November 9, 2026

David Pedrick
Director of Core Energy Solutions
Ekotrope

**Re: Ekotrope RATER Audit — Completion and Determination**

Dear Mr. Pedrick:

The International Code Council, Inc. (ICC) completed its audit of the Ekotrope RATER software. ICC evaluated whether RATER accurately calculates building thermal envelope values under the Total UA Alternative in Section R402.1.5 of the 2021 International Energy Conservation Code (IECC) and the corresponding Section N1102.1.5 of the 2021 International Residential Code (IRC).

The audit covered three sample plans furnished by Ekotrope. These were a single-family home, a townhouse, and an apartment building evaluated as three dwelling-unit designs (top, middle, and ground floor). At ICC's recommendation, Ekotrope also furnished four additional structure variations, a conditioned basement, an unconditioned basement, a crawl space, and a mass wall. The single-family plan was evaluated in Climate Zones 1 through 8, and the townhouse and apartment plans in representative climate zones.

**Scope and methodology**

Between July 1, 2026 and October 30, 2026, ICC evaluated each test case across three independent calculators. These were Ekotrope RATER (version 5.2.3), the U.S. Department of Energy's REScheck-Web, and ICC's own Total UA calculator, built from the reference U-factors in 2021 IECC Table R402.1.2 and the assembly values in ASHRAE 90.1-2019 Appendix A.

ICC ran the sample plans as Ekotrope delivered them (five test cases) and again as code-minimum buildings, with every envelope component set at the exact 2021 IECC prescriptive value (24 test cases). For each test case, ICC compared the pass or fail result and the compliance margin across the three calculators.

**Results**

RATER returned the same pass or fail result as REScheck and ICC's independent calculation in all 29 test cases. All 24 code-minimum test cases passed in all three calculators. ICC found no calculation error in RATER's proposed total UA. Small differences in compliance margins between the calculators are explained by differences in calculation methodology, such as REScheck's exclusion of slab-on-grade floors from its UA total.

In addition, ICC issued two findings:

- **Heated garages and sunrooms.** RATER holds thermally isolated sunrooms and heated garages to the standard Table R402.1.2 requirements rather than the reduced requirements permitted by Sections R402.2.12 and R402.3.5. This treatment is conservative. It can require more insulation or

better fenestration than the code requires, never less. ICC has recommended Ekotrope address this issue, but does not consider it a required remediation.

- **Slab-edge insulation trade-off.** RATER as delivered permitted a slab-edge insulation trade-off that the unamended 2021 IECC does not allow. The 2024 IECC is the first edition to permit it. Ekotrope has since updated RATER to prohibit the trade-off where a jurisdiction has adopted the 2021 IECC without an amendment enabling this trade-off.

**Determination**

Based on the completed audit, including Ekotrope's update to RATER, ICC has determined that RATER calculates Total UA values consistent with ICC's independent results and produces Total UA outputs suitable for submission to code officials to demonstrate building thermal envelope compliance under Section R402.1.5 of the 2021 IECC and Section N1102.1.5 of the 2021 IRC.

**Scope limitations**

- This determination applies to the Total UA Alternative (Section R402.1.5 of the 2021 IECC and Section N1102.1.5 of the 2021 IRC), the sample plans and structure variations included in the audit, and the code-minimum variants ICC built from them.
- The audit did not evaluate other building envelope provisions of Section R402, the systems requirements of Sections R403 and R404, or the performance compliance options of Sections R405 and R406.
- The audit was based on a representative sample of plans and structure types. It was not a review of every possible building configuration or of content outside the audited scope.
- The determination reflects RATER model build studied as of the completion date above.
- This letter does not alter the authority of the applicable authority having jurisdiction and does not replace project-specific review, approval, permitting, or inspection requirements.
- Any public statement referencing ICC or the conclusions of this review must accurately describe the scope of ICC's review and verification, and requires ICC's written approval before publication.

Sincerely,

Jason C. Toves
Deputy Director of Energy Programs
Technical Services
International Code Council, Inc.