Building Labels for Federal Agencies

Presented to the GSA Green Building Advisory Committee by the Building Labeling Task Group November 12, 2013
General

- Our intent is not to set performance goals but to help agencies report progress toward achieving goals that have already been set.
- Labels should be clear, transparent and understandable to the general public.
- Labels should define reporting parameters and establish a baseline against which to measure performance over time.
- All labels should be modeled on the graphic “bar” with mean performance indicated as well as the performance of the subject property.
- Bar graph should include a performance scale with code minimum performance at one end and high achievement at the other (with extended ranges below code minimum and above high achievement). As codes become more rigorous, the ranges should “move” with the code.
- The format for graphic representation should be the same for each metric.
- Metrics should be compared by building type
- Labels should reference established metrics supporting environmental sustainability and human health and wellbeing.
Energy

- Label should report absolute energy use and energy use intensity (EUI) per person and per SF by source (electricity, gas, etc.). Building data should include size (SF) and FTEs.
- Energy should be reported for the whole building and by building system (e.g. base building, lighting, plug load). Codes are moving toward sub-metering and our recommendations should anticipate that and include sub-meters as part of best practice.
- Label should report asset level metrics (based on the building’s design potential) and as well as operational metrics (actual performance).
- Energy use data should be entered into Energy Star Portfolio Manager.
- It is recommended that GSA establish a requirement that they will not lease a facility if the facility does not provide the data required to populate the label.
IEQ

- Label should report on potential stressors (e.g. noise levels, temperature, air flow, light, pollutants, etc.) that should be kept within known ranges of human comfort. Bar graph should be scaled to include known comfort ranges (with extended ranges below and above known comfort ranges).

- Future labels should report on human responses to building IEQ in real time and place (that is, tie the metrics to the occupants rather than to the building).
**Water**

- Label should report total water consumption, total potable consumption
- Label should report absolute water use as well as water use intensity per person and per SF.
- The goal should be to report use by building system and report building use separate from grounds use (irrigation and maintenance)
- CDP water accounting protocol asks for information about water withdrawals by source, water discharges to various receiving bodies and water use intensity. This may be beyond our ability today but CDP protocols should be considered in future as a basis for detailed water risk management
- Water data should be entered into Energy Star Portfolio Manager.
Waste

- Label should report volume of waste generated and recycled as well as waste per occupant
Further Recommendations

- Task Group recommends that Agencies institute pilot projects to develop methodologies and ranges supporting environmental sustainability and human health and well-being and case studies to test concepts (e.g. developing devices to monitor physiological responses to the built environment).
HERS® Index

Existing "Typical" Home
EPA ENERGY STAR New Home

This Home 70

Zero Net Energy A+
High Performance A
Very Good A-
Efficient B
Average C
Inefficient D
Unsatisfactory F

AS DESIGNED
Not Rated
June 2012

Building EQ

Building Energy Quotient

As Designed: Indicates the estimated energy consumption of this building as designed.
In Operation: Indicates the energy consumption of this building in actual use.

Building Location:
Sample Building
1000 Any Street
Anytown, USA 10909
Building Energy Rating

California Home Energy Rating Certificate

[Graphs and charts showing energy ratings and performance data]