Get Started Right: EnerNOC’s New Building Commissioning Services

Lawrence Berkeley National Laboratory (LBNL) found that a building that is not commissioned will cost 8-20% more to operate over its lifetime. Building owners are integrating commissioning into their business plans in order to realize rental and sales premiums and to lower operating costs.

What is commissioning?
The main goal of the commissioning process is to ensure the building meets the owner’s functional needs. As nearly all owners require an energy efficient building, commissioning strives to optimize the building’s energy performance directly translating into lower operating costs. Commissioning is a quality assurance process of establishing, verifying and documenting that the performance of new buildings and their subsystems achieve the owner’s project requirements. This process optimally starts in the design phase and continues well past occupancy.

As states adopt stricter building codes and building owners continue to pursue certifications such as Leadership in Energy and Environmental Design (LEED), the new building commissioning process becomes even more important. Many states use ASHRAE standards when setting their building codes, which includes a commissioning requirement for buildings over 50,000 square feet.2

EnerNOC’s commissioning process is broken into four phases:

Design Phase
- Review Owner’s Project Requirements document
- Review Basis of Design
- Develop initial Commissioning Plan
- Perform commissioning focused design reviews
- Develop commissioning requirements for the specifications

Construction Phase
- Lead Construction Phase kick-off meeting
- Review submittals, monitor development of drawings
- Lead on-going commissioning meetings
- Develop System Readiness Checklists and Functional Performance Tests
- Perform ongoing site observations
- Witness Start-ups and other Pre-functional tests

Acceptance Phase
- Perform Installation Verification
- Review O&M Manuals
- Witness functional performance testing
- Verify and review training of owner’s staff
- Perform diagnostic monitoring (trend analysis)

Post-Occupancy Phase
- Develop Commissioning Report and Systems Manual
- Resolve outstanding commissioning issues
- Perform seasonal/deferred testing
- Perform near warranty-end review

Commissioning and LEED Certification
In today’s competitive real estate market, LEED certification is being employed as a differentiator. Commissioning is a pre-requisite credit for LEED and the benefits are well documented. Multi-tenant Class A buildings with LEED certification command a 3% rental premium and a 16% higher average selling price.3
Why Choose EnerNOC’s Commissioning Services?

EnerNOC employs a Certified Commissioning Professional who teaches New Building Commissioning for LEED at the University of California, Berkeley Extension and has an extensive track record of delivering results. Our commissioning process starts with the design phase and stays with the project through the first year of occupancy. It can be tailored to meet your goals, whether it is ensuring your building is performing as designed or achieving LEED Platinum certification.

EnerNOC’s world-class team of commissioning experts has successfully delivered energy services to over 100,000,000 square feet of conditioned space and generated over 500,000,000 kWh in annual savings to customers, which translates to more than $50 million in savings each year.

LBNL found that new building commissioning projects have a median whole building energy savings of 13%. Our results demonstrate the outcomes of our commissioning projects:

UC Santa Cruz
Location: Santa Cruz, CA
Industry: Higher Education
Project: New Campus Laboratory Building

The new Physical Sciences Building, a complex laboratory building on the UC Santa Cruz campus was the University’s first new building project using a third-party Commissioning Authority. This highly successful project led to the smoothest transition from construction to operation of any complex building on campus. EnerNOC worked closely with University staff and the general, mechanical, electrical and controls contractors to implement the commissioning process. The effort resulted in the resolution of over 200 identified issues. Based largely on this experience, the University intends to retain a Commissioning Authority for all future major campus buildings.

San Francisco International Airport
Location: San Francisco, CA
Industry: Government
Project: Terminal 2 Renovation Project

EnerNOC was the Commissioning Authority for the prestigious Terminal 2 Renovation, a project with a cost of over $430M. This project is a complete renovation of the facility and includes many energy efficient and emerging technology applications, such as displacement ventilation and daylight harvesting. EnerNOC was requested to fulfill the commissioning role based on the successful results of other energy efficiency projects, including an Airport-wide Investment Grade Energy Audit, Redesign of the central boiler plant and retro-commissioning of the International Terminal. EnerNOC has worked closely with the design team to improve the sequences of operation and improve operational efficiency.

How to get started:
Commissioning is most effective when started early in the design phase. To begin, please contact EnerNOC to schedule a no-cost consultation. We tailor each engagement to meet your goals and budget. Let us help ensure that your next project is delivered on-time, to your specifications, and optimized for energy efficiency.

I think you are doing a terrific job on the commissioning effort. We made a conscious decision some years ago to do this and it looks like, due to your efforts, we will be opening buildings that will be working as designed. In my book this is money well spent.”

—Frank Nunez, Director of Facilities and Operations, Foothill/De Anza Community College District