UNIVERSITY OF TOLEDO  
FACILITIES AND CONSTRUCTION

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<th>Central Control</th>
<th>Procedure Number:</th>
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<td>Subject:</td>
<td>Operation of the Building Automation System</td>
<td>Effective Date:</td>
<td>January, 1993</td>
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<td></td>
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<td>Revised Date:</td>
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<tr>
<td>Facilities Officer:</td>
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Standard Operating Procedure

The Central Control Operators will operate building components and equipment through the Building Automation Systems at Central Control Center and/or manually (where applicable), the systems that are the responsibility of the Facilities Maintenance Department will be operated as efficiently as possible.

Purpose

To maintain a safe and satisfactory comfort level while maintaining the maximum energy efficiency.

Procedure

COOLING

1. Check electrical peak demands.

2. Efficiently use outside air for cooling, considering the BTU content of outside versus return air BTU content and configure dampers accordingly.

3. Consider design conditions and adjusting the reheat water temperature downward and possibly increasing the air handling units discharge temperature upward. (These actions should be in conjunction with one another.)

4. Anticipation of outside conditions should be a consideration and radiation water temperature adjusted downward. Whenever possible, radiation pumps should be shut down before any mechanical cooling is started.

5. Before any electrical mechanical cooling is started, an evaluation of generator status electrical demand and non-essential equipment, evaluation analysis will determine current operating status and every effort will be made to offset the initial (start-up) current usage of the cooling equipment. When possible, equipment will be started five minutes after the ½ hour or fifteen minutes before the ½ hour.

6. When mechanical cooling is required, absorption cold generators are the preferred methods of cooling. When starting electrical chillers, demand settings should be at their lowest setting and increased very gradually, so as to minimize the electrical demand recognized by our demand metering system.
7. **Unoccupied** areas should be monitored closely (physically if possible) to insure maximum energy efficiency. The environmental conditions of these areas need only be controlled within acceptable levels needed to insure that no physical harm to structure or contents are ensued.

8. Equipment run time should, whenever possible, consider the occupancy of a particular building or area and when insofar a possible, be held to a minimum.

**HEATING**

1. Check electrical peak demands.

2. Efficiently use outside air for heating, considering BTU content of outside air versus return air BTU content and configure dampers accordingly.

3. Consider design conditions and adjusting the reheat water temperature downward and possibly increasing the air handler unit's discharge temperature upward (using more return air.) (These actions should be in conjunction with one another.)

4. Anticipation of outside conditions should be a consideration and radiation water temperature reset schedules should be followed.

5. **Unoccupied** areas should be monitored closely (physically if possible), to insure maximum energy efficiency. The environmental conditions of these areas need only be controlled within acceptable levels needed to insure that no physical harm to structure or contents are ensued.