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HERS Raters are uniquely poised to deliver the data needed to begin Embodied Carbon Tracking in the United States. If included in the HERS Index, it would become part of what is already the gold standard for home energy assessments in the residential home market. It would transform the HERS Index into an even more powerful tool for tackling climate change within the next 10 years and ensuring that we have a livable planet for generations to come.

As of 2017, building operations accounted for 28% of global carbon emissions. An additional 21% came from the production and distribution of the building materials themselves. Combined, operational and material emissions account for almost *half* of global emissions! Our industry has done exceedingly well at reducing operational emissions. It is time to turn our sights to reducing the emissions associated with materials, as well.

Factoring in the embodied carbon footprint of materials allows us to capture up-front carbon savings. The greenhouse gases that are generated to extract, process, and manufacture materials account for 60-90% of the emissions associated with the full life-cycle of a building. They are already in the atmosphere by the time construction begins. Operational emissions accrue on top of that baseline. If we want to reach the carbon targets needed to reverse climate change by 2030, we must begin factoring embodied carbon emissions now.

RESNET Certified Home Energy Raters already collect data in order to produce detailed reports defining Operational Emissions for the HERS Index. Much of the data collected for the HERS Index overlaps with the data needed to calculate Embodied Carbon Emissions. The attached worksheet outlines the approximately 65 data points already being collected in one of the RESNET Accredited HERS Rater Software Systems that apply to both operational and embodied construction carbon emissions, with a list of additional items that would need to be added for a comprehensive carbon outlook of the built environment.

With some simple software innovations, it is possible to produce an Embodied Construction Carbon calculation as a quantifiable output alongside the operational calculations already being used. Designers and builders can use these calculations to dial in both energy and carbon targets as they select building components for a given project. We anticipate that any of the RESNET Accredited HERS Rater Software systems can roll out software adaptations that will encourage workforce evolution and continued relevancy for the over 2000 HERS Raters under the RESNET umbrella, while encouraging the next generation to become interested in being a HERS Rater.

The residential marketplace is not served by any comprehensive carbon standard. Nationally, the ASHRAE SSPC 90.2 group is discussing disclosure of Embodied Carbon to be integrated into its upcoming standards. At the state level, language is being proposed for the Massachusetts EZ Energy Code to incorporate embodied carbon disclosure. Several North American municipalities are using cutting-edge tracking software to establish a baseline of emissions so that future carbon savings can be calculated.

Our working group is interested in collaborating with individuals and organizations that can help achieve the following goals:

- 1) Adaptation of the HERS index software to include embodied carbon in the calculations.
- 2) Conducting a baseline study for the Northeast.

Additionally, and simultaneously, we seek support from Energy Efficiency programs to help incentivize the market and adopt carbon tracking as a standard practice.

Sincerely,

The Northeast HERS Alliance Embodied Carbon Work Group

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