NYC Accelerator PACE Financing Program

Technical Guidance Supplement

Version 3.0

Original Release Date September 27, 2022

Last Updated June 26, 2026

Background

The City of New York (the "City") has developed a program known as the NYC PACE Financing program (the "Program") under which qualified lenders (each, a "Lender") can make commercial property assessed clean energy ("PACE") loans to eligible borrowers to finance qualifying energy efficiency and renewable energy projects in such borrowers' existing buildings, including Major Renovations projects of existing buildings or New Construction projects (each, a "Project").

Under the applicable laws, rules and requirements of the Program, Projects financed under the Program must satisfy all applicable requirements set forth in the current guidelines for the Program promulgated by the City and the City's designated Program administrator, the New York City Energy Efficiency Corporation ("NYCEEC", and acting in the capacity of Program administrator, the "Administrator"). As used in this document, the term "Guidelines" means the Program Guidelines, as revised on June 26, 2026 (version 4.0).[1] Capitalized terms used but not otherwise defined in this document have the meanings given in the Guidelines.

In addition to meeting the requirements set forth in the Guidelines, under the applicable laws, rules and requirements of the Program, Projects must also satisfy certain technical criteria established by the New York State Energy Research and Development Authority ("NYSERDA"). To memorialize these requirements, NYSERDA has promulgated various guidance documents which are available online.[2] These NYSERDA documents include, among others, the NYSERDA document entitled "*Municipal Sustainable Energy Loan Program – Commercial Property Assessed Clean Energy (PACE) Guidance Document*" dated June 2024 (the "NYSERDA General Guidance") and the NYSERDA document entitled "*Guidance for Calculating a Cost Benefit Ratio (CBR)*" dated June 2024 (the "CBR Guidance").

Purpose of this Document

This Technical Guidance Supplement document (this "Supplement") has been developed pursuant to the Program Guidelines. This Supplement is intended to serve as a supplement to the NYSERDA General Guidance and the CBR Guidance, and to provide additional requirements, information and context, particularly as it relates to the Program's "Technical Certification", including its related "Technical Certification Workbook", both described in Section 6 of the Guidelines and below (the "Workbook" or the "TCW").

[1] The current version of the Guidelines is available on the Program Website.

[2] Such guidance documents are available here https://www.nyserda.ny.gov/All-Programs/Commercial-Property-Assessed-Clean-Energy

Technical Certification

For each project, a Technical Certification, including its related Workbook, must be certified to the Administrator and the City by a Certified Energy Audit Contractor or Certified Feasibility Study Contractor. In general, the Technical Certification should be certified by the same contractor that provided the Energy Audit or Feasibility Study. The contractor must use the most recent form of Technical Certification available on the Program Website.

The Technical Certification requires the following categories to be completed:

- Scope of Work Fields
  - An itemized description of each improvement, measure and system in the project as it appears in the final construction bid or construction contract, including quantity, cost and other relevant details.
- Technical Fields
  - Identify where a certain improvement, measure or system corresponds to an improvement, measure or system recommended by the Energy Audit or Feasibility Study provided.
  - For Energy Efficiency Improvements, confirm that the improvements have been determined to be "appropriate" and identify where in the Energy Audit such determination is described.
  - For Renewable Energy Systems, confirm that the system has been determined to be "feasible" and identify where in the Feasibility Study such determination is described.
  - For Energy Efficiency Improvements and Renewable Energy Systems, assign a technology name from a dropdown list for data tracking.
  - State useful life (in years) for each improvement, measure and system.
  - Input the projected energy cost savings by fuel type for each improvement, measure and system.
- Financing Fields
  - Provide the estimated energy cost savings for the project.
  - Input the weighted average useful life of all improvements, measures or systems to be implemented as part of the project (weighted by the projected greenhouse gas emissions savings, for existing buildings).
  - Provide documentation/calculation supporting the additional savings.
  - The financing costs must be equal to those shown in the loan documents.
  - If applicable, confirm that the project is "cost effective" and calculate the SIR to be 1.0 or greater.
- Local Law No. 97 Fields
  - Input the gross floor areas to determine the greenhouse gas emissions savings for the project.

In evaluating the technical and engineering merits of each proposed project, the Administrator (or its consultants) expects to carefully review the Energy Audit and/or Feasibility Study, the Technical Certification and the related Technical Certification Workbook. In connection with this review, additional backup and/or supplemental documentation and/or information will be required to substantiate the underlying data and other information provided in the Energy Audit, the Feasibility Study, the Technical Certification and/or the Technical Certification Workbook (as the case may be).

Building Baseline Energy Usage

In order for a building to satisfy the Program's technical requirements for receiving a PACE loan under the Program, the historical "baseline" energy usage of the building must be determined in a manner consistent with all applicable Program requirements and entered into the Workbook. For purposes of determining such historical "baseline" energy usage, the building's average annual energy usage over the last three-year period must be used. The operational assumptions and design of the baseline building for purposes of the energy analysis must reflect the actual building characteristics and operation. Changes in expected use of the building and resulting changes in the baseline energy consumption to which the energy efficiency benefits are applied must be substantiated with back-up documentation provided to the Administrator.[3] Per the NYSERDA General Guidance, historic structures that are currently vacant, or for adaptive re-use in existing structures, or where historical energy data does not exist, or for any proposed changes in building usage or additions, an alternate energy consumption baseline, based on the proposed usage, must be provided. Any adjustments or changes to the actual baseline energy usage must be substantiated with back-up documentation provided to the Administrator. If the Project building is smaller than 25,000 square feet, the previous three years of billed utility consumption data must be provided to the Administrator.

The baseline for new construction Projects or major renovation Projects is the New York City Energy Conservation Code minimum baseline applicable at the time of the New York City Department of Buildings design filing.

Utility Rates

In order for a building to satisfy the Program's technical requirements for receiving a PACE loan under the Program, the blended utility rates for the building must be determined and entered into the Workbook. The blended utility rates used in the Workbook must conform with NYSERDA's CBR Guidance and must be calculated as follows: blended utility rate for a particular utility shall be equal to the total cost for that utility over the last three years *divided by* the total consumption over the last 3 years with all values based on billed data. Any exceptions must be described and substantiated with back-up documentation and calculations.

The utility rate for new construction Projects or major renovation Projects shall be a blended rate derived from the anticipated rate class and tariff of the proposed building. The blended rate may be calculated based on the sum-of-the-rate's parts including on and off-peak demand charges, energy charges, and other fees.

Energy Savings Calculations

In order for a building to satisfy the Program's technical requirements for receiving a PACE loan under the Program, the estimated energy savings expected to result from the Project must be calculated and entered into the Workbook. These energy savings calculations must conform to the current version of the "New York Standard Approach for Estimating Energy Savings from Energy Efficiency Programs" (the "Technical Resource Manual" or "TRM") as stated in NYSERDA's CBR Guidance and, where applicable,

[3] As used in this document, the adequacy of the term "back-up documentation" will be determined by the Administrator, in its sole discretion.

Normative Appendix G, Performance Rating Method as described in Appendix CA of the current version of New York City Energy Conservation Code (the "NYCECC").[4]

Energy Modeling

Energy modeling undertaken in connection with a given Project must conform to the requirements and guidelines in Normative Appendix G, Performance Rating Method as described in Appendix CA of the latest version of New York City Energy Conservation Code.[5]

As required by the NYSERDA General Guidance[6], input data for the building and for each proposed Energy Efficiency Improvement or Renewable Energy System, must be presented, in documentation supplied to the Administrator, in a manner which allows easy identification of input parameters. Output data from the energy model with clear and precise presentation of the results in both tabular and narrative forms must be provided to the Administrator.

Incremental Cost Approach for Enclosure Measures

The "Incremental Cost Approach", as described in the CBR Guidance, may be utilized to calculate the SIR for building enclosure measures for retrofit Projects. Refer to the CBR Guidance and the Workbook for further information.

Effective Useful Life of a Measure

The effective useful life or "useful life" of Energy Efficiency Improvements must be determined by reference to the current Technical Resource Manual.[7] For Renewable Energy Systems, solar photovoltaic or solar thermal systems system life is determined by the provided manufacturer's warranty for the installed product or useful life equivalent to the contracted term of managed operations and maintenance ("O&M") services. Combined heat and power plants, fuel cells, and battery or thermal storage shall have an effective useful life of ten (10) years or a useful life equivalent to the contracted term of managed O&M services, whichever is greater. Signed and dated O&M contracts or warranties must be provided to the Administrator as back-up if used to determine the useful life of a measure. The useful life for New Construction Projects and Major Renovation Projects is established on a whole building basis of 25 years.

Energy Storage

Energy storage is eligible for PACE financing and if included as part of a Project, information on the energy storage system must be included in the Workbook per the following guidance. Only the energy storage scope, "Measure Type", cost, "Effective Useful Life", and "Other Annual Savings" information should be entered in the Workbook. The Other Annual Savings field shall include the total cost savings for the measure, including applicable: energy and demand savings, demand response revenue, O&M

[4] The current version of the NYCECC is available at: https://www1.nyc.gov/site/buildings/codes/energy-conservation-code.page
[5] The current version of the NYCECC is available at: https://www1.nyc.gov/site/buildings/codes/energy-conservation-code.page
[6] The NYSERDA General Guidance is available at: https://www.nyserda.ny.gov/All-Programs/commercial-property-assessed-clean-energy
[7] The current version of the NYSERDA TRM is available at: https://www3.dps.ny.gov/W/PSCWeb.nsf/All/72C23DECFF52920A85257F1100671BDD

savings, and avoided New York City Local Law 97 of 2019 ("Local Law 97") penalties. No energy, greenhouse gas, or Local Law 97 information will be entered into the Workbook and must be provided to the Administrator separately as back-up documentation. Back-up documentation must be provided to the Administrator summarizing the build-up to the value input into Other Annual Savings in the Workbook, including the energy storage system design, specifications, energy usage and savings, Local Law 97 avoided penalties (if applicable), and proposed operation.

Eligible "Other Savings" and "Ancillary Measures"

"Other Savings" entered into the Workbook can include savings described in the "Total Savings" section of the current version of the CBR Guidance.[8]

Additionally, pursuant to the NYSERDA General Guidance[9] certain "ancillary measures" (as referenced in the NYSERDA General Guidance), which must be accomplished for an Energy Efficiency Improvement or Renewable Energy System to proceed, may be included in the related PACE loan financing. Ancillary measures that must be accomplished for health and safety reasons, such as lead abatement, mold mitigation, or asbestos remediation, may be excluded from the SIR calculation. Other, non-health and safety ancillary measures that must be accomplished for an Energy Efficiency Improvement or Renewable Energy System to proceed, such as roof repairs, must be included in the SIR calculation.

In all cases, figures entered into the Workbook concerning "Other Savings" and "Ancillary Measures" must be directly related to a specific Energy Efficiency Improvement or Renewable Energy System and must be substantiated with documentation provided to the Administrator.

Local Law 97 Analysis and Avoided Penalties

The building occupancy types provided for the Local Law 97 calculation in the Workbook must be consistent with "Property Types in Portfolio Manager" as contained in Energy Star Portfolio Manager's current list.[10] Gross floor areas must be consistent with publicly available building records. Any adjustments or variations from publicly available data must be substantiated with back-up documentation provided to the Administrator.

Pursuant to Local Law 97, penalties are applicable from 2024 through 2035. Starting in 2024 the avoided penalties resulting from Local Law 97 fines are counted as savings in the SIR calculation in the Workbook. The savings from Local Law 97 avoided penalties are applied until the end of the related Project's average weighted useful life. The SIR calculation in the Program's Technical Certification Workbook, version 2.0, includes extending the savings expected to result from Local Law 97 avoided penalties beyond 2035 through the term of the related PACE loan or 2050, whichever comes sooner. The value of avoided Local Law 97 penalties beyond 2034 are estimates that utilize the coefficients and carbon thresholds as currently established for the 2030 to 2034 compliance period.

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[8] [8] The current version of NYSERDA's "Guidance for Calculating the Cost Benefit Ratio" (CBR) is available at: https://www.nyserda.ny.gov/All-Programs/commercial-property-assessed-clean-energy.

[9] The current version of the NYSERDA PACE Guidance is available at: https://www.nyserda.ny.gov/All-Programs/commercial-property-assessed-clean-energy

[10] Energy Star Portfolio Manager property types available at: https://www.energystar.gov/buildings/benchmark/understand_metrics/property_types

Pre-Qualified Energy Efficiency Improvements and Pre-Qualified Projects

For all projects, Pre-Qualified Energy Efficiency Improvements are deemed cost-effective and are not required to be included in the Savings to Investment Ratio ("SIR") calculation, though they are still required to be included in an energy audit and to provide energy and cost savings per the Energy Savings Calculations section above. Costs for Pre-Qualified Energy Efficiency Improvements will not be included in SIR calculations, but associated savings for Pre-Qualified Energy Efficiency Improvements may be included in SIR calculations. If the Project consists entirely of Pre-Qualified Energy Efficiency Improvement(s), there will be no SIR calculation. However, in such an instance, as noted above, energy and cost savings must still be provided. The Program allows the following Pre-Qualified Energy Efficiency Improvements which are stated in the "List of Cost-Effective Energy Efficiency Improvements" section of the NYSERDA General Guidance[6]:

- Electric heating ventilation and cooling ("HVAC") systems with efficiencies that meet or exceed the requirements of the most recently published version of ASHRAE 90.1.
- Electric domestic hot water systems with efficiencies that meet or exceed or exceed the requirements of the most recently published version of ASHRAE 90.1.
- Electric energy and heat recovery ventilators that meet or exceed the requirements of the most recently published version of ASHRAE 90.1.
- Electrical enabling upgrades, including but not limited to electrical service, panel, wiring, or infrastructure upgrades or replacements to support electric equipment in the building.

Measures qualifying as Pre-Qualified Energy Efficiency Improvements remain eligible as Energy Efficiency Improvements and, as such, can alternatively be submitted through the SIR methodology, where their associated costs and savings would be included in the SIR test.

Pursuant to Section 5.1 of the NYSERDA Guidance and the Guidelines, retrofit Projects that are designed so the building is completely electrified according to local code and regulations, then the SIR is not applicable, and the entire project is considered a "Pre-Qualified Project".

New Construction and Major Renovation Electrification Requirement

New Construction Projects or Major Renovations Projects are defined in the Program Guidelines. All New Construction Projects or Major Renovation Projects must adhere to the "Low Carbon Building" requirement contained in the Guidelines.

As defined in the Guidelines, the term "Low Carbon Building" means a building that is designed, engineered, developed, constructed, operated and maintained such that any device, machinery, equipment, component, system or element installed or used in such building that causes or otherwise results in the combustion within or upon such building of any substance emits no more than 25 kilograms of carbon dioxide per million British thermal units of energy, as determined by the United States energy information administration, provided that such limitation shall not apply to any of the following:

a. Any device installed or used in such building that (1) has no connection to the gas supply line or fuel oil piping system of such building; (2) is used on an intermittent basis; and (3) is not used to supply such building, or any portion of such building, with heat or hot water; or
b. Any building in which the combustion within or upon such building of a substance that results in the emission of 25 kilograms or more of carbon dioxide per million British thermal units of

energy, as determined by the United States energy information administration, is necessary: (1) for a manufacturing use or purpose; (2) for the operation of a laboratory, laundromat, hospital, crematorium, or commercial kitchen as defined in section 202 of the New York City fire code; (3) to provide emergency or standby power; or (4) for any use allowed pursuant to a rule promulgated by the Department of Buildings in accordance with exception 9 of section 28-506.1 of the Administrative Code, provided that any such emission in excess of 25 kilograms of carbon dioxide per million British thermal units of energy allowed pursuant to this definition be limited to the emission necessary for the use or purpose described in subparagraphs 1 through 4 of this paragraph.

Lenders must submit documentation to the Administrator that demonstrates that a New Construction Project or a Major Renovation Project meets the requirement of a Low Carbon Building, as determined by the Administrator in its sole and absolute discretion. Such documentation may include, but is not limited to, contract documents, design drawings, scope of work, construction permits and any other relevant documents and information that is requested by the Administrator. Lenders must also provide all required information as listed in the NYSERDA General Guidance for New Construction.

New Construction and Major Renovation Eligible Costs and Total Eligible Costs Limit

Eligible Costs for New Construction Projects or Major Renovation Projects may only be comprised of Eligible Improvements, as defined in the Guidelines. For New Construction Projects or Major Renovation Projects that meet the Low Carbon Building requirement, the following Energy Efficiency Improvements, as contained in the New Construction Workbook, are considered Prequalified Energy Efficiency Improvements (as defined below) and thus are exempt from the SIR requirement:

- Electric HVAC systems
- Electric domestic hot water systems
- Building electric service upgrades
- Building enclosure measures
- Energy efficiency measures that are more efficient than code
- Energy Audits and/or Feasibility Studies
- A pro-rata share of total Project soft costs based on the ratio of the hard cost total for all eligible Energy Efficiency Improvements out of the total Project hard costs

Eligible Costs consists of the costs of all necessary components to operate and achieve savings from the measure, including any non-health and safety ancillary measures required to complete the Project.

The Total Eligible Costs (the "TEC") for PACE proceeds for New Construction Projects and Major Renovation Projects may not exceed 35% of the Loan-To-Value as stabilized ("LTV"), plus all reasonable financing costs and capitalized interest which may be added to such 35% of LTV. The LTV must be based on an accredited third-party appraisal acceptable to the Administrator and completed within the previous 2 years of project submission.

Total Eligible Costs must be broken out by construction division or relevant allocation thereof, or by measure and provided to the Administrator with backup documentation, as requested by the Administrator in its sole and absolution discretion, along with the calculation and build-up determining the PACE proceeds as a percentage of the LTV.

Embodied Carbon

The Program recognizes that greenhouse gas emissions resulting from the energy used for building materials and construction, also known as "Embodied Carbon", are a substantial environmental consequence of New Construction, Major Renovation and "Adaptive Reuse" (as defined in the Guidelines and below) projects. As such, the reduction of Embodied Carbon is a qualifying Energy Efficiency Improvement that may be financed for such projects, subject to the requirements below.

Adaptive Reuse Projects

In order to qualify as an Adaptive Reuse project, a project must mee the requirements contained in Section 5 of the Guidelines, in addition to the below requirements.

Calculation of Retainage of Existing Buildings for Adaptive Reuse Projects

For Adaptive Reuse projects, the following standards shall be utilized in calculating the percentage of the existing building to be retained.

The project must retain at least 50% of both of the existing primary and secondary structure (foundations; columns, beams, walls, floors; and lateral elements) and building enclosure (roof framing, wall framing and exterior finishes). Window assemblies, insulation, portions of buildings deemed structurally unsound or hazardous, and hazardous materials that are remediated as part of the project shall not be included in the above calculation.

The calculation shall include roof and floor areas, and façade area as measured in elevation, for the entire building. Façade areas are permitted to be considered retained even if the existing exterior wall covering is repaired, replaced, or modified to increase insulation or airtightness. Salvaged and reused products sourced from the project site are permitted to be counted towards the 50% existing building requirement. Buildings, or portions of buildings that are remediated as part of the project because they are deemed unsafe or dangerous or have hazardous materials are excepted from this calculation.

Construction documents for Adaptive Reuse projects shall clearly distinguish the "Gross Floor Area"[11] for existing and new elements, and include the following information:

- Gross Floor Area of existing building(s) in square feet;
- Gross Floor Area of the aggregate addition(s) in square feet (if applicable);
- Gross Floor Area of the alteration in square feet;
- Existing total floor area and retained total floor area of the primary and secondary structural frame of the existing building(s) in square feet; and
- Existing total exterior wall and fenestration surface area and total retained exterior wall and fenestration surface area of the existing building(s) in square feet, as well as areas allowed to be excluded from the calculation.

[11] "Gross Floor Area" shall be calculated per Section 103-06 of the Rules of the City of New York, as follows: Gross floor area is the total number of square feet measured between the exterior surfaces of the enclosing fixed walls. It includes vent shafts, elevator shafts, flues, pipe shafts, vertical ducts, stairwells, light wells, basement space, mechanical/electrical rooms, and interior parking. It excludes unroofed courtyards and unroofed light wells. For atria, gross floor area only includes the area of atrium floors. For tenant spaces, interior demising walls should be measured to the centerline of the wall.

Technical Standards for the Reduction of Embodied Carbon in Adaptive Reuse Projects

For Adaptive Reuse projects to be eligible to utilize PACE financing for the reduction of Embodied Carbon, a third-party Contractor certified pursuant to the NYSERDA Guidance must submit a report, and any other materials requested by Administrator, detailing the percentage reduction of Embodied Carbon of the proposed project utilizing one of the following industry software tools: CARE Tool, Oneclick LCA Tool, C.SCALE, or another industry software tool deemed acceptable by the Administrator, in its sole discretion.

Low Carbon Materials

For New Construction or Adaptive Reuse projects to be eligible to utilize PACE to finance Low Carbon Materials for the reduction of Embodied Carbon, such building materials must meet the below requirements. New Construction or Adaptive Reuse projects may utilize PACE to finance all documented hard costs associated with the procurement and installation of Low Carbon Materials that meet the below requirements, subject to the financing limitations contained in the Program Guidelines.

EPD Requirements for Ready-Mix Concrete and Unfabricated Steel

The proposed project must submit an unexpired facility-specific Type III Environmental Product Declaration ("EPD") for all concrete and structural steel products, or subcategories, as defined below.

Global Warming Potential Limits for Ready-Mix Concrete and Unfabricated Structural Steel

The maximum Global Warming Potential ("GWP") for each concrete and structural steel product used in the building, as listed in the associated EPD, should not exceed the GWP limit associated with its relevant eligible material subcategory.

Eligible material subcategory GWP limits can be found below, or in the 2025 Carbon Leadership Forum North American Material Baselines Report.

Concrete Strength Classes (psi)	**Maximum GWP (kgCO2e/m3) for Ready-Mix Concrete**	**Maximum GWP (kgCO2e/m3) for Lightweight Concrete**
Less than 2,500	240	* Not eligible
2,500 to 3,000	264	517
3,001 to 4,000	314	573
4,001 to 5,000	378	628
5,001 to 6,000	399	* Not eligible
6,001-8,000	472	* Not eligible
8,000-9,000	410	* Not eligible
9.000-10,000	429	*Not eligible
10,000-11,000	353	*Not eligible

GWP Limits of Subcategories of Unfabricated Structural Steel	
Eligible Material Subcategories	**Maximum GWP (kg CO2e/metric ton)**
Cradle to Mill Gate:	
Rebar/Reinforcing Steel	753
Plate Steel	1,480
Hot Rolled Steel Sections	901
Cradle to Manufacturer Gate:	
Hollow Structural Sections (HSS)	1,710
Cold-Formed Steel	2,440
Steel Deck	2,330
Open-Web Steel Joists	1,430

***** These material subcategories are currently ineligible for PACE financing as there is not sufficient information to establish GWP limits. They will be re-evaluated in the future as additional information becomes available.

Alternative Pathway for Mass Timber buildings.

Proposed projects considered to be "Mass Timber" buildings pursuant to Section 602.4 of the New York City Building Code (Section 8-701.2) may utilize PACE financing for the cost of the Mass Timber materials, which qualify as Low Carbon Materials and are exempt from the above EPD and GWP requirements, subject to the Administrator's review and approval, in its sole discretion.

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Legal Notices

All backup, substantiating and other documentation, information and data provided to the Administrator pursuant to this Supplement must be satisfactory to the Administrator in its sole discretion.

This Supplement is a Program Document, and it is subject to the Additional Terms, Conditions and Disclaimers attached to the Guidelines at Appendix A. As used in such Additional Terms, Conditions and Disclaimers, the term "Guidelines" shall be deemed to mean this Supplement.

Website links or addresses provided in the footnotes to this Supplement may change. They were accurate and valid as of June 26, 2026.