

Thermostat Setback

This technical topic expands on the thermostat setback guidelines for both multifamily and commercial buildings contained within *P4P Existing Buildings Program Guidelines v4.0, section 4.6.3 (page 4-27)*. Pre-inspections performed as part of the program process may require verification of existing heating and cooling controls.

Multifamily Buildings

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- For multifamily buildings, replacement of non-programmable thermostats with programmable thermostats and/or BMS thermostatic control strategies in installations where heating and/or cooling energy bills are **paid by tenants** must be modeled as no more than **3°F** setback for eight hours a day for heating, and no more than a **2°F** temperature offset (increase in space temperature) for six hours a day for cooling, if applicable.
- This measure is not allowed in the scope of work if utility bills are **not paid by tenants**.

Apartment Overheating

- Credit can be claimed for measures that reduce apartment overheating if proper on-site measurements of existing temperatures is performed. For this measure, the set point reduction cannot exceed **2°F**. All existing temperature measurements must be provided in the *Temperature Measurements* section of the *Other Equipment* tab of the ERP tables.
- Since residents often open windows to prevent overheating, infiltration credit can also be claimed with the overheating measure. The model can be adjusted to reduce the proposed infiltration by **10% or 0.1 ACH, whichever is less**. The existing and proposed ACH must be documented in the 'changes made to previous model runs' in the *Measure Simulation* tab of the ERP tables. Also, a description of these on-site conditions must be provided in the *Envelope* tab, which indicate windows were open in order to compensate for overheating.

Commercial Buildings

Thermostat Setback – Unoccupied

- For commercial buildings, replacement of non-programmable thermostats (or uncontrolled spaces) with programmable thermostats and/or BMS thermostatic control strategies must be modeled as no more than **4°F** setback for heating during unoccupied periods, and no more than **3°F** offset (increase in space temperature) for cooling during unoccupied periods, if applicable.
- Larger setbacks during unoccupied periods may be applied in cases where representative on-site temperature measurements are performed and documentation is provided showing proposed

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temperatures (e.g. sequence of operations for BMS). The existing temperature measurements must be documented in the ERP and the proposed documentation must be submitted for review and approval. The documentation provided must clearly outline the proposed hourly heating and cooling schedule. *Simulated* setbacks during unoccupied periods may not drop below **60°F** during winter months or exceed **85°F** during summer months.

Thermostat Setback – Occupied

- Credit can be claimed for measures that reduce space temperatures during occupied periods if proper on-site measurements of existing temperatures is performed. The post-retrofit temperature during occupied periods may not be less than **72°F**. All existing temperature measurements must be provided in the *Temperature Measurements* section of the *Other Equipment* tab of the ERP tables. Unoccupied setbacks can be measured from the revised occupied setpoint.

Additional guidance on overcooling will be provided in a follow up Tech Topic.