



Resolving Indoor Temperature Control Problems FACTSHEET

A hot or cold work environment can lead to physical discomfort and disrupt work operations. Working in a hot office environment may cause fatigue, headaches and/or stuffiness. A cold office environment may cause a decrease in sensitivity and dexterity of the fingers. Very cold temperatures may also exacerbate existing conditions such as Raynaud's phenomenon, fatigue, and diseases of the blood circulation system.

Indoor thermal conditions are influenced by air temperature, thermal radiation, air speed (drafts), metabolic rate (sitting versus physical activity), clothing and relative humidity. Air temperature and relative humidity have significant impact on peoples' perception of thermal comfort and these factors are measured during the initial evaluation of temperature control problems. Relative humidity below 30 percent may cause dry skin, eye irritation and/or respiratory irritation. Relative humidity above 60 percent may provide an environment conducive to the growth of mold, mildew, and dust mites, and cause allergic reactions.

Which guidelines or codes are for indoor temperature?

The American Society of Heating, Refrigerating, and Air-conditioning Engineers (ASHRAE) Standard 55-2013 titled, "Thermal Environmental Conditions for Human Occupancy", specifies the combinations of indoor space environment and personal factors that will produce thermal comfort conditions acceptable to 80% or more of the occupants within a space. The standard recommends the following temperatures: 68 to 76 degrees during the winter and 72.5-80 degrees in the summer. The standard also recommends that relative humidity be maintained between 30 and 60 percent. When these guidelines are written into OGS (Office of General Services) leases, building owners are required to ensure these thermal parameters are met.

In addition, NYS Building Code section PM602.4 requires that indoor work spaces shall be supplied with heat from September 15th to May 31st and maintain a minimum temperature of 65°F when spaces are occupied.

Some buildings' systems allow easy switching between heating and cooling, while others require scheduled changeovers. Often, these changeovers are scheduled on a seasonal basis. This may result in instances where some buildings are inadequately cooled or heated when a hot or cold spell occurs prior to the changeover. Other causes of temperature problems are poorly designed or maintained systems and of course, the unexpected breakdown. There are also occasions when temperatures reach extremes that outstrip the capacity of heating or cooling systems. Power outages and power cutbacks may also affect building temperatures.

Can we create a comfort zone for most people?

In general, people are very sensitive to temperature changes. Many people are able to sense a change of less than one degree Fahrenheit. Perception of comfortable temperatures is highly variable within groups of co-workers. ASHRAE acknowledges these differences between people and states: "The standard specifies conditions in which 80% or more of the occupants will find

the environment thermally acceptable.” Temperature settings should be discussed among co-workers and settings adjusted to satisfy the maximum number of people.

How can we correct persistent temperature problems?

The Office of General Services (OGS) negotiates the leases for most state offices. The lease usually stipulates that a temperature range is maintained between 68-75 degrees during the winter and no more than 78 degrees for the summer. If temperatures consistently fall outside of these ranges, the first step is to inform management and request corrective action. If a mechanical failure exists, you should request an explanation of what is wrong and the expected date it will be fixed. Augment your request by sending a letter to management identifying the areas of concern and documenting temperature ranges. A thermometer should be used in the affected areas to record the temperatures throughout the day for several consecutive days. The letter should also request that management communicate in writing to the landlord requesting immediate correction of the problems. In state operated buildings, OGS handles maintenance and operations problems.

Documentation is important to enable OGS to activate clauses in the lease to have the problems corrected (such as withholding rent, or making repairs and deducting the cost from the rent) should the problems continue.

For more immediate problems, such as extreme outdoor temperatures and power cutbacks, a memo should be sent from management advising employees of the temporary condition along with some suggestions to help them while the problems are being addressed. For example:

- Request that management arrange for the temporary use of portable heaters or fans.
- Have employees take frequent water breaks.
- In offices with windows, have employees close their blinds during the warmer parts of the day during hot weather, and open them to bring more warmth in on cold days.
- In hot weather, relocate employees to a cooler area of the building or to another building for the warmer parts of the day.
- Monitor the temperature and comfort of employees.

The most effective method to address temperature control problems is to have an effective local health and safety committee. These committees provide a process for union representatives to work with management, OGS, and building owners to identify and control temperature and other indoor environmental problems. Article 18 of the PEF contract establishes the right for members to form such committees. If you need assistance in addressing a temperature control problem or in forming a local health and safety committee, contact PEF Health and Safety.

Upon request, PEF Occupational Safety & Health will provide other factsheets, standards, regulations, and other resources. Contact us at healthandsafety@pef.org or 518-785-1900, ext. 254 or 1-800-342-4306, ext. 254.

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