

AFFORDABLE HOUSING NEW CONSTRUCTION APPLICATION & GUIDELINES

January 1, 2019 through December 31, 2019

The affordable housing new construction (AHNC) offering provides technical guidance and incentives for developers of single-family and multi-family new construction and major renovation projects that increase the energy efficiency for income eligible households. In order to participate in the AHNC offering, buildings must include eligible units that are targeted to households at or below 80 percent area median income (AMI).

Participant buildings must adhere to the high-performance energy efficiency reference standard set forth in the *ComEd® Multi-Family Standard 2018*. The standard includes an integrated bundle of energy conservation measures (ECMs) that can be applied to new construction and major renovation projects across single-family, low-rise, mid-rise, and high-rise multi-family buildings. The bundled ECMs are designed to result in significant energy savings over the 2016 Illinois Energy Conservation Code baseline. Compliance with this reference standard must be achieved for *all* living spaces within the participant building(s).

INCENTIVE SUMMARY

UNITS PER PROJECT	MAJOR RENOVATION	NEW CONSTRUCTION
Less than 80 total living units	Up to \$4.85/IE-gsf*	Up to \$4.55/IE-gsf*
80 or more total living units	Up to \$4.55/IE-gsf*	Up to \$4.30 / IE-gsf*

*Incentives levels are calculated per gross square foot (gsf) of income eligible (IE) living space (IE-gsf).

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AHNC PARTICIPATION TIMELINE

- 1 **APPLY EARLY**
 - Customer confirms that the program eligibility requirements are met.
 - Customer submits this application, signed terms and conditions, IRS Form W-9, and any available design documentation or narratives.
 - **Application submission begins the review process but does not guarantee acceptance into the program.**
- 2 **RECEIVE ELIGIBILITY LETTER AND ESTIMATED INCENTIVE**
 - Program team conducts initial design review and, for accepted projects, issues eligibility letter with estimated incentive.
- 3 **COLLABORATE WITH OUR PROGRAM TEAM**
 - Program team provides technical guidance to project design team for compliance with the *ComEd Multi-Family Standard*.
- 4 **SUBMIT INTERMEDIATE DESIGN REVIEW**
 - During design development phase, project team submits intermediate design documentation for preliminary review by the program team.
- 5 **SUBMIT CONSTRUCTION DOCUMENTS AND DESIGN SUBSTANTIATION DOCUMENTS**
 - Program team reviews construction documents and substantiation documents for design phase compliance with the *ComEd Multi-Family Standard*.
- 6 **RECEIVE AND SIGN INCENTIVE AGREEMENT**
 - Program team finalizes energy specifications outlining each measure in compliance and issues incentive agreement.
 - Customer signs and returns incentive agreement.
- 7 **SUPPORT FIELD SUBSTANTIATION INSPECTION OF ENVELOPE MEASURES**
 - Program team inspects constructed envelope measures and submittals for compliance with the *ComEd Multi-Family Standard*.
- 8 **SUPPORT FIELD INSPECTION(S) DURING CONSTRUCTION**
 - Program team conducts field inspection(s) during construction.
- 9 **SUPPORT FINAL FIELD SUBSTANTIATION INSPECTION**
 - At construction completion, program team completes final field substantiation inspection for compliance with the *ComEd Multi-Family Standard*.
- 10 **SUBMIT FINAL SUBSTANTIATION DOCUMENTATION**
 - Customer submits testing report(s) and final substantiation documentation.
- 11 **RECEIVE INCENTIVE PAYMENT**
 - Sign and return *Final Measure Installation Confirmation*.
 - **ComEd cannot issue certain incentives or rebates unless it is provided with: 1) certification that measures were self-installed by the ComEd customer, or 2) evidence that the measures were installed by an installer certified with the Illinois Commerce Commission.**
- 12 **SUPPORT PROGRAM EVALUATION**
 - If required, customer participates in utility evaluator third-party evaluation interviews.

AHNC APPLICATION

DIRECTIONS: Please save a copy of this form to your computer by selecting “FILE/SAVE AS” before entering text and numbers. Then fill in your information electronically and select “SAVE.” Note that this form requires the current Adobe Reader® version to function properly. Download the most recent version of Adobe Reader® at <https://get.adobe.com/reader/>.

AFFORDABLE HOUSING NEW CONSTRUCTION PROGRAM APPLICATION

Please check the active boxes below.

When applying for the ComEd® Energy Efficiency Program affordable housing new construction offering, the ComEd customer will:

- Confirm the following eligibility requirements are met:
 - Project is early in the planning process.
 - Project includes income eligible units targeted to households at or below 80 percent area median income (AMI).
 - Project will exceed the current Illinois Energy Conservation Code requirements for energy efficiency.
 - Customer intends to adhere to the *ComEd Multi-Family Standard*.
 - Project is located in ComEd service territory.
- Commit to participating fully in the design collaboration and substantiation processes, including site inspections and documentation. See *Participation Timeline* and *Substantiation Requirements Overview* sections of this document (*AHNC Program Application and Guidelines*).
- Review and agree to the attached program terms and conditions.

SUBMITTING AN APPLICATION

Applications under this program will be accepted on an ongoing basis through December 31, 2019.

If you are applying for tax credits or other funding and require a program eligibility letter from ComEd indicating that you are pursuing incentives through the affordable housing new construction offering, you must complete and submit this application and all required documentation to ComEd no later than two weeks prior to the application deadline.

ADDITIONAL ELIGIBILITY INFORMATION

Financial incentive “stacking,” or receipt of multiple financial incentives for identical energy efficiency upgrades from more than one utility program, is not allowed. All projects must be located in ComEd service territory and may not be a municipal utility customer, unless prior approval has been given by ComEd. The following technologies or approaches are not eligible for technical assistance or financial incentives through the new construction offering: fuel switching, renewable energy, combined heat and power, on-site generation, thermal storage or peak shifting. Energy savings from combined heat and power systems are not eligible for technical assistance or financial incentives through the affordable housing new construction offering, but may be eligible for another ComEd Energy Efficiency Program incentive.

FOR MORE INFORMATION

To apply or to discuss project eligibility please contact the team:

EMAIL: BusinessEE@ComEd.com (10MB file size limit; submit multiple emails if necessary)

CALL: 855-433-2700

MAIL: ComEd Energy Efficiency Program
Attn: New Construction Team - AHNC
749 University Row, Suite 320
Madison, WI 53705

VISIT: ComEd.com/NewConstruction

REQUIRED INFORMATION

ALL FIELDS ARE REQUIRED. APPLICATION MUST BE SIGNED BY THE CUSTOMER.

SECTION 1: PRIMARY CONTACT -

Name:	Project role:		
Company:			
Address:	City:	State:	ZIP code:
Telephone: ()	Email:		

SECTION 2: PROJECT INFORMATION

Building types (select all that apply): <input type="radio"/> Multi-family <input type="radio"/> Single-family <input type="radio"/> Other: _____			
Housing type: <input type="radio"/> Senior housing <input type="radio"/> Supportive housing <input type="radio"/> SRO <input type="radio"/> Other: _____			
Eligible project types: <input type="radio"/> New facility <input type="radio"/> Major renovation <input type="radio"/> Addition/Expansion			
Public sector project: <input type="radio"/> Yes <input type="radio"/> No	Funding involved: <input type="radio"/> IHDA <input type="radio"/> HUD <input type="radio"/> City of Chicago <input type="radio"/> Other _____		
Project name:			
Address (If multiple addresses, include in Description field):	City:	State: IL	ZIP code:

Description of project, primary space type(s) and scope:

Number of buildings:	Gross building area (gsf):	Number of total units:	Number of units targeted to households at or below 80% AMI:
Design start date:		Design completion date:	Current project phase:
Estimated construction start date:	Estimated envelope construction start date:	Estimated envelope construction completion date:	Estimated project cost (if available):
			Design process: <input type="radio"/> Design-bid-build <input type="radio"/> Design-build

Electric utility for building (select one): ComEd Other _____

Natural gas utility for building (select one): Nicor Gas Peoples Gas North Shore Gas Other _____

Certification sought (i.e. LEED™, ENERGY STAR®, PHIUS, Enterprise Green Communities, etc.):	Preliminary drawings or scope of work documents available? <input type="radio"/> Yes <input type="radio"/> No
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MEASURE INSTALLATION INFORMATION

Please be aware that legislation requires ComEd to collect projection installation information.

- I acknowledge that pursuant to Section 16-128B of the Illinois Public Utilities Act, ComEd cannot issue certain incentives or rebates unless it is provided with:
1. certification that measures were self-installed by the ComEd customer, or
 2. evidence that the measures were installed by an installer certified with the Illinois Commerce Commission.

Select how energy efficiency measures will be installed:

- I will use my own staff to self-install my project
- I will purchase equipment from a contractor, but will use my own staff to self-install my project
- I will use an ICC certified trade ally, contractor or subcontractor to install my project where the incentive per measure is greater than \$300.
(A ComEd outreach professional will contact you prior to construction completion to collect installer information)

REQUIRED INFORMATION

SECTION 3: CUSTOMER OR DESIGN TEAM LEAD SIGNATURE

I verify this information is correct, that I meet all eligibility requirements and request consideration for participation under the ComEd Energy Efficiency Program. By signing, I agree to the terms and conditions listed at the end of this application.

Customer signature:		Print name:		
Company:				
Address:		City:	State:	ZIP code:
Telephone: ()	Email:		Date:	

Please complete the entire application, then email to: BusinessEE@ComEd.com

CONTACT INFORMATION FOR PROJECT TEAM

CUSTOMER INFORMATION

Name:		Title:		Company:	
Address:		City:	State:	ZIP code:	
Telephone: ()		Email:			

OWNER (if different from above)

Name:		Title:		Company:	
Address:		City:	State:	ZIP code:	
Telephone: ()		Email:			

ARCHITECT OR DESIGN TEAM LEAD

Name:		Title:		Company:	
Address:		City:	State:	ZIP code:	
Telephone: ()		Email:			

GENERAL CONTRACTOR OR EQUIVALENT

Name:		Title:		Company:	
Address:		City:	State:	ZIP code:	
Telephone: ()		Email:			

MECHANICAL ENGINEER

Name:		Title:		Company:	
Address:		City:	State:	ZIP code:	
Telephone: ()		Email:			

ELECTRICAL ENGINEER

Name:		Title:		Company:	
Address:		City:	State:	ZIP code:	
Telephone: ()		Email:			

TERMS AND CONDITIONS

Commonwealth Edison Company (ComEd), Nicor Gas, Peoples Gas and North Shore Gas (with their representatives and contractors collectively the “new construction team”) are offering affordable housing new construction services with incentives under the ComEd® Energy Efficiency Program to facilitate the implementation of cost-effective energy efficiency improvements for eligible customers.

PROGRAM EFFECTIVE DATES

Program incentives are offered to applicable affordable housing new construction and major renovation projects until approved funds are exhausted or December 31 of each program year, whichever comes first. The effective program dates are January 1, 2019 through December 31, 2019.

Subsequent program year budgets and plans will be made available toward the end of the existing program year. At the current time, ComEd has a commitment to provide this program through December 31, 2019.

Projects with estimated completion dates beyond December 31, 2019, will be considered on a case-by-case basis. Projects that are accepted will be required to document progress on design and construction to maintain and extend incentive reservation.

PROGRAM AND PROJECT ELIGIBILITY

The program offers cash incentives, technical guidance and whole-building solutions to help businesses use energy more efficiently. Program incentives are available to all nonresidential customers who pay into the Energy Efficiency Pricing Performance (Rider EEP) regardless of retail electric supplier. Program incentives are not available to residential customers. Funds are limited and subject to availability.

Under the Future Energy Jobs Act, customers who had an account with a load of 10MW or higher during the 12 months ending December, 2017, will not contribute to, nor participate in, the ComEd Energy Efficiency Program.

Project requirements under the ComEd Energy Efficiency Program include the following:

- Projects must involve new measures installed in a new building or major renovation project that result in a permanent reduction in electrical energy usage (kWh).
- Equipment must be installed and operational.
- Equipment must be new (not used or rebuilt, and not for resale) and used at the address for which savings are claimed.
- Replaced equipment must be permanently removed. All removed materials, including lamps and ballasts containing polychlorinated biphenyls (PCBs), must be permanently taken out of service and disposed of in accordance with local codes and ordinances. Resale of replaced equipment is expressly forbidden.
- Any measures installed at a facility must be sustainable and provide 100 percent of the energy benefits as stated in the application for a period of five years or for the life of the project, whichever is less. If the customer ceases to be a delivery service customer of ComEd or removes the equipment or systems at any time during the five-year period

or the life of the project – without having replaced the equipment or system with an equally or more energy-efficient equipment or system during that time – the customer may be required to return a prorated amount of incentive funds to ComEd.

Projects that are NOT eligible for an incentive include, but are not limited to, the following:

- Fuel switching (e.g., electric to gas or gas to electric) that does not result in a reduction of total BTUs of electricity and natural gas.
- On-site electricity generation.
- Energy savings due to combined heat and power systems are not eligible for incentives through the new construction offering, but may be eligible for a custom incentive.
- Projects involving gas-driven equipment in place of electric equipment (such as a chiller).
- Projects using energy savings devices that do not demonstrate measurable and verifiable energy and/or demand savings, including power conditioning (power factor correction, harmonic current reduction, transient voltage protection, lighting voltage regulation or other power-conditioning measures such as interruptible power supplies, rectifiers, etc.) or black box solutions (software, hardware, system or material in which the efficiency is not supported with ComEd accepted certified test results).
- Projects focused primarily on power factor improvement.
- Projects that involve peak-shifting (and not kWh savings).
- Renewables.
- Projects that repair or replace existing equipment with like equipment.
- Projects for the sole purpose of implementing demand response measures
- Projects receiving funding for the same equipment through any other Energy Efficiency Portfolio (EEP) programs offered by ComEd, Ameren, Nicor Gas, Peoples Gas, North Shore Gas.
- Custom projects with simple paybacks greater than the equipment life.
- Used and/or refurbished equipment

REAPPLICATION

This application is valid for one year from the submittal date. After one year, if a signed *Incentive Agreement* has not been submitted to ComEd, customers will be required to reapply to the program.

If construction has not begun within 270 days following an *Incentive Agreement* signature date, customers may be required to reapply.

It is the responsibility of the customer to notify the program of significant changes to the project’s size, scope or programming that occurs at any time after the application has been submitted; such projects may be required to reapply.

TERMS AND CONDITIONS

INCENTIVE AGREEMENT

Issued to the customer, the incentive agreement confirms that the project design documentation has been reviewed by the AHNC team for compliance with the program requirements and indicates the resultant estimated incentives for which the project will qualify if executed in compliance with the *ComEd Multi-Family Standard*. The incentive agreement form must be signed and returned within 30 days of issue.

Funds are reserved for a project when a signed incentive agreement is received. Applicants are encouraged to call 855-433-2700 if they have any questions about documentation requirements.

INSPECTIONS

ComEd reserves the right to inspect all affordable housing new construction projects to verify compliance with the program standard and the accuracy of project documentation. This may include pre-installation and/or post-installation inspections, detailed lighting layout descriptions, metering, data collection, interviews and utility bill data analyses. Upon reasonable notice by ComEd, the customer must allow access to project documents and the facility where the measures were installed for a period of five years after receipt of incentive payment by ComEd.

INCENTIVE PAYMENTS

Customers without a Federal Employer Identification Number (FEIN) are ineligible for incentives.

SUBSTANTIATION AND FIELD VERIFICATION

Substantiation documentation and field verification is required by the program prior to payment of incentives. The team reserves the right to request supporting documentation as deemed necessary to ensure project eligibility and to verify that the expected energy savings will occur. Requested information could include: plans, specifications, manufacturer's information, scope of work documents, invoices and purchase orders. Project invoices should provide sufficient detail to separate the project cost from the cost of other services, such as repairs and building code compliance. All customer information will be held in confidence.

The location or business name on the invoice must be consistent with the information listed on the final measure installation confirmation. The confirmation and all required supporting documentation should be received by November 15, 2019, to be applicable for the 2019 calendar year.

EVALUATION, MEASUREMENT AND VERIFICATION

The ComEd Energy Efficiency Program is evaluated annually by an independent third-party evaluator, as required by law. The customer's completed project may be selected for evaluation. Depending on the nature of the project, evaluation may include measurement and verification (M&V), the process of monitoring, measuring and/or verifying data related to equipment operation and electrical consumption. Upon reasonable notice, the customer agrees to participate fully in the evaluation process by allowing access to the facility where the project took place and providing information and access to data required for M&V to the program's evaluator.

REQUIREMENTS FOR NEW CONSTRUCTION PROJECT ELECTRICITY AND GAS SAVINGS CALCULATIONS

The customer will be responsible for repayment of incentives if program terms and conditions are violated as determined by ComEd. The team is solely responsible for the final determination of the annual energy savings to be used in calculating the incentive amount. The annual electricity and gas savings will be calculated using industry-accepted engineering algorithms or simulation models. The applicant must provide the new construction team with requested information necessary to calculate potential savings.

TAX LIABILITY

Incentives may be taxable under federal and state tax codes and, if more than \$600, will be reported to the IRS unless the customer provides acceptable proof that it is exempt from payment of such applicable taxes. In any event, ComEd is not responsible for any taxes that may be imposed on your business as a result of your receipt of an affordable housing new construction incentive or for providing legal or accounting advice regarding such. Customer should consult with its tax accountant or advisor regarding potential tax liability.

DISPUTES/GOVERNING LAW

This application shall be exclusively governed by and interpreted in accordance with the laws of the State of Illinois. Any litigation between the parties shall be prosecuted only in the state or federal courts located in Cook County, Illinois.

TOXIC MATERIALS

Neither ComEd, nor its consultants, contractors and/or subcontractors, shall have any responsibility for the discovery, presence, handling, removal, disposal of, or exposure to hazardous materials of any kind in connection with customer's facility, including without limitation, asbestos, asbestos products, PCBs or any other toxic substances.

LIMITATIONS OF LIABILITY

The customer shall independently evaluate any advice or information offered by ComEd related to estimates of electricity savings or program costs and is solely responsible for the selection and implementation of Energy Conservation Measures (ECMs).

In no event will ComEd, Nicor Gas, Peoples Gas, North Shore Gas, their consultants, contractors, and/or subcontractors be liable for a customer's failure to achieve a specified amount of energy savings, the operation of the customer's facilities or any incidental or consequential damages of any kind in connection with this application or the implementation of ECMs at the customer's facilities. In no event will the team be liable to the customer for any lost profits, lost savings or incidental, indirect, special or consequential damages, arising out of the customer's participation in this program. The state of Illinois exempts itself from any claims, demand, and actions based upon or arising out of any services performed for the program.

Each party hereby agrees to defend, indemnify and hold harmless the other party, its consultants, contractors and subcontractors, and their respective officers, employees, agents, assigns, and successors-in-interest ("Indemnified Parties") from and against any third party claims, damages, losses,

TERMS AND CONDITIONS

LIMITATIONS OF LIABILITY (continued)

liability, costs (including attorney's fees and expenses) for bodily injury to any person (including death resulting therefrom) and property damage arising out of or in connection with the program, except to the extent such claims, damages, losses, liability and costs are caused by the negligence or willful misconduct of the other party.

DISCLAIMER

ComEd, in its sole discretion, may change any of the terms and/or conditions of this program upon thirty (30) days written notice to customer and/or trade ally.

ComEd does not guarantee that certain energy savings will be achieved and does not make any warranties associated with the measures eligible for incentives under this program. ComEd has no obligations regarding, and does not endorse or guarantee, any claims, promises, representations, or work made or performed, or equipment furnished or installed by any contractors, subcontractors, or vendors that sell or install energy-efficiency measures.

The customer shall be entitled to the energy cost savings realized by the customer that result from the installation of ECMs at the customer's site. In consideration of the services provided by ComEd as part of this program, the customer agrees that ComEd is entitled to 100 percent of the rights and benefits associated with the measures, including without limitation PJM products and all other attributes, credits or products associated therewith under any regional initiative or federal, state or local law, program or regulation, and customer waives, and agrees not to seek, any right to the same.

ICC CERTIFIED ENERGY EFFICIENCY MEASURE INSTALLER

Beginning January 1, 2018, the ComEd Energy Efficiency Program will be responsible for verifying that an installing contractor is certified by the ICC for the installation of applicable measures prior to any incentive or rebate payout. Payment will be withheld if the installing contractor is not certified or until certification is approved / verified. This is not applicable if the customer self-installs the applicable measure(s).

Payment of incentives requires compliance with requirements as described in the Terms and Conditions. I verify that the information provided herein is true and correct. Signing of this application indicates acceptance of the above as well as the Terms and Conditions listed herein.

ComEd CUSTOMER AUTHORIZED SIGNATURE:

PRINT NAME/TITLE:

DATE:

PROGRAM GUIDELINES

INCENTIVE INFORMATION

Incentives will be calculated per gross square foot (gsf) of income eligible (IE) living space (IE gsf) as follows:

• Major Renovation

- » Up to \$4.85/IE-gsf for major renovation single-family and multi-family projects that will result in less than 80 total living units (IE and non-IE)
- » Up to \$4.55/IE-gsf for major renovation single-family and multi-family projects that will result 80 total living units or more (IE and non-IE)

• New Construction

- » Up to \$4.55/IE-gsf for new construction single-family and multi-family projects with less than 80 total living units
- » Up to \$4.30/IE-gsf for new construction single-family multi-family projects with 80 or more total living units

ComEd reserves the right to negotiate the incentive amount with the incentive applicant depending upon availability of incentive funds, scope and size of project. ComEd reserves the right to modify the incentive amounts as needed to fulfill the EEPS statutory requirements or based on current market development, technology development, and evaluation, measurement and verification (EM&V) results and program implementation experience. The ComEd program reserves the right to waive funding limitations and other program parameters. The ComEd program has the authority to implement pilot projects under this program.

PROGRAM STANDARD

Participant buildings must adhere to the high-performance energy efficiency reference standard set forth in the *ComEd Multi-Family Standard* (“the standard”). The standard includes an integrated bundle of energy cost reduction measures (ECMs) that can be applied to new construction and major renovation projects across single-family, low-rise, mid-rise, and high-rise multi-family buildings. The bundled ECMs are designed to result in significant energy savings over the current Illinois Energy Conservation Code baseline. The standard is prescriptive; meeting the standard is the minimum required for obtaining an incentive.

Compliance with the standard must be achieved for all spaces within the participant building(s), not just living spaces targeted to households at or below 80 percent AMI.

ELIGIBILITY

Eligible Applicants

This program is open to affordable housing developers building new construction or executing major renovation projects in single-family and/or multi-family buildings. Developers must meet the following:

- Projects must be targeted to households at or below 80 percent Area Median Income (AMI)¹; and
- Applicants will be required to indicate and ensure the number of units that will be targeted to households at or below 80 percent AMI.

Eligible Square Footage

Incentives are based on the gross square footage of eligible living space. Eligible living space includes: living units targeted to households at or below 80 percent AMI and qualified shared living spaces (e.g. common kitchens, fitness facilities, laundry, resident library, resident lounge, mailroom, dining, other spaces as approved by the program). Qualified living spaces must primarily serve residents.

Ineligible Square Footage

Non-living spaces and living spaces that do not target households at or below 80 percent AMI will not be included in the square footage used for incentive calculations. Non-living spaces include, but are not limited to, lobbies, corridors, stairwells, administrative offices, nursing space, commercial space, conference rooms, and basement (unless basement square footage will serve as code-compliant living units).

ADMINISTRATION

For an overview of the offering administration milestones, refer to the Participation Timeline in the *Applications and Guidelines* document.

Application Process

Prospective applicants are encouraged to contact ComEd Energy Efficiency Program staff prior to submittal of the application and as early in the design process as possible.

If preliminary drawings or narratives of the project exist, these documents shall be submitted with the application in PDF format.

Applications under this offering will be accepted on an ongoing basis, but must be submitted by December 31, 2019.

Payment Schedule

No incentive payments made prior to construction completion.

Full incentive payment upon ComEd’s verification that energy efficiency measures are installed and operational.

¹ For information on Area Median Income (AMI), see <http://www.huduser.org/datasets/il.html>.

ComEd MULTI-FAMILY STANDARD OVERVIEW

The following is an overview of the integrated bundle of measures comprising the *ComEd Multi-Family Standard*. Participating projects must adhere to all requirements of this reference standard.

1. HIGH-PERFORMANCE WINDOWS:

Improved windows with above-code specifications for U-factor and Solar Heat Gain Coefficient (SHGC). These values generally correspond to the requirements for ENERGY STAR® windows. The measure includes some alternative requirements for windows that require greater structural strength, durability or ability to withstand wind loads; these windows are found almost exclusively in high-rise buildings and were used to model savings for the high-rise prototype.

2. REDUCED INFILTRATION:

Reduced envelope infiltration verified by testing. The measure combines the (generally) more stringent requirement from the commercial energy code with the testing requirement in the residential code, delivering savings above both codes.

3. REDUCED THERMAL BRIDGING:

Improved detailing of the thermal envelope and better accounting for thermal bridges. The measure includes a straightforward list of prescriptive requirements that will help reduce thermal bridging and standards for calculating the U-factor of the thermal envelope elements to better account for the impact of thermal bridges.

4. HIGH-PERFORMANCE HVAC EQUIPMENT:

Above-code levels of performance for HVAC equipment that generally correspond to the Consortium for Energy Efficiency's Tier 2 requirements for HVAC equipment.

5. HIGH-PERFORMANCE FANS:

High-efficiency fans, including requirements for both system and exhaust/ventilator fans.

6. EFFICIENT VENTILATION:

Improved ventilation through the adoption of ventilation strategies that are both effective and efficient in multi-family buildings and that avoid some common inefficient configurations.

7. ADVANCED HVAC CONTROLS:

HVAC controls with better user interfaces that allow for greater ease of programming and access that are also more responsive to occupant needs and use patterns.

8. HIGH-PERFORMANCE INTERIOR LIGHTING:

Reduced lighting power density in common areas and improved lamp efficacy in dwelling units.

9. INTERIOR LIGHTING CONTROLS:

Occupancy and vacancy controls for common areas paired with implementation of bi-level lighting in some areas.

10. HIGH-PERFORMANCE EXTERIOR LIGHTING:

Improved lamp efficacy for exterior site, landscape and architectural lighting.

11. HIGH-PERFORMANCE WATER HEATING EQUIPMENT:

Higher-efficiency water heaters and boilers used for water heating.

12. HOT WATER CONSERVATION:

Low-flow fixtures in kitchens and bathrooms meeting WaterSense® criteria

13. EFFICIENT APPLIANCES:

ENERGY STAR® appliances and other equipment.

SUBSTANTIATION REQUIREMENTS OVERVIEW

The following table provides an overview of program substantiation requirements during design and construction phases. This requirements overview below may be subject to revisions or additions at the discretion of the ComEd Energy Efficiency Program. For complete substantiation requirements, request Appendix A: Substantiation Checklist.

	CONSTRUCTION DOCUMENTATION	CONSTRUCTION/ POST-CONSTRUCTION
SUBSTANTIATION TIMING	<ul style="list-style-type: none"> • Design team should take part in a progress design review before construction documentation is issued. • Substantiation of compliance with the program standard will take place at the completion of construction documentation. 	<ul style="list-style-type: none"> • Up to three site visits during the construction period. • Walk-through at substantial completion of the building.
WINDOW REQUIREMENTS	<ul style="list-style-type: none"> • Product NFRC certification, or ENERGY STAR® documentation detailing the assembly U-value and SHGC of the window units. • For site-built windows, manufacturer or contractor assembly U-value calculations, or product-specific cut sheets detailing performance as per NFRC 100 (U-value) NFRC 200 (SHGC) procedures, or NFRC certification. 	Field verification of installation to be performed by ComEd.
AIR LEAKAGE TESTING REQUIREMENTS	Specification for air sealing of envelope and air leakage testing.	Provide air leakage testing report as per the <i>ComEd Multi-Family Standard</i> sampling requirements and ASTM E779-10.
THERMAL BRIDGING REQUIREMENTS	<ul style="list-style-type: none"> • Provide assembly section drawings for walls, spandrel, roof, and foundation illustrating compliance with the requirements. R-5 continuous insulation for the entire envelope in most cases. • Provide calculation documentation for each major wall, spandrel, roof, and foundation assembly detailing the U-factor of each component using the ASHRAE parallel path methodology. ASHRAE 90.1 Appendix A assembly factors may be used for typical construction practices. Simulation of the assembly using software such as WUFI or THERM is also acceptable. • The U-factor components must illustrate that the area weighted assembly, Total UA, meets or exceeds Illinois energy code. 	Field verification of thermal barrier assemblies conducted by ComEd using open wall visual inspection of typical envelope constructions.
HEATING AND COOLING SYSTEM REQUIREMENTS	Provide documentation showing the efficiency rating of each applicable space heating and cooling system. Documentation can come directly from the manufacturer for the specific model or produced via the AHRI certificate directory. These ratings must be based on their respective AHRI test procedure listed in Appendix A of the <i>ComEd Multi-Family Standard</i> .	Field verification of installed equipment to be performed by ComEd.
VENTILATION REQUIREMENTS	<ul style="list-style-type: none"> • Provide ventilation drawings, equipment schedules, and control sequences, indicate total system supply and exhaust CFM, ventilation air, and any energy recovery systems. • Provide documentation indicating that dwelling units meet ASHRAE standard 62.2 based on typical unit sizes and ventilation rates. This can be a comparison to table 4.1a of ASHRAE Standard 62.2-2016. 	<ul style="list-style-type: none"> • Field verification of ventilation system major components to be performed by ComEd. • Provide duct sealing test report if applicable.
FAN EFFICIENCY	Provide drawings and equipment schedules indicating fan locations, efficiencies, flow, motor size and type.	Field verification of installed equipment to be performed by ComEd.

SUBSTANTIATION REQUIREMENTS OVERVIEW

	CONSTRUCTION DOCUMENTATION	CONSTRUCTION/ POST-CONSTRUCTION
SPACE CONDITIONING CONTROL REQUIREMENTS	Provide documentation showing the specified thermostats and functionality meet the requirements.	Field verification of installed thermostats to be performed by ComEd.
INTERIOR LIGHTING EFFICACY REQUIREMENTS	<ul style="list-style-type: none"> • Provide drawings indicating the location and type of light fixture. • Provide cut sheets for each installed lighting fixture located in dwelling units. • Provide completed substantiation table (with each lighting fixture count, watts, lumens, and lamp efficacy for the dwelling units). • Provide completed substantiation table (showing the total count of each fixture type, watts, location, area, and resultant LPD for the common areas). 	Field verification of installation to be performed by ComEd.
COMMON AREA LIGHTING CONTROL REQUIREMENTS	<ul style="list-style-type: none"> • Provide documentation showing the specified controls and setpoints (timing, dimming factor, etc.) • Provide drawings indicating the location of each of the required control points. 	<ul style="list-style-type: none"> • Field verification of installed control system to be performed by ComEd. • Functional testing of controls to be performed by ComEd.
EXTERIOR LIGHTING EFFICACY REQUIREMENTS	<ul style="list-style-type: none"> • Provide drawings indicating the location and type of light fixture. • Provide cut sheets for each installed lighting fixture. • Provide completed substantiation table with each lighting fixture count, watts, lumens, and lamp efficacy. 	<ul style="list-style-type: none"> • Field verification of installed lights to be performed by ComEd. • Functional testing of controls to be performed by ComEd.
WATER HEATING EQUIPMENT REQUIREMENTS	<ul style="list-style-type: none"> • Provide documentation showing the efficiency rating of each applicable water heating system. Documentation can come directly from the manufacturer for the specific model or produced via the AHRI certificate directory. • Documentation must clearly show systems are direct vent seal combustion when located in residential units. 	Field verification of installed components to be performed by ComEd.
HOT WATER CONSERVATION REQUIREMENTS	<ul style="list-style-type: none"> • Provide drawings showing the location of and fixtures used for showers and lavatory faucets. • Provide cut sheets showing the fixture flow rates or WaterSense® label. 	Field verification of installed components to be performed by ComEd.
PLUG LOAD REQUIREMENTS	<ul style="list-style-type: none"> • Provide completed substantiation table listing out the total number of installed applicable appliances (e.g., washers, driers, refrigerators, dishwashers). • Provide cut sheets showing the specified appliances are ENERGY STAR® certified. 	Field verification of installed components to be performed by ComEd.