



NEW YORK UNIVERSITY

A private university in the public service

Facilities & Construction Management

Sustainability, Energy & Technical Services

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To Whom It May Concern,

This document confirms that the In-room Occupancy Based Temperature Controls at New York University meet the criteria of AASHE's STARS Reporting Framework for Innovation credits.

The University performed an extensive manufacturer and product review before embarking on this project. Occupancy sensors are common. However, the use of an algorithm which measures the slope of the room interior temperature response curve is uncommon, and as far as we know, unique. This algorithm determines how long it takes the heating/cooling unit in an individual student room to reach the setpoint temperature after a drive cycle is initiated (i.e., when the room is unoccupied). Thus, the crucial setting on the smart thermostat system is not setback temperature or setback offset, but the recovery time.

What this means is that much deeper energy cuts are possible, since the system can set back the temperature quite deeply when it is able to do so and still recover within the prescribed time. Since this can be done without sacrificing occupant comfort, the University has found very high acceptance of the system. As a result, we have installed almost 4000 of these units. We do not know of any other institution that so broadly controls indoor temperatures on an occupancy basis, and certainly none that utilize the advance control strategy described herein.

The networkable components of the system also produce ancillary benefits not found in more commonly used products. For instance, the system can automatically produce alerts when the compressor runtime in a PTAC unit exceeds a predetermined value – a sign that the refrigerant charge is failing or that there is another energy-using problem with the unit. By allowing Facilities to learn of and correct the problem before the student occupant would have been likely to complain, another form of energy savings can be achieved. This networked system is based upon Zigbee wireless technology.

This truly innovative initiative has helped advance sustainability within Facilities Management while also fostering understanding of energy savings among the students living in University residences, thus furthering the academic mission of the University.

Signed,

Cecil Scheib
Director, Energy and Sustainability
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