



## Pay for Performance Program Existing Buildings Partner Guidelines Updates Summary

FY21 (Oct. 1, 2020-June 30,2021)

### Section 1: Introduction

No changes

### Section 2: General Requirements

#### Section 2.3.9 Parking Garages and Lots

- ◆ Rules modified, parking garage square footage will no longer contribute to Incentive #1 value.

#### Section 2.4.2 Enhanced Incentives

- ◆ Addendum incorporated, added County buildings and Affordable Housing to eligible entities that can qualify for enhanced incentives.

#### Section 2.6 Miscellaneous

- ◆ Subsections edited/added on Prevailing Wage and Dispute Resolution process.

### Section 3: Energy Reduction Plan Development

#### Code References

- ◆ Updated all *ASHRAE 90.1-2013* references to *ASHRAE 90.1-2016*
- ◆ Updated all *IECC 2015* references to *IECC 2018*

#### Section 3.2 Utility Bill Collection Requirement

- ◆ Clarified that requirements listed here also apply to post-retrofit bills
- ◆ Clarified requirement for actual readings on beginning and end of utility period.
- ◆ Added that reasonable amount of bills in a single period should be actual to avoid too few reading periods when combining estimated bills.

##### Section 3.2.1.1 Alternative Approach to In-Unit Elec. Usage

- ◆ Clarified that this option cannot be used on projects with direct-metered in-unit heating and/or cooling equipment that are included in the scope of work.



## Table 3-4. Common Energy Efficiency Opportunities

- ◆ Updated

## Section 4: Simulation Guidelines

### M&V References

- ◆ Updated all *2010 IPMVP* references to *2016 IPMVP*
- ◆ Updated all *2008 FEMP M&V Guidelines, Version 3.0* references to *2015 FEMP M&V Guidelines, Version 4.0*
- ◆ Updated references provided in Section 4.3.10

### Code References

- ◆ Updated all *ASHRAE 90.1-2013* references to *ASHRAE 90.1-2016*
- ◆ Updated all *IECC 2015* references to *IECC 2018*

### Section 4.4.1 Simulation Software

- ◆ Removed references to DOE 2.1.
- ◆ Removed references to TREAT modeling software
- ◆ Added reference to DOE2.3, which shall be used for eQuest projects involving DOAS or VRF
- ◆ Remove reference to OpenStudio and TRACE for custom refrigeration modeling

### Section 4.6.3 Caps of Measures with High Savings Uncertainty

- ◆ Added variable speed drives and energy recovery into bullet 1
- ◆ Added *changes in pump energy* to the example in bullet 3

### Section 4.6.4.1 Lighting Fixture Improvement

- ◆ In Table 4-3, removed *Average – Miscellaneous* category and replaced with *Other*.
- ◆ For *Other* building types, removed 4,573 equivalent full load hours (EFLH) and added methodology to determine EFLH
- ◆ Updated interior and exterior lighting controls required by code to reflect updated requirements in 90.1-2016.
- ◆ Removed “100 hours per year” in runtime hours bullet. Runtime hours should comply with Table 4-3.



### Section 4.6.4.6 Window Improvement

- ◆ Updated and added reference table for ASHRAE 90.1-2016.

### Section 4.6.4.7 Derating HVAC Equipment Efficiency

- ◆ Added “The Program Manager may request nameplate photos or specification sheets to justify Efficiency<sub>original</sub>.”

### Section 4.6.4.8 Boilers

- ◆ For condensing boilers modeled in Trane Trace, added requirement to model ancillary electricity usage associated with fans and controls.
- ◆ Added requirements for ancillary boiler improvements and noted that these contribute to the uncertainty cap (Section 4.6.3)

### Section 4.6.4.10 Programmable Thermostats and Thermostat Setbacks

- ◆ Added note that this measure contributes to the uncertainty cap (Section 4.6.3)

### Section 4.6.4.11 Plug and Process Load Reduction Measures

- ◆ Removed outdated references (links) to EPA Savings Calculator for Office Equipment
- ◆ Updated references (links) for transformers
- ◆ Removed reference to peer reviewed calculation for transformers
- ◆ Updated references (links) for vending machine controls
- ◆ Removed references to provide supporting spreadsheet calculations and instead added requirement to use calculators within the ERP Tables.

### Section 4.6.4.13 BMS, HVAC Controls

- ◆ Added *changes in outdoor air schedule* to ventilation schedule modeling requirements of the HVAC Control ruleset.
- ◆ Added requirements for static pressure reset to the HVAC Control ruleset.
- ◆ Added requirements for hot water supply temperature reset to the HVAC Control ruleset.
- ◆ Added requirements for supply air temperature reset to the HVAC Control ruleset.
- ◆ Added requirements for chilled water temperature reset to the HVAC Control ruleset.
- ◆ Added variable speed drives and energy recovery to examples of HVAC control EEMs to which the uncertainty cap applies. Removed exception for variable speed drives



### **Section 4.6.4.16 Improvement to Commercial Refrigeration Equipment**

- ◆ Replaced section with new requirements, including references to the program's new refrigeration energy calculator available on the Partner Portal

### **Section 4.6.4.18 Modeling Cooling and Heating Efficiency**

- ◆ Added clarification to use derated efficiency in supply fan extraction calculations
- ◆ Removed references to Appendix G system types
- ◆ Removed references to submission supporting spreadsheets

### **Section 4.6.4.21 Elevator Improvements**

- ◆ Removed lengthy example of how to calculate baseline and proposed elevator consumption
- ◆ Added requirement to use P4P's Elevator Energy Consumption Calculator

### **Section 4.6.4.23 Measures Involving Plant Decentralization**

- ◆ Added new section describing how to model plant decentralization improvements as two or more individual measures.

## **Section 5: Measure Implementation**

No changes

## **Section 6: Post-Construction Benchmarking Report**

### **Section 6.4.2 Utility Bill Collection**

- ◆ Clarified that pre-retrofit data should not include any adjustments made for the purpose of achieving calibration (during the ERP stage)
- ◆ Added Sections 6.4.4 Allowed Post-Retrofit Adjustment for Billing Periods Spanning more than 370 Days
- ◆ Added Section 6.4.5 Allowed Post-Retrofit Adjustment for Irregular Deliveries

### **Section 6.4.2 Utility Bill Collection**

- ◆ Clarified that post-construction baseline adjustments will be made to post-retrofit/performance billing period.

## **Section 7: Building Performance with Energy Star**

No changes



## Appendix A: Minimum Performance Standards

### Code References

- ◆ Updated all *ASHRAE 90.1-2013* references to *ASHRAE 90.1-2016*
- ◆ Updated all *IECC 2015* references to *IECC 2018*

### Minimum Performance Standards

- ◆ Electric Unitary HVAC table updated to align with new code
- ◆ Ground Source Heat Pump table updated to align with new code
- ◆ Gas Water Heating table updated to align with new code
- ◆ Horticultural reference added to Lighting Fixtures section
- ◆ Fluorescent references removed from Lighting Fixtures section
- ◆ Food Service Equipment table removed, reference added to refer to SmartStart application for details
- ◆ Pipe Insulation section removed, refer to code instead
- ◆ Occupancy Controlled Thermostat section added

## Appendix B: NJCEP Measure Lives

Updated to match FY2021 Protocols

## Appendix C: 2005 Nonresidential ACM Manual

This appendix replaced with link to “New York Standard Approach for Estimating Energy Savings from Energy Efficiency Programs”

## Appendix D: Metering Guidelines

Updated all *2008 FEMP M&V Guidelines, Version 3.0* references to *2015 FEMP M&V Guidelines, Version 4.0*

## Appendix E: Frequently Asked Questions

Updated all *ASHRAE 90.1-2013* references to *ASHRAE 90.1-2016*, including codes referenced in question 29.