

March 14, 2014

Mo Modani
Florida Building Commission
Building Codes and Standards Office
2555 Shumard Oak Blvd.
Tallahassee, Florida 32399-2100

re: Florida Building Commission Accreditation for REM/Rate™ v14.5 Software

Dear Mr. Modani,

Please find enclosed Architectural Energy Corporation's *Florida Building Commission Software Tool Accreditation Application* for REM/Rate™ v14.5. Architectural Energy Corporation followed the *Florida Building Commission's Energy Simulation Tool Approval Technical Assistance Manual*.

We certify that the REM/Rate v14.5 Software

- Accurate and reliable when compared to the standard tests; and
- Able to generate minimum required Standard Reference Design from user inputs; and
- Suitable in terms of the accurate calculation of the correct energy/cost budget, the printing of standardized forms, and
- The documentation on how the program demonstrates compliance.

We have included a few changes to the REM/Rate Software based on the suggestions we received from the staff at Florida Building Commission Codes and Standards. We added an error message if equipment efficiency is below federal minimum standards, included a raised floor foundation type and floor type in our libraries. We hope these satisfy any concerns there were for code compliance.

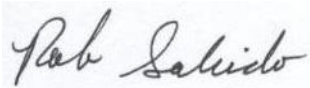
During the course of completing this application, we discovered some issues we would like to bring to light.

1. Our help system is online and not available in a paper format. The help is context sensitive which allows the user to go direct to the topic in the help system that they need. We found that our users were not using the paper version so we no longer provide one.
2. During the Reference Design Auto Generation Tests, we run a Florida Energy Code Reference Home for all 4 test buildings through our Reference Home Generation routine. What we found is the 0.00036 SLA value for the Florida Reference Home converts to a 0.12 nACH in REM/Rate. This means the Design Home for this reference home is reset to 0.35 nACH since there is no mechanical ventilation. Our e-ratio values are way out of limits and not applicable in this case. We have this same problem with IECC and RESNET Reference Home generation tests for Miami, Florida. We believe this to be an unintended flaw in the test methodology.
3. The RESNET HERS BESTEST is conducted using modified heating and cooling load limits that calibrate with the REM/Rate heating and cooling seasons for Colorado Springs, Colorado and Las Vegas, Nevada with those of the TMY2 weather data used to set the load limits. AEC has been conducting this test for

RESNET Software Accreditation this way. The load limit modifications are part of the *Home Energy Rating System Building Energy Simulation Test (HERS BESTEST) NREL document NREL/TP-472-7332a*

I am sending all the REM/Rate v14.5 testing suite data and reports for all six testing requirements for Florida Building Commission Software Accreditation. I am also sending a zip drive with the REM/Rate v14.5 installation to use as you please. I will also send the information electronically to the Florida Building Commission.

Thank you for your assistance and let me know if you need additional information.

A handwritten signature in black ink that reads "V. Robert Salcido". The signature is written in a cursive style.

V. Robert Salcido, P.E., LEED AP
Director of Products – REM/Rate Software
Architectural Energy Corporation
Boulder, Colorado