

Note: This proposal is the product of an independent advisory committee to GSA, and as such, may or may not be consistent with current GSA or other Federal agency policy.

## **GSA Green Building Advisory Committee**

December 13, 2016

Kevin Kampschroer  
Chief Sustainability Officer and Director,  
Office of Federal High-Performance Green Buildings  
U.S. General Services Administration (GSA)

RE: Recommendations for the Adoption of new Energy Use Intensity metrics

Dear Mr. Kampschroer:

This letter summarizes recommendations of the Green Building Advisory Committee (GBAC) in pursuit of expanding and enhancing the concept of Energy Use Intensity (EUI) to better support current requirements. These two new metrics will strengthen the Federal Government's understanding of enterprise-wide energy use intensity showing how efficiently facilities are utilized and how efficiently commuting to and from the workplace impacts energy use and productivity. The detailed proposals, including research and steps taken to date, follow this letter.

The Concepts:

Traditional Energy Use Intensity (EUI) measures energy per square-foot of facility. While this has been helpful to date, it falls short in helping the Federal Government comply with the numerous cost reducing energy and footprint reduction requirements underway – which aim to shrink square footage, the denominator in this equation. Dividing facility energy used by each Full-Time Equivalent Occupant (FTEO) – a concept introduced in the attached paper – allows agencies to further benefit from reductions in their facilities footprint by taking credit for their reductions in energy used per FTEO. As facilities shrink for numerous reasons, the energy used per person drops. The resourceful tools already being harnessed to shrink facility footprints will be more strongly supported by this simple approach we are calling Occupancy-based EUI.

Transportation energy is a massive and expanding direct result of how our cities and regions are planned, driven in large part by the daily effort to get to and from workplaces. Commuting in particular overburdens our national infrastructure and negatively impacts productivity and readiness, in addition to using a massive and growing share of the

nation's energy resources. To help agencies take credit for planning that reduces the energy and time expended on commuting, we are proposing that a new transportation energy use intensity measure, in similar units as are used for building EUI, be adopted to better understand commuting time and energy per each occupant. We are calling this Transportation-based EUI, and are pleased that our work has led to GSA's new Smart Location Calculator incorporating this proposed metric into its online tool.

The following paper titled *Expanding the Concept of Energy Use Intensity (EUI)* details and supports the Occupancy-based EUI and Transportation-based EUI proposals including research and steps taken to date and serves as a framework for the GSA and other federal agencies to accomplish even greater enterprise-wide performance in support of effectively shrinking their facilities' footprints and reducing the attendant costs and energy consumed by inefficiencies.

Conclusion:

Occupancy-based EUI and Transportation-based EUI are directly relatable to how energy is used in facilities and in regards to commuting. These concepts are fully scaleable to suit private and public enterprise so will help inform leasing decisions as well as decisions related to federally owned facilities. While continued validation of the concepts is expected and necessary over time, initial findings detailed in the paper that follows indicate clearly that both metrics support a more prudent assessment and planning platform than relying on older metrics alone.

Thank you for your careful consideration of this package and for the opportunity to recommend these important policies to the GSA. On behalf of the Green Building Advisory Committee, I respectfully submit these recommendations for your consideration.

Sincerely,

-----

Greg Kats, Chair  
Green Building Advisory Committee