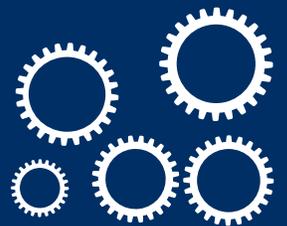


10

SIGNS YOUR BUILDING

MAY NEED

RETRO-COMMISSIONING



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RETRO-COMMISSIONING

As a building owner or manager, do you ever wonder if your building is operating as well as it could be? How can you be completely sure that all systems are functioning at maximum efficiency and that undiagnosed energy losses aren't driving up costs unnecessarily?

If your operating costs are increasing and you've noticed a rise in complaints from tenants or occupants, your building is most likely operating less efficiently than it should be. Not only does this lead to a significant increase in operating costs, it can impact air quality and the comfort level of occupants, leading to health hazards and losses in productivity.

Today's commercial buildings are not always efficient

Today's buildings are incredibly complex and cannot be designed or operated without the help of computers. Architects and design engineers use computer automated design (CAD) software, and most commercial buildings under construction today will be operated by several computers, which manage every aspect of building operations, from thermostats and lights to security systems and fire alarms.

The use of so much sophisticated technology means today's buildings can function more efficiently than ever. But like any machine, the computers that operate our buildings must be properly maintained and managed to avoid problems and malfunctions. In fact, many buildings constructed today have been found to have operational issues from the start.

Unfortunately, quality and efficiency are not always accounted for in the initial construction. It is a common misperception that new buildings operate efficiently and do not need the same attention that older facilities do. The reality is that most systems were not commissioned upon turnover, many systems were never checked for correct operation, and the building itself is more than likely not operating as efficiently as it could. This results in the potential for increased energy waste and decreased productivity for many years until the building ages to where it is assumed that it needs attention.

A study of 60 newly constructed buildings revealed that:

50% suffered from temperature control problems

40% had HVAC equipment problems

25% had energy management systems, economizers, and/or variable speed drives that did not function correctly

15% had missing equipment

- Lawrence Berkeley National Laboratory, 1996

As a result, budgets are constantly overrun, building maintenance becomes a constant challenge, and occupants are dissatisfied. For owners, high operating costs combined with high energy costs represent a constant financial drain.

Fortunately, a customized quality assurance process known as Retro-Commissioning can address all of these issues and get buildings into an optimal operating state.

How do you know when your building is due for a Retro-Commissioning evaluation?



Are your operating costs increasing?

Are complaints from tenants and occupants going up?

Is your building operating less efficiently?

If you answered “yes” to the above questions, you can reduce costs and improve your facility’s efficiencies through Retro-Commissioning. The following guidelines can help you determine if Retro-Commissioning is necessary and when your building’s performance can be improved.

10 signs your building may need Retro-Commissioning



1. Whenever significant changes occur in building occupancy, space utilization, equipment configuration, or maintenance practices.

The Retro-Commissioning process can help identify and document the new operational requirements and provide a formal method for accomplishing the required modifications to meet the new operational criteria.

2. Whenever sections of buildings and systems are undergoing a significant upgrade.

The Retro-Commissioning process can also be applied simultaneously to other portions of the building that are not directly affected by the upgrade. Ensuring that the existing systems are working properly and efficiently will maximize the chances that the new upgrade will meet design criteria and performance requirements as set by the stakeholders.

3. When energy-use trending reveals an increase over time.

Such increases may be attributable to control drift or equipment wear. A distinct shift in energy use that may be attributed to equipment or system failure can also be rectified with Retro-Commissioning.

4. When an older building has been inactive and is being re-activated for continued use.

Older buildings should be Retro-Commissioned as a part of the reactivation project unless the reactivation is for a short duration.

5. When a recently completed project is 1-3 years old.

New construction will require follow-up to ensure that the building and systems are operating in an optimum manner, especially if the occupancy or use has changed from what was originally specified. Utilizing the Retro-Commissioning process in a newer building provides an opportunity to correct drift in controls, rectify changes in building system operation, and to repair equipment malfunctions. Retro-Commissioning will also identify changes in the function of the building and will implement corrections needed to meet the current requirements.

6. When a building's operating systems are particularly complex.

Facilities with highly interdependent systems and sophisticated controls will also present the greatest likelihood that even small operational problems will have a big impact on performance.

7. When a large number of complaints is received by the maintenance staff or the building manager.

Facilities that are experiencing comfort problems or premature equipment deterioration, or have been historically problematic, will likely gain the most from the Retro-Commissioning process.

8. When the building is a heavy energy consumer.

Buildings that consume the most energy are practically guaranteed to experience a reduction in energy use and related cost-savings from the Retro-Commissioning process.

9. When the building has high maintenance costs.

Facilities with the highest maintenance costs are also good candidates for Retro-Commissioning.

10. When an older building has never received energy audits or upgrades.

Older buildings generally have the least efficient equipment, have the least amount of effective insulation, and are likely in the poorest condition. Older buildings generally have more to gain from the Retro-Commissioning process than do recently upgraded or properly operating newer buildings.

Through Retro-Commissioning, businesses can often experience a 20% reduction in energy costs, as well as the additional benefits of reducing maintenance costs, extending the life of building equipment, improving indoor air quality, and increasing occupant comfort and productivity.

The resulting cost savings mean that most Retro-Commissioning projects pay for themselves between two months and five years. With additional government incentives available to businesses that reduce energy consumption, Retro-Commissioning isn't just a good business practice — it's an absolute necessity.



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sys-tek is a nationally recognized leader in the Retro-Commissioning (RCx) industry. Our RCx projects lower operation and maintenance costs, reduce tenant complaints, and extend equipment life. Contact sys-tek to learn more about our services.

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