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Variable Speed Drive on Cooling Tower Fan

The existing Baltimore Air Coil (BAC) cooling tower fan operates at a constant speed. Currently, the tower fan cycles on and off to maintain the condenser water temperature at the preset 85°F. A variable speed drive (VSD) will vary the speed of the fan automatically to maintain the condenser water temperature. The fan laws dictate that as the speed of the fan is reduced, the power consumed by the fan motor is reduced at the 'cube' rate. Therefore, ESG proposes to install a VSD to reduce the energy consumption at the cooling tower. In addition, the VSD employs a soft-start feature that slowly ramps up the speed of the fan motor to reduce stress and wear to the motor, fan drive and belts. This will reduce maintenance costs for the cooling tower fan motor as well.

Please see Scope of Work Section in the appendix for details on this proposal and also refer to the Building Description Section for thorough descriptions of existing conditions.