COMMISSIONING
Project Services

Our team streamlines the commissioning process, providing one convenient source of project information. Utilizing Cx Alloy or other cloud-based tools, we track project status and documentation, providing complete transparency for you and all project stakeholders throughout the entire process.

Choose one of our customer-focused commissioning solutions or tailor a solution to meet your specific needs. Our commissioning solutions include:

- Preferred Commissioning
- Essential Commissioning
- Basic Commissioning
- Fundamental Commissioning for LEED Certification
- Enhanced Commissioning for LEED Certification

By working hand in hand with your design team, general contractor, subcontractors, and vendors, Vertiv™ ensures your new facility meets your needs from day one. As a result, your project is much more likely to be delivered on time and on budget. Even more important, commissioning services ensure you get the results you expect. From lower operating costs and improved energy efficiency, to reduced downtime and higher availability, commissioning your project today delivers benefits for many years to come.

As an independent Commissioning Authority (CxA), Vertiv works objectively, in your best interest, to ensure that your project requirements are met. We work on your behalf to identify potential issues before they escalate and lead to costly disruptions.

Ensure optimal performance of your critical facility and all its systems with commissioning solutions

BENEFITS

Protect Your Investment

As technology advances, building systems and controls have become more complex and interdependent. As a result, even small problems can have a major disruptive impact on your business. Commissioning mitigates your risk. The process verifies and documents that a new facility, including all systems and assemblies, are planned, designed, installed, tested, operated, and maintained to meet the owner’s project requirements.

Commissioning delivers value far beyond the cost of commissioning services by identifying system-related problems early in the project, allowing them to be resolved when it is most economical. For example, design problems are identified during design reviews instead of in the construction phase. Installation issues are discovered before startup. Operations and maintenance (O&M) process problems are detected before a component fails.

Ultimately, commissioning gives you assurance that your facility will operate exactly as intended.

Benefits

- Avoid unplanned downtime
- Reduce change orders and construction delays
- Lower operating costs
- Improve energy efficiency
- Increase life of equipment
- Optimize O&M training and documentation
- Enhance safety and compliance

Ensure optimal performance of your critical facility and all its systems with commissioning solutions
Preferred Commissioning

Preferred Commissioning is our most comprehensive commissioning package. It spans the entire design/build process, resulting in the greatest value to the project owner. Preferred Commissioning includes:

- Owner’s Project Requirements (OPR) workshop
- Commissioning plan
- Basis of Design (BOD) review
- Design reviews
- Commissioning specifications
- Equipment submittal review
- Progress reports
- Pre-functional checklists
- Functional testing
- Integrated systems testing
- O&M training and documentation
- Deferred and seasonal testing
- Warranty review
- Final commissioning report
- Re-commissioning plan

Essential Commissioning

Essential Commissioning helps keep your project on track and on budget with fewer change orders, costly delays, and rework. Our team is engaged before construction begins, allowing us to serve as a liaison between facility owners and the design team, general contractor, subcontractors, and vendors. We facilitate collaboration, communication, and commitment among all stakeholders. Essential Commissioning includes:

- Commissioning plan
- Equipment submittal review
- Progress reports
- Pre-functional checklists
- Functional testing
- Integrated systems testing
- Final commissioning report
- Re-commissioning plan

Basic Commissioning

Designed to ensure maximum availability of your critical infrastructure at an affordable cost, Basic Commissioning begins in the acceptance phase of your commissioning project. Armed with an extensive library of test scripts, our experts ensure proper equipment installation and full system integration by thoroughly inspecting and testing mission-critical equipment. Basic Commissioning includes:

- Pre-functional checklists
- Functional testing
- Integrated systems testing
- Project management
- Final commissioning report
- Re-commissioning plan
**LEED® Commissioning**

LEED is the preeminent program for the design, construction, maintenance and operations of high-performance green buildings. Commissioning is a prerequisite for LEED certification. If your project is attempting LEED certification, you must involve a CxA mid-way through the design phase of your project or earlier.

The team at Vertiv™ has experience commissioning LEED-certified projects at the Gold and Silver levels. Our staff includes individuals with LEED AP® credentials who have experience in the rating system for the LEED green building program. As your CxA, we help ensure your project is commissioned per LEED requirements including management of construction phase submittals.

**Fundamental Commissioning for LEED Certification**

As your CxA, we ensure your project is completed per Fundamental Commissioning requirements including reviewing the OPR and BOD; developing the commissioning plan and commissioning specifications; verifying proper installation and operation of equipment; testing systems; and developing the final commissioning report.

**Enhanced Commissioning for LEED Certification**

Enhanced Commissioning allows facilities to earn additional credits and achieve advanced levels of certification. In this case, our commissioning team reviews contractor submittals, conducts a design review, develops systems manuals, conducts a building operations review within 10 months post occupancy, and verifies O&M training and documentation.
Summary

Trust your mission-critical facility to the commissioning experts at Vertiv. Through our extensive experience commissioning complex systems, we have developed proven processes for delivering consistent, quality results while increasing your speed to market.

Our experts are trained in ASHRAE commissioning guidelines and include certified Qualified Commissioning Providers (QCxP). Our NETA-certified, professional, and mechanical engineers have experience commissioning a variety of systems including electrical, mechanical, monitoring and controls, structural, and specialty.

We stay up to date on industry standards by actively participating in a variety of associations such as the Building Commissioning Association (BCxA), the InterNational Electrical Testing Association (NETA), American Society of Healthcare Engineering (ASHE), and the 7x24 Exchange International.

Ensure optimal performance of your facility by putting our commissioning expertise to work for you.

Ordering Information

To learn more about this service and other Vertiv solutions, please contact your local sales representative office for Vertiv's Electrical Reliability Services or visit VertivCo.com. In the U.S., call 1-877-468-6384.

Other Commissioning Services

Vertiv™ offers flexible solutions to solve your unique challenges. If our commissioning packages do not meet your needs, you can customize your own solution by choosing from these individual commissioning services:

- OPR workshop
- Design reviews
- Commissioning specifications
- Integrated systems testing
- O&M documentation
- O&M training
- Deferred and seasonal testing
- Warranty review

Related Services

In addition to commissioning, we provide the following related services to support your facility throughout its lifecycle:

- Acceptance testing
- Arc flash analysis
- Safety and compliance audit
- Employee skills assessment
- Safety assessment
- Failure/fault investigation
- Electrical maintenance
- Program management
- Computation fluid dynamics analysis

Comparison of Commissioning Service Offerings

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>PREFERRED</th>
<th>ESSENTIAL</th>
<th>BASIC</th>
<th>FUNDAMENTAL CX FOR LEED</th>
<th>ENHANCED CX FOR LEED</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPR Workshop</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commissioning Plan</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOD Review</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design Reviews</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Commissioning Specifications</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Equipment Submittal Review</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Progress Reports</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Pre-Functional Checklists</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Functional Testing</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Integrated Systems Testing</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>O&amp;M Training and Documentation</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deferred and Seasonal Testing</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warranty Review</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Commissioning Report</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Re-Commissioning Plan</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>LEED Certification</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>