

## White Paper Proposal

### Title: **Non-Energy Benefits of Lighting and its Smart Controls**

Non-energy benefits can be necessary to retrofit high performance fluorescent or existing LED, because energy savings and rebates are often no longer sufficient. With today's low wattage LED products occupancy sensors and daylight dimmers are often no longer cost-effective saving energy. Future re-retrofits, even if they were zero watt, would often not save enough energy to be cost effective. Non-energy benefits can also be required to get optimal lighting approved in new construction. Non-energy benefits include biophilia, Human Centric Lighting, certifications and going green and smart controls for lighting, which include lumen maintenance, load monitoring, electric billing in multi-tenant office buildings, rated life, maintenance, security, space usage, interior positioning, asset tracking, employee location, intelligent emergency lighting, and of course data. Although there are some tools to quantify non-energy benefits, better ones need to be developed.

(If desired, somebody else could write about non-energy benefits that are not mainly from lighting)

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