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## Building Energy Asset Score: Building Upgrade Guide<sup>1</sup>

### **BUILDING HVAC CONTROL SYSTEMS**

*Implementing control strategies and/or adding equipment controls may significantly improve the efficiency of the heating and cooling systems in a building.*

#### **Cooling**

**Asset Score Report Recommendations:**  
**Implement Chilled Water Temperature Reset**  
**Cost: \$**

Chillers are more efficient at higher leaving water temperatures; therefore, in general, optimum efficiency is achieved when the chilled water supply temperature (CHWST) setpoint is as high as possible to meet the load. While increasing the CHWST reduces chiller energy use, it will increase the flow rate and hence pump energy use in variable flow systems. However, the negative impact of increased pump energy use is much less than the positive energy savings due to chiller performance. ASHRAE 90.1 2010, Section 6.5.4.3, requires chilled water and hot water supply temperature to be reset based on building loads or by outside air temperature.

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<sup>1</sup> The complete Asset Score Building Upgrade Guide is available at:

[https://buildingenergyscore.energy.gov/assets/energy\\_asset\\_score\\_recommendations\\_guide.pdf](https://buildingenergyscore.energy.gov/assets/energy_asset_score_recommendations_guide.pdf)

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