

**Title: Modernizing Building Energy Code Compliance
Proposal for funding submitted to DOE by FSEC as Principal Institution.
A decision on the award is expected in June 2023.**

Principal Institution: University of Central Florida's Florida Solar Energy Center (FSEC)
Principal Investigator: Muthusamy Swami, Ph.D., Program Director
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The University of Central Florida's Florida Solar Energy Center, as the principal institution, has submitted a proposal for funding to DOE to improve code compliance by creating a Portal Advancing Energy Code Compliance, Equity, and Tracking (PAECCET) that will automatically archive energy code compliance data. This modernization will lead to better access to the details of modeler code compliance inputs, improving field verification. In Florida, it is estimated that over 95% of energy code compliance for residential and commercial buildings is through the performance method using a computer compliance tool. The code compliance inputs contain significant information (construction and energy equipment details) of value to the industry. This project applies advancements in data science to support the energy code compliance improvement by 1) developing software tools to support local code compliance implementation, validation, and improvement, 2) providing a better understanding of the construction trends and building technologies, 3) providing the ability to systematically quantify and verify the energy cost savings and GHG emission reduction through code compliance 4) to consider advancing Florida's Building Code to be equivalent with the latest national codes.

The project objective is to modernize Florida's building energy code compliance which other states can replicate. The PAECCET will automatically archive energy code compliance data as contractors or energy modelers complete the software calculations. This back-end process for residential and commercial Buildings will help streamline the code compliance process. In addition, the data available in PAECCET will be an invaluable resource for interested participants (e.g., state building commissions, building departments, builders, and utilities) and help potentially lead to ideas for code compliance improvement in Florida and elsewhere. Studies indicate that regular updates in energy codes lead to energy cost savings and carbon emissions reductions¹, impacting long-term housing affordability for low and moderate households.

The Florida Solar Energy Center respectfully seeks the FBC Energy Technical Advisory committee's support in bringing the project to fruition.

¹ <https://www.energycodes.gov/determinations>