Maintenance Tips
Optimize Your Building Automation Contract

Optimization and monitoring of your Building Automation Maintenance Contract is essential to tenant comfort and maintaining energy usage, and continual monitoring of service performance must take place on a regular basis to ensure that site teams optimize their contracts to drive Best in Class service. Typically, Industry service contracts pertain to a blanket preventative maintenance schedule and software services. As part of NPĄĶs pilot project, a new contract was executed with Siemens in 2014; at this time, it was then determined that these four key items were areas that existing contracts did not define. These four key items should always be built into your contract and may vary slightly for the training module, as follows:

1. **Calibration Service**
    - A list of points to be calibrated needs to be established and frequency of testing determined. For example: annually, for all temperatures and pressures; more frequently, for sensors that impact on overall system performance such as, but not limited to, outside air sensors.
    - Once each calendar year, submit calibration reports that include the current value of the point, the actual measured value of the point, and the new value should any adjustment be required if the device is found to be outside the expectable range.
    - A guarantee of the calibration services in the event of incomplete calibration services and reports within 30-days after the annual anniversary date, in which case the contractor will refund the total contract value to Oxford Properties Group. Calibration services need to be broken out of the service contract; for example, if the total contract is $40,000 annually and the calibration portion is $18,000, this amount would be the refundable portion.
    - Sites with air-flow monitoring devices need to ensure testing is done in conjunction with your balancer and controls technician and included in the calibration report.
2. **Sequence of Operation**
    - On an annual basis, contractor's technician, together with one of their energy engineers, should test each major mechanical systems sequence of operation to ensure all control devices are tracking setpoints with no oscillation of devices such as valves and dampers.
    - Evaluation by the contractor's energy engineer requires spending the necessary amount of time (days) to review and analyze the sequence of operation in the facility to ensure the systems are operating at peak performance.
    - The contractor will provide annual reports on the sequence of operation testing together with an annual recommendation/s for improvement to the mechanical systems.
3. **Sample Training Model for In-house Staff:**

- Training evaluation of in-house maintenance staff to determine which specific skills are required, and custom tailor a proactive training program for each employee learning needs, then track and report outcomes. Some examples of learning topics follow:
- Define DDC and explain how it is used to control building systems
- Identify the DDC hardware used to control and monitor building equipment; describe system architecture
- Navigate through system platform
- Define and generate reports; schedule reports to run automatically; describe the report application
- Modify point definitions
- Manage system alarms
- Monitor and command system points to control building equipment
- Create trend definitions
- Collect and analyze trend information
- Schedule events and zones
- Override schedules and zones.

4. **Quality Assurance Program**
    a. The service provider will meet quarterly with the site team to evaluate system performance and to ensure the quality of service that is being provided. The contractor will host the meeting, which should cover the following criteria:
        i. Review of any major incidents/operational issues during the quarter.
        ii. Review the calibration services and sequence of operation testing during the quarter.
        iii. Identify any recommendations for areas of improvement pertaining to the BAS and mechanical equipment.

5.

Supplied by Frank Hawkins,
from the Oxford Collection: National Programs