

Scope of Work

Proposal to Review and Consider Possible Technical Changes to section 553.9065, Florida Statutes

Florida Building Commission (FBC)

And

University of Central Florida/Florida Solar Energy Center (FSEC)

Project Leader: Rob Vieira, Florida Solar Energy Center

1. Introduction

Pursuant to section 553.9065, Florida Statutes, the FBC has been tasked with reviewing and consideration of the legislative requirements for unvented attic as outlined in section 553.9065, Florida Statute for the purpose of providing technical changes and reporting such changes to the Legislature by December 31, 2024.

Section 553.9065 Thermal efficiency standards for unvented attic and unvented enclosed rafter assemblies.

- (1) Unvented attic and unvented enclosed rafter assemblies that are insulated and air sealed with a minimum of R-20 air impermeable insulation meet the requirements of sections R402 of the Florida Building Code, 8th Edition (2023), Energy Conservation, if all of the following apply:
 - (a) The building has a blower door test result of less than 3 ACH50.
 - (b) The building has a positive input ventilation system or a balanced or hybrid whole-house mechanical ventilation system.
 - (c) If the insulation is installed below the roof deck and the exposed portion of roof rafters is not already covered by the R-20 air-impermeable insulation, the exposed portion of the roof rafters is insulated by a minimum of R-3 air-impermeable insulation unless directly covered by a finished ceiling. Roof rafters are not required to be covered by a minimum of R-3 air impermeable insulation if continuous insulation is installed above the roof deck.
 - (d) All indoor heating, cooling, and ventilation equipment and ductwork is inside the building thermal envelope.

FSEC shall conduct a literature review of available field studies and research papers published on the subject of moisture in sealed attics and evaluate the impact of the thermal efficiency standards for unvented attic of section 553.9065, Florida Statutes on moisture within sealed attics, and the energy use of Florida homes relative to the provisions of the Prescriptive Compliance Method of the 8th Edition (2023) Florida Building Code, Energy Conservation – Residential Provisions.

2. Scope of Work:

a. Literature Survey

The objective of this task is to review available research literature particularly as it applies to moisture in sealed attics. This review will help provide guidance for various installations that may become more prevalent with the new legislation.

- FSEC shall conduct a literature review of available field studies and research papers published on the subject of moisture in sealed attics.
- FSEC shall provide a summary of the literature survey outlining the recommendations and conclusions of each research project reviewed.

b. Evaluate the energy performance of the thermal efficiency standards for unvented attic as depicted in section 553.9065, Florida Statutes

The objective of this task is to evaluate the impact of the thermal efficiency standards for unvented attic of section 553.9065, Florida Statutes on the energy use of Florida homes relative to the provisions of the Prescriptive Compliance Method of the 8th Edition (2023) Florida Building Code, Energy Conservation – Residential Provisions.

- FSEC shall perform simulations to quantify the energy use differences between the unvented attic energy measures of section 553.9065, Florida Statutes, and that of the prescriptive compliance method of the 8th Edition (2023) Florida Building Code, Energy Conservation – Residential Provisions.
- FSEC shall simulate the expected change in energy use via a matrix of 120 or more simulations that vary residence types (one-story, two-story, flat), location, duct tightness, mechanical ventilation, roof pitch, and ceiling and roof insulation levels.
- Based on the simulations, FSEC shall determine the average change in energy use due to the new legislation.

3. Staffing

Project Investigators (PI): Robin Vieira

4. Method of Payment

A purchase order will be issued to the University of Central Florida/Florida Solar Energy Center (FSEC). This project shall start on the date of execution of the purchase order and end at midnight on June 30, 2025, and shall not exceed \$25,000 and shall cover all costs for labor, materials, and

overhead. Payment will be made for the project after Department's Program Manager has approved the final report. Additionally, the Contractor agrees to provide additional documentation requested by the Program Manager to satisfy all payment and audit requirements.

5. Deliverables

- a. An interim report shall be prepared and delivered no later than September 1, 2024. The interim report shall cover progress to date on all tasks. This report will serve as a progress update that details the current state of research, preliminary results, and descriptions of any issues that may have been encountered. In addition, the interim report shall be formally presented to the Florida Building Commission's Energy Technical Advisory Committee at a time agreed to by the Contractor and Department's Program Manager. The due date may be extended with the approval of the Department's Program Manager.

- b. A final draft report shall be prepared and delivered no later than October 15, 2024, to the Department's Contract Manager that explains the purpose, methods, and results of the research. The final report shall include a summary of literature research and simulation findings. A discussion of these findings shall be provided to support any recommendations for changes to the Florida Building Code. In addition, the final report shall be presented to the Florida Building Commission's Energy Technical Advisory Committee at a time agreed upon by FSEC and the Department's Contract Manager.

6. Performance Measures and Financial Consequences

The University of Central Florida and FSEC are solely and uniquely responsible for the satisfactory performance of the tasks and completion of the deliverables described in this Scope of Work. Failure to complete the task and deliverables in the time and manner specified in Sections 2 and 4 shall result in a non-payment of the invoice until corrective action is completed as prescribed by the project manager.

7. Contract Manager:

The Project Manager for this project is Mo Madani. Mo Madani's email address is Mo.Madani@myfloridalicense.com and his phone number is 850-717-1825.