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PJM Mechanical Contractors Publication
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Preventive Maintenance and the Perennial Lowest-Bid Contractor: The Math, the Methodology, and Why You Should Always Be Wary

By Rick Wey

To anyone who's ever signed a contract, common sense should dictate that choosing the lowest-bid contractor for preventive maintenance comes with a good measure of risk. With HVAC equipment accounting for more than 50% of construction costs and about two-thirds of all primary energy consumed in commercial buildings, decision makers should be aware of the financial perils that come with cutting corners on PM. That starts with understanding how low-bid contractors arrive at their too-good-to-be-true pricing, and how saving a few dollars at the outset will end up costing a bundle in the long run.

As the saying goes, time is money, and chronic low-bid PM contractors tend to shave costs by cutting back on time allotted to do the job right. Technicians who are pressed for time spend more effort carrying out basic belt-and-filter changes and less time inspecting systems for warning signs that lead to expensive emergency service calls and equipment failure. Also, "going in low" is S.O.P. for many dishonest PM contractors who bank on recouping the money on additional work when subpar PM ultimately leads to failure. It would be easy to solely condemn the contractor for all of the above, but the reality is that owner complacency and/or inattention is often what allows these poor business practices to continue unchecked.

Other places where lowest-bid preventive maintenance contractors save money is on tools and technical training. Technicians who are not equipped with the know-how or necessary equipment can't easily spot existing or potential problems, and wouldn't have the time or capability to fix them properly even if they did. Also, these contractors often don't provide sufficient support and supervision, and technicians are left to manage time and make judgment calls they are not necessarily equipped to make.

Inside This Issue...

Whether poor PM is rooted in contractor dishonesty or merely the typical shortcomings of a skimpy contract, such practices will never be conducive to developing a trusting, long-term client/HVAC contractor relationship. Simply put? Low-bid, bare-bones PM will always cost more in emergencies, failures, downtime, and aggravation, whereas good PM more than pays for itself every time.

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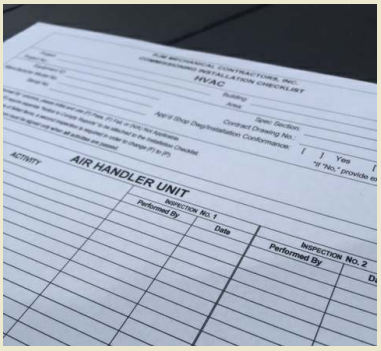
SIMPLE CHECKLIST COMMISSIONING

When project budgeting doesn't permit the expense of hiring a third-party commissioning agent, many facilities turn to the installing contractor and construction managers to perform commissioning. Many contractors, like PJM, have developed their own customized commissioning forms, while others may choose to work from standard checklists and guidelines from associations such as ASHRAE and NEBB. A commissioning checklist should always be tailored to the specific project, but must always include the basics: pressure testing and signoff, vendor/factory startup and documentation, approved system walk-downs, and performance and sequence testing.

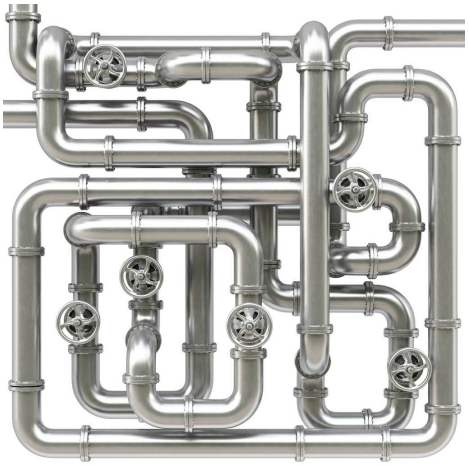


Some facility owners are hesitant to entrust contractors with performing commissioning on their own work, likening it to the fox guarding the henhouse, **which is why it is especially important for owners to be involved in the commissioning process**. PJM works closely with facility representatives to develop comprehensive, cost-effective commissioning checklists and encourages owner participation and sign-off on the system walk-down. This helps to ensure a clean and thorough commissioning process and allows facility personnel to learn the workings and intricacies of their systems, greatly reducing their learning curve before the building is turned over. For more information on PJM commissioning services, please call us at 609-921-1394.

Sanitizing Water Pipes through Chlorination

When domestic water lines are newly installed or renovated, dirt, foreign matter, construction materials, and bacteria introduced by handling or the environment can infiltrate the piping interior. Unchecked biofilm growth on pipe walls can harbor Legionella, salmonella, E. coli, and various other microbes that can cause serious waterborne diseases. In order to prevent microbe proliferation, domestic water lines should be disinfected through shock chlorination via continuous feed (a slug or tablet method may also be used) prior to use. This process is usually required by municipalities in order to receive a Certificate of Occupancy.

During the sanitization procedure, a high-pressure metering pump is used to inject a concentrated chlorine solution into the water system while all faucets and fixtures, both hot and cold, are open. When sufficient levels of chlorine are measured at each outlet, faucets are closed and the chlorine solution is allowed to remain in the system for 12-24 hours, at which time the solution is retested. Because chlorine is consumed as it interacts with microbes, chlorine levels that measure too low indicate that a high number of microorganisms still remain in the system, and the procedure must be repeated. Once chlorine levels are acceptable, the system is flushed and certified for use. For more information on pipe sanitization, contact PJM Mechanical at 609-921-1394.



Service Photo Album

Third Time's the Charm – A new customer called PJM in frustration after two other HVAC companies failed to fix a cooling problem during a heat wave. The issue was a malfunctioning chilled water pneumatic control valve positioner that had been improperly field-modified. PJM installed a new positioner and E/P, recalibrated the valve, and verified flow and discharge temperature of 55°F to put the system back in operation.

Intermittent problems are among the most difficult to solve, but diagnostic expertise isn't always required. A longtime client called PJM when a low-temp freezer was showing small, random temperature spikes on a chart recorder, but a thorough check failed to pinpoint the problem. The mystery was finally solved a few days later when a cleaning person was spotted unplugging the unit to clean behind it.

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PJM welcomes **Lawrence Martin** to our team as our newest Project Manager. He comes to us from Rowan University, where he held the position of Director of Design and Construction. Larry holds a PhD in Administration and an MBA from Seton Hall, and B.S. In Construction Management from Rutgers University. He is PMP certified and experienced in capital planning, construction management, and facilities management.

Kevin McKenna has joined PJM as Purchasing Manager. Kevin earned a BS in Mechanical Engineering from the University of Buffalo, followed by a long career at Graver Water Systems, where served in a number of top roles including Procurement Manager, Construction Project Manager, Applications Engineer, and Plant Engineer. Most recently he served as Procurement Manager for Durr Mechanical.

David Robinson has joined PJM as Project Coordinator in support of our Design/Build team. He comes to us from On Time Heat & Air in Pennington, NJ, where he served as Manager, and previously served as Project Manager at Mercer General Works. He grew up in a family construction business in North Carolina and has a BS in Economics from East Carolina University, Greenville, NC.

Take Advantage of Fall Swing Season

Summer is coming to a close, and soon daytime temperatures will become mild and nighttime will be cool. This is the swing season, with no hot or cold design days, affording plant operators and building owners the opportunity to make overdue repairs. Schedule the small projects, duct cleaning, controls replacements, and rebuilds you have been putting off for so long. Make plans now, and don't procrastinate. Parts and equipment may have a lead time of 4-6 weeks, and developing a scope of work and getting pricing can take time. Swing season is prime time for deferred projects and shutdowns, and it will be over before you know it.