

**SUBJECT**

Code Compliance &amp; Income Qualified Retail Lighting

**DATE**

March 6, 2024

**FROM**

Michelle Krueger, APTIM

**TO**Derek Mills, Entergy New Orleans  
Ross Thevenot, Entergy New Orleans**COPIES TO**

Adam Thomas, ADM Associates, Inc.

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APTIM is the current Third Party Administrator (TPA) for Entergy New Orleans (ENO) Energy Smart Programs. At the request of ENO, APTIM has outlined the recommended Code Compliance and Income Qualified Retail Lighting program offerings below.

Energy Smart Code Compliance

The New Construction Code Compliance offering would provide incentives for projects to adopt and implement energy-efficient design and construction that meets advanced energy codes IECC 2021. These energy codes were effective as of July 2023, and represent an unprecedented advancement in energy code in the State of Louisiana. Prior to the adoption of IECC 2021, the codes in place were IECC 2009. As the TPE notes, the new requirements represent a four-step advancement in energy codes, no other State has attempted to advance this many steps in a single update. APTIM is recommending an intermediary step to support customers and trade allies in meeting the advanced energy codes prior to the completion of the TPE compliance study. APTIM recommends prescriptive and custom incentives for meeting IECC 2021, while using IECC 2015 as the baseline for energy savings calculations. The default baseline would use two code steps as the baseline for calculating savings (IECC 2015) for PY14 and PY15 prior to TPE compliance study results. Outreach and education efforts will begin with the City of New Orleans "One Stop" building permit department upon approval from ENO. All major remodels and new construction projects must visit One Stop to submit plans and receive a building permit before the start of construction. Engaging One Stop will ensure the offering is presented to builders seeking permits.

The offering will provide support for Entergy New Orleans customers to meet IECC 2021 energy codes and overcome the additional upfront cost of the more efficient equipment and design.

## Residential and Commercial Project Eligibility:

- New building/ground-up construction.
- Addition or expansion of an existing building.
- Gut rehabs that include replacement of all electrical systems, including HVAC, lighting or process equipment.
- "Warm Shell" projects, where the building envelope, central mechanical system and core lighting systems are included in the design and construction, but future buildout work or tenant improvements are permitted separately.

## Proposed Prescriptive Incentives:

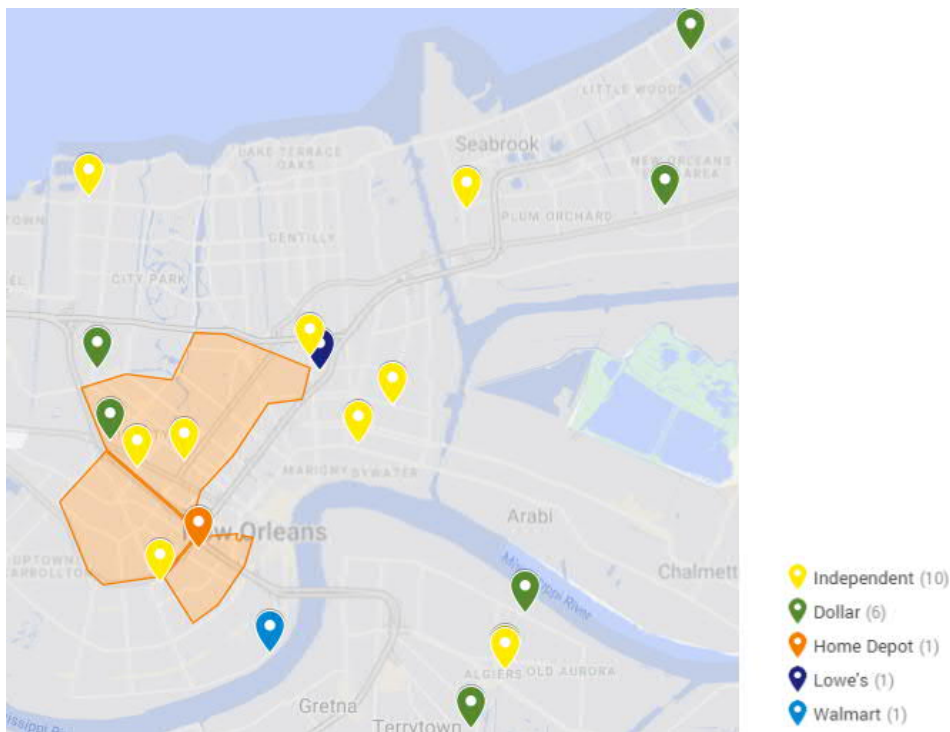
- High efficiency AC units
- High efficiency heat pump units
- High efficiency packaged terminal AC (PTAC) units
- Guestroom PTAC/PTHP Energy Management controls
- High efficiency air-cooled chiller
- High efficiency water-cooled chiller
- ECM motor
- ENERGY STAR refrigeration or commercial kitchen equipment
- Low flow water fixtures including sink aerators, shower heads, pre-rinse spray valves

Energy Smart Income-Qualified Retail Lighting

APTIM seeks to provide additional support for income-qualified residential customers to purchase and install LED lighting. In alignment with both Arkansas and energy efficiency programs in the State of Louisiana, APTIM recommends providing upstream retail lighting incentives at the point of purchase in zip codes considered more than 50% low-income. Discount lighting may also be included in dollar store retailers, thrift stores and food bank distributions throughout Orleans Parish regardless of zip code. The TPE has provided guidance to APTIM regarding qualifying zip codes and exceptions to the updated LED baselines.

Income-qualified Retail Lighting would allow Energy Smart to continue targeted outreach to income qualified communities with free lighting kits, free distribution at partner foodbank events and limited lighting retail discounts. APTIM recommends partnering with independent retailers including Goodwill, The Green Project New Orleans, Habitat for Humanity ReStore of New Orleans, Downman Discount Market, Burkes Outlet and Savers.

Available retail locations in Orleans Parish:



Bulb type and average incentive per bulb:

- General purpose replacements
  - <450 lumens - \$1.25
  - 451-1,000 lumens - \$1.50
  - >1,000 lumens - \$2.50
- Globe - \$2.00
- Reflector (flood/spotlight)
  - 450-699 lumens - \$2.00
  - 700-1200 lumens - \$2.50
  - >1201 lumens - \$3.00
- Downlight solid state retrofit - \$3.00.

# COMMERCIAL CODE COMPLIANCE STUDY OUTLINE

SUBMITTED TO:

DEREK MILLS, ENTERGY NEW ORLEANS

ROSS THEVENOT, ENTERGY NEW ORLEANS

SUBMITTED BY: ADM ASSOCIATES, INC.

SUBMITTED ON: MARCH 6, 2024

The ADM logo is displayed in a large, bold, white sans-serif font. It is positioned in the bottom right corner of the page, overlaid on a background image of a dirt road winding through a forest. The background image is semi-transparent, allowing the text to be clearly visible.

ADM Associates, Inc  
3239 Ramos Circle  
Sacramento, CA 95827  
916-363-8383

## INTRODUCTION

ADM Associates, Inc. (ADM) is the current Third Party Evaluator (TPE) for Entergy New Orleans (ENO) Energy Smart Programs. At the request of ENO, the TPE has authored this technical memorandum outlining a proposed approach for addressing commercial code compliance impacts in New Orleans.

## BACKGROUND

Effective June 20, 2022 the State of Louisiana adopted the 2021 International Energy Conservation Code (IECC 2021) with a selection of Louisiana exceptions for residential and commercial new construction.

This supplanted the prior codes in place:

- American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) Standard 90.1-2017
- IECC 2009

IECC is updated triennially, and the new requirements in Louisiana as a result constituted a four-step advancement in energy codes. On this basis, ENO, TPE, and the Third Party Administrator (TPA) concur that there is a possibility of code non-compliance due to a sudden advancement in requirements outstripping the technical resources and capabilities of local trades to change practices to this significant of a degree in a short timeframe.

## COMMERCIAL CODE COMPLIANCE

Based on conversations with ENO and TPA, the TPE has determined that it is plausible that commercial new construction may fall short of advanced code requirements. The TPE recommends that the upcoming evaluation cycle include an assessment of the extent to which commercial new construction meets code requirements, and upon this basis address:

- 1) Whether a current-practice baseline can be supported; and
- 2) Whether the New Orleans TRM (TRM) should establish lower-than-code baselines for specific measure categories for new construction.

## Proposed Study Outline

The study would occur in two phases:

- PY14: Sample design along with conducting interviews with design professionals and code officials. The purpose of this Phase I study would be to obtain a high-level picture of areas of perceived non-compliance by local experts and officials. This will inform our approach and areas of emphasis for follow-up study, and will provide guidance to the TPA to support code compliance encouragement efforts.
- PY15 (pending approval): Site visit data collection, compliance assessment, and write up findings. In this Phase II study, the TPE will conduct site visits on a sample of new construction projects to address compliance rates.

## Compliance Findings Characterization

ADM will mirror the characterization established by the Pacific Northwest National laboratory (PNNL)<sup>1</sup> for calculation of energy impacts from code compliance enhancements. Parameters will include (but are not limited to):

- Roof insulation
- Cool roof/reflectivity
- Wall & floor mass & insulation
- Window-to-wall ratio
- Skylight-roof ratio
- Fenestration U-factor/SHGC
- Air leakage
- HVAC efficiency
- Thermostat settings (deadband, setbacks, etc.)
- Demand control ventilation
- Duct leakage
- Commissioning
- Lighting power density
- Lighting controls

For each measure category, the TPE will develop compliance percentages along with estimated annual kWh impacts of non-compliance. Further, the compliance rates found in this study will inform baselines for the NOLA TRM, establishing whether each measure category is complying with:

- IECC 2012
- IECC 2015
- IECC 2018

This delineation will allow for a transparent establishment of market-actual baseline for commercial measures for use in the NOLA TRM. This parameter may differ by measure; for example, it could be found that lighting is meeting IECC 2021 while HVAC systems or thermostat setbacks only meet IECC 2015.

## Field Data Collection Sample

TPE proposes a sample of 70 new construction commercial facilities for this study. At present, it is not known how many valid projects will be available. To be valid, the project must be permitted under new code requirements and then complete. With the timing of this study, it is plausible that the available projects may

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[https://www.energycodes.gov/sites/default/files/2023-01/Data\\_Analysis\\_of\\_Energy\\_Code\\_Compliance\\_Rev1.pdf](https://www.energycodes.gov/sites/default/files/2023-01/Data_Analysis_of_Energy_Code_Compliance_Rev1.pdf)

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be constrained to small commercial/retail/restaurant facilities, as larger projects will have longer timelines from application to completion.

The TPE anticipates at a minimum sampling the following facility types:

- Small Office
- Retail
- Restaurant

Sampling will include other facility types should they be found in available data.

If available, TPE will request that data on new commercial construction be made available by the City of New Orleans Safety & Permit Department. If this data is unavailable, the TPE will source new construction projects from external datasets, such as Dodge Construction Network<sup>2</sup>. The TPE anticipates requiring generous incentives to encourage participation in this study.

## Field vs. Survey Data Collection

TPE does not recommend survey data collection for this study, as was performed when completing the Residential Appliance Saturation Survey (RASS) – the level of detail required for results to be useable for Energy Smart necessitates on-site data collection and testing.

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<sup>2</sup> <https://www.construction.com/>