Florida Building Commission                                September 10, 2024
Building Codes and Standards Office
2555 Shumard Oak Blvd
Tallahassee, Florida  32399-2100

RE:  Submission of IESVE software version 2024 for approval for the 8th edition Florida Energy Code for Commercial Buildings

Integrated Environmental Solutions is pleased to submit IESVE for approval for the 8th Edition Florida Energy Code for Commercial Buildings.

Certification

To the best of our knowledge, judgment, and interpretation, we certify that the software submitted for approval meets the requirements to demonstrate compliance with the 2023 8th Edition Florida Energy Code for Commercial Buildings.

IESVE Software End User License Agreement
[www.iesve.com/software/eula_pdfs/eula-standard_licence.pdf](www.iesve.com/software/eula_pdfs/eula-standard_licence.pdf)

**Contents of Submission**

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# Cover sheet for the request for approval by the Florida Building Commission as a Compliance Software Tool

Date of Submittal: September 10, 2024

Software Company:  Integrated Environmental Solutions Ltd.

Contact Person:  Matthew Duffy

Contact Email:  matthew.duffy@iesve.com

Contact Phone Number:  415.420.9314

Name of Product:  IESVE

Version Number: 2024


**Code Compliance Methods this software calculates (only those ⊠):**

☐  ASHRAE 90.1-2019 Prescriptive Method
⊠  ASHRAE 90.1-2019 Performance Method (Appendix G)
⊠  ASHRAE 90.1-2019 Performance Method (Energy Cost Budget)
☐  ASHRAE Envelope Trade-off Option Method
☐  IECC Prescriptive Method
☐  IECC Total Building Performance Method
☐  IECC Component Performance Alternative Method


As an official of the software company named above, I certify the software listed meets the requirements of the Florida Building Code, Energy Conservation 8th Edition (2023) for the methods indicated and that this submittal includes the required documentation as given in the Energy Simulation Tool Approval – Technical Assistance Manual or as requested by the Florida Building Commission:


_Matthew Duffy_
_____                         __**September 10, 2024**__
Signature                                                                    Date



Matthew Duffy                     Business Development Manager
Printed Name                                             Title

**IESVE Software for Certification Authority**

**About IES Ltd.:**

Integrated Environmental Solutions Ltd. (IES Ltd.) is an international organization and develops software which is supported in over 130 countries. IES have multiple offices in North America as well as on other continents. IES' mission is to advance the sustainability of the world's buildings through the use of integrated building performance modelling technology which more intelligently and assuredly determines the measures required to mitigate climate change and conserve our natural resources for future generations.

**About IESVE Software:**

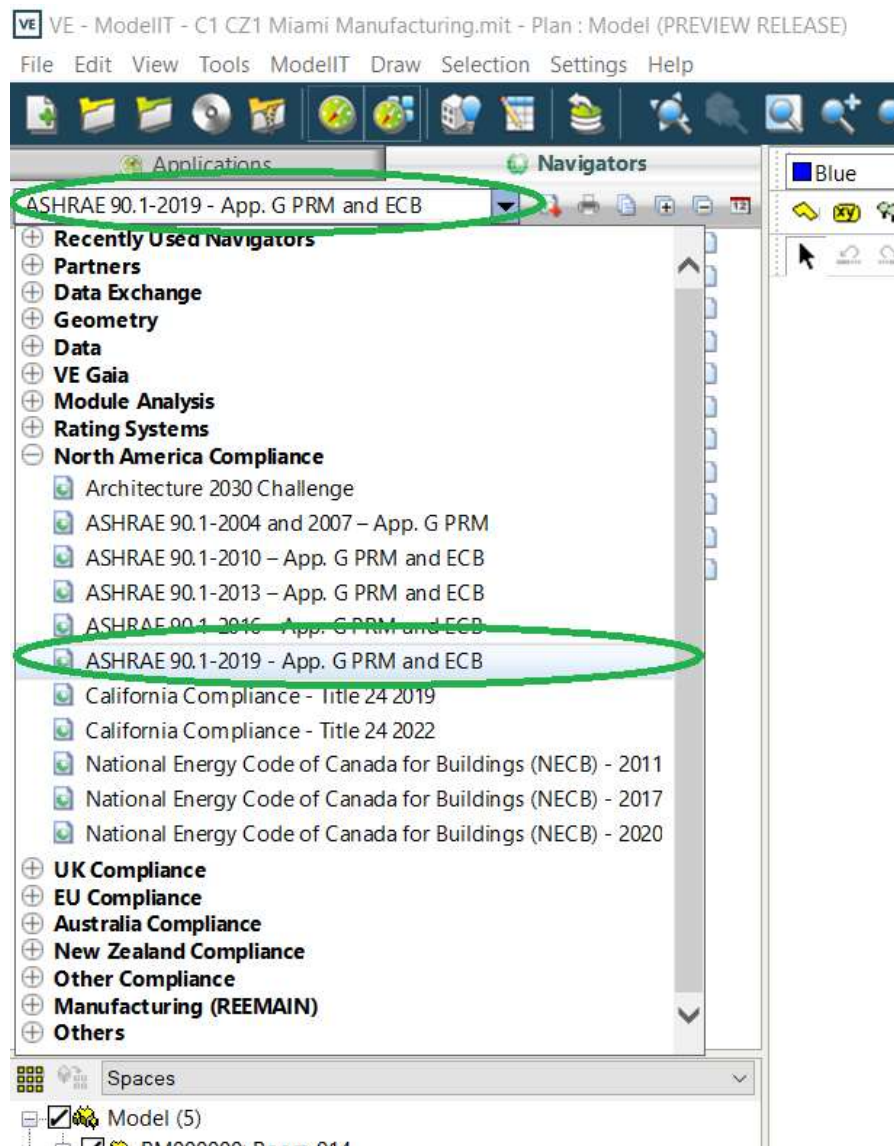Current capabilities of IESVE software relevant to North America include:

1. Energy Modeling:
   This can include modeling as per AHSRAE 90.1 Appendix G (Performance Rating Method) and ECB (Energy Cost Budget). ASHRAE 90.1 versions include 2004, 2007, 2010, 2013, 2016, and 2019.

2. ASHRAE Standard 140:
   IESVE software has been tested in accordance with ASHRAE Standard 140 and meets or exceeds all requirements of this test. Results of the ASHRAE 140 test are available on the IES website. See: http://www.iesve.com/software/software-validation.

3. The DOE (IRS 179D & EPAct):
   IESVE software is approved by the DOE to qualify for tax deductions (Internal Revenue Code 179D. The approval is referenced on the DOE website: https://www.energy.gov/sites/default/files/2023-07/bto-qs-ies-virtual-environment-iesve-version-2023.pdf. Please note all of the passive, low-energy strategies capable within the IESVE software.

4. LEED Automation and LEED Project Management:
   IES Ltd. are partners with the USGBC and are approved for LEED Automation. See http://www.usgbc.org/leedautomation/leedautomation.aspx.

5. LEED Credits (various LEED versions):
   - Optimize Energy Performance (Energy Modeling with ASHRAE 90.1)
   - Increased Ventilation (ASHRAE 62.1)
   - Thermal Comfort for Occupants (ASHRAE 55)
   - Daylighting and Views
   - Water Use and Water Efficiency Landscaping
   - Green Power (Renewable Energy) and Controllability of Systems

For further information, please contact matthew.duffy@iesve.com or call: +1 415-420-9314.

# Choosing the Compliance Option in IESVE 2024

The option to select the compliance path is located in the IESVE software under *Navigators*. Please note a 30-day trial version of the software is available to the public with full software capability for that trial period; the 2024 trial version is available at this link. Upon opening the software you will have to register your free 30 day trial through the start page to activate the trial. Please contact licensing staff with any questions.

A range of individual software applications and features are available within the IESVE suite which can be used to construct a detailed PRM and ECB Budget model. The user needs to manually switch between applications and know at which point in the process a specific feature needs to be used. The IESVE PRM/ECB Navigator is a tool which brings all of the individual IESVE applications and features together in a single area and presents the user with step-by-step smart navigation and management of the PRM workflow and analysis process. The Navigator is driven through the successful execution of specific actions and commands which are activated by the user in a defined sequence.

This smart navigation leads the user through the process of basic geometry creation, to constructions/thermal data assignment, and ultimately to the automatic generation of a full set of PRM compliant results which are presented in a format similar to the LEED EAc1 Letter Template.

The Navigator also provides the user with predefined prototypical ASHRAE data which can be used to populate the model with default baseline information. The main structure of the PRM Navigator workflow includes:

1. Preliminary Data setup

2. Envelope Thermo/Physical Properties

3. Room/Zone Thermal Template Data

4. HVAC systems

5. Other Input Data

6. Generate Baseline

7. Sizing runs

8. Simulations

9. Results

The ASHRAE 90.1 App – G PRM/ECB Navigator functions as a series of hyperlinks that are accessed within the smart navigator tree structure that is located on the upper left side of the interface.  The hyperlinks take the user to the relevant IESVE application and dialog box to complete the tasks associated with that topic.

# IESVE Software Validation for ASHRAE 140

IESVE software has been tested in accordance with ASHRAE Standard 140 and meets or exceeds all requirements of this test. Results of the ASHRAE 140 test are available on the IES website. See: http://www.iesve.com/software/software-validation.

The specific documents for the IESVE ASHRAE 140-2017 reports and results are located in the following compressed folder.
https://www.iesve.com/software/validation/ASHRAE-140_2020_VE2024.rar

The compressed folder contains the directory with the models, results, weather files, reports (*ASHRAE 140 ApacheSim – Envelope.pdf, ASHRAE 140 ApacheSim - Space Cooling.pdf, ASHRAE 140 ApacheSim - Space Heating.pdf*), and a readme file. The following is an image of the directories and files after extracting the compressed folder.

| Name | Date modified | Type | Size |
|------|---------------|------|------|
| 📁 models | 30/05/2018 17:01 | File folder | |
| 📁 results | 30/05/2018 17:01 | File folder | |
| 📁 weather_files | 30/05/2018 17:01 | File folder | |
| 📄 ASHRAE 140 ApacheSim - Envelope.pdf | 20/03/2017 14:59 | Adobe Acrobat D... | 16,734 KB |
| 📄 ASHRAE 140 ApacheSim - Space Cooling.pdf | 20/03/2017 15:05 | Adobe Acrobat D... | 8,165 KB |
| 📄 ASHRAE 140 ApacheSim - Space Heating.pdf | 20/03/2017 15:07 | Adobe Acrobat D... | 1,037 KB |
| 📄 README_ASHRAE140_IESVE_2017.txt | 20/03/2017 15:21 | Text Document | 3 KB |

Should you have any questions, concerns, or comments, please reach out to Matthew Duffy at IES.

**IES**

**Matthew Duffy**
**Business Development Manager**

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http://www.iesve.com

**Software User Manual**

The software user manual is now located online for IESVE. It is complete with a search and index function on the following site.

https://help.iesve.com/ve2024/getting_started.htm

## Results and Output Reports

The results of the compliance software application are located in the spreadsheet, ***CommercialPerformanceMethodsResultsIESVE.xlsm***. This is located at the following link:

https://send.iesve.com/index.php/s/pnkY6HoFMF5pgjL

Each of the prototype buildings and the subsequent baseline or reference building has its own Florida output report. These are located in the specific directory in the 'PROTOTYPE BUILDING NAME…\Content\Compliance Report' directory. These are located in the compressed folder at the following link:

https://send.iesve.com/index.php/s/S355P2nGZzyQgos