYSERDA's Workforce Development and Training definitions, priority populations include: Veterans; Individuals with disabilities; Low-income individuals, whose household's total income is below or at 60% of the State Median Income, or whose household has been determined eligible for or is receiving assistance through the Home Energy Assistance Program (HEAP), Temporary Assistance for Needy Families (TANF), Supplemental Nutrition Assistance Program (SNAP), or other human service benefit programs; Incumbent or unemployed fossil fuel workers; Previously incarcerated individuals; 16- to 24-year-olds who are enrolled in or have completed a comprehensive work preparedness training program such as those offered by Boards of Cooperative Education Services (BOCES), technical high schools, Conservation Corps, YouthBuild, and AmeriCorps; Homeless individuals; and Single parents.

Procedural Equity

Fair and transparent processes used for decision-making, resource allocation, and policy development. Decision makers create inclusive and accessible processes for developing and implementing clean energy programs such that all stakeholders have equitable access to participate.

Project labor agreement

Labor Law §222(1) provides that a project labor agreement (PLA) is a pre-hire collective bargaining agreement between a contractor and a bona fide building and construction trade labor organization establishing the labor organization as the collective bargaining representative for all persons who will perform work on a public work project, and which provides that only contractors and subcontractor who sign a pre-negotiated agreement with the labor organization can perform work.

Regional Planning Commission

(Also referred to as a committee, board, or council) is a quasi-governmental body that supports municipalities within a defined region by providing planning, coordination, and technical assistance. These organizations help local governments, often facing capacity constraints, address issues that cross jurisdictional boundaries, including transportation, land use, environmental sustainability, economic development, and regional infrastructure

Registered apprenticeship program

A program that meets minimum state and federal requirements around equal opportunity, related training, and relevance of on-the-job training. Registered apprenticeship programs offer a standardized curriculum for workers to learn the skills and abilities they will need to be a fully functioning worker in a specific trade. They utilize an "earn-while-you-learn" model, including classroom training as well as training on a job site. They can be operated by unions or non-union contractors and in New York State, they must be registered with the New York State Department of Labor.

Reliability

The energy system's ability to function consistently during normal conditions. In many cases, adaptation strategies that improve resilience also have the benefit of improving reliability.

Resilience

The capacity to withstand or to recover quickly from negative events such as natural disasters, climate change, and other threats/hazards.

Resource Efficient Decarbonization

A phased approach to eliminating greenhouse gas emissions from large buildings in cold climates that creates a path toward cost-effective decarbonization.

Risk

The potential for the loss or degradation of energy supply or services, and the associated indirect impacts of those losses on society, resulting from the exposure of energy infrastructure to a threat.

Risk Mitigation Strategy

A proactive approach to enhance the State's energy reliability and end-use resilience through which Risk Mitigation Measures are identified, evaluated, and may be prioritized for implementation.

Small Modular Reactors (SMRs)

Smaller, more advanced, nuclear reactors that offer improved sustainability, economics, safety, and proliferation and use non-water coolants.

Smart growth

An approach to planning and development that supports and integrates equity, economy, environment, energy, and climate to create livable and sustainable communities.

Spot market / spot price

A market where assets are traded for immediate delivery and payment. (As contrasted with futures markets, where transactions are settled at a future date.)

Sprawl

The development of automobile-centric, low-density, dispersed residential and commercial uses that occurs outside of urbanized areas, encroaching onto natural and working lands.

Strike Price

A predetermined fixed price at which the owner of an option can buy or sell an underlying asset.

Subsidized affordable housing

Housing that is affordable because of government subsidy. This can include, but is not limited to, housing units receiving support under the U.S. Department of Housing and Urban Development programs (e.g., Section 8 Housing Choice Voucher, tenant-based vouchers, project-based vouchers, and HOME), including units owned or overseen by Public Housing Authorities.

Supplemental heat

A heating system that is installed or left in place to complement a heat pump heating system that is not sized to meet the full heating load of the building, providing heat to supplement the main heating system during the coldest hours of the year.

The New York Control Area

The New York Control Area (NYCA) is comprised of eleven geographic zones (also referred to as "load zones") from western New York (Zone A) through Long Island (Zone K).

Thermal energy network

A network of equipment and pipes that connects multiple buildings together to thermal energy sources such as geothermal, surface water, waste heat, and the air, to provide space heating cooling and domestic hot water. This technology can be an effective way to reduce energy costs and greenhouse gas emissions from a set or groups of buildings at scale.

Threat

Anything that can damage, destroy, or disrupt energy systems, including natural, technological, human/physical, and cybersecurity events.

Threatened

Under the Endangered Species Act, plant and animal species that are likely to become endangered within the foreseeable future

Transit-oriented development (TOD)

Dense, pedestrian-oriented, mixed-use development located near (usually within a quarter- or half-mile radius) of direct transit access. Transit-oriented development integrates multiple mobility modes, including walking, biking, micromobility, and various forms of public transit, to provide residents with convenient and efficient transportation options beyond personal vehicles.

Transportation Demand Management (TDM)

Managing demand is about providing travelers, regardless of whether they drive alone, with travel choices, such as work location, route, time of travel and mode. In the broadest sense, demand management is defined as providing travelers with effective choices to improve travel reliability.

Transportation Systems Management and Operations (TSMO)

Focuses on operational improvements that can maintain and even restore the performance of the existing transportation system before extra capacity is needed.

Vehicle Miles Traveled (VMT)

The amount of travel for all vehicles in a geographic region; calculated by adding up all miles driven by all motorized vehicles.

Vehicle-Grid Integration

Vehicle-to-Grid (V2G) technology allows EVs to both draw electricity from the electric grid to charge the EV's battery and also discharge the EV's battery to sell power back to the electric grid.

Vulnerability

The susceptibility of an energy infrastructure system to damage, loss, or degradation caused by a threat due to weaknesses within the system or due to the system's dependence on critical supporting systems or material, technical, or workforce resources affected by the threat.

Weatherization

Protecting a building's interior from outside temperatures and moisture to cut energy use and enhance indoor comfort through measures like air sealing, insulation, and window upgrades.

Wetlands

An area that is saturated or inundated by water, either surface or ground, at a frequency and duration sufficient to support vegetations adapted to saturated soil condition

Zero-Emissions Vehicles (ZEVs)

Vehicles powered by energy sources that result in no tailpipe emissions, such as battery-electric vehicles (BEVs) and hydrogen fuel cell electric vehicles (FCEVs). Plug-in hybrid electric vehicles (PHEVs), which run exclusively on electricity for a limited range and then are powered by an internal combustion engine, are also considered ZEVs under certain regulations.