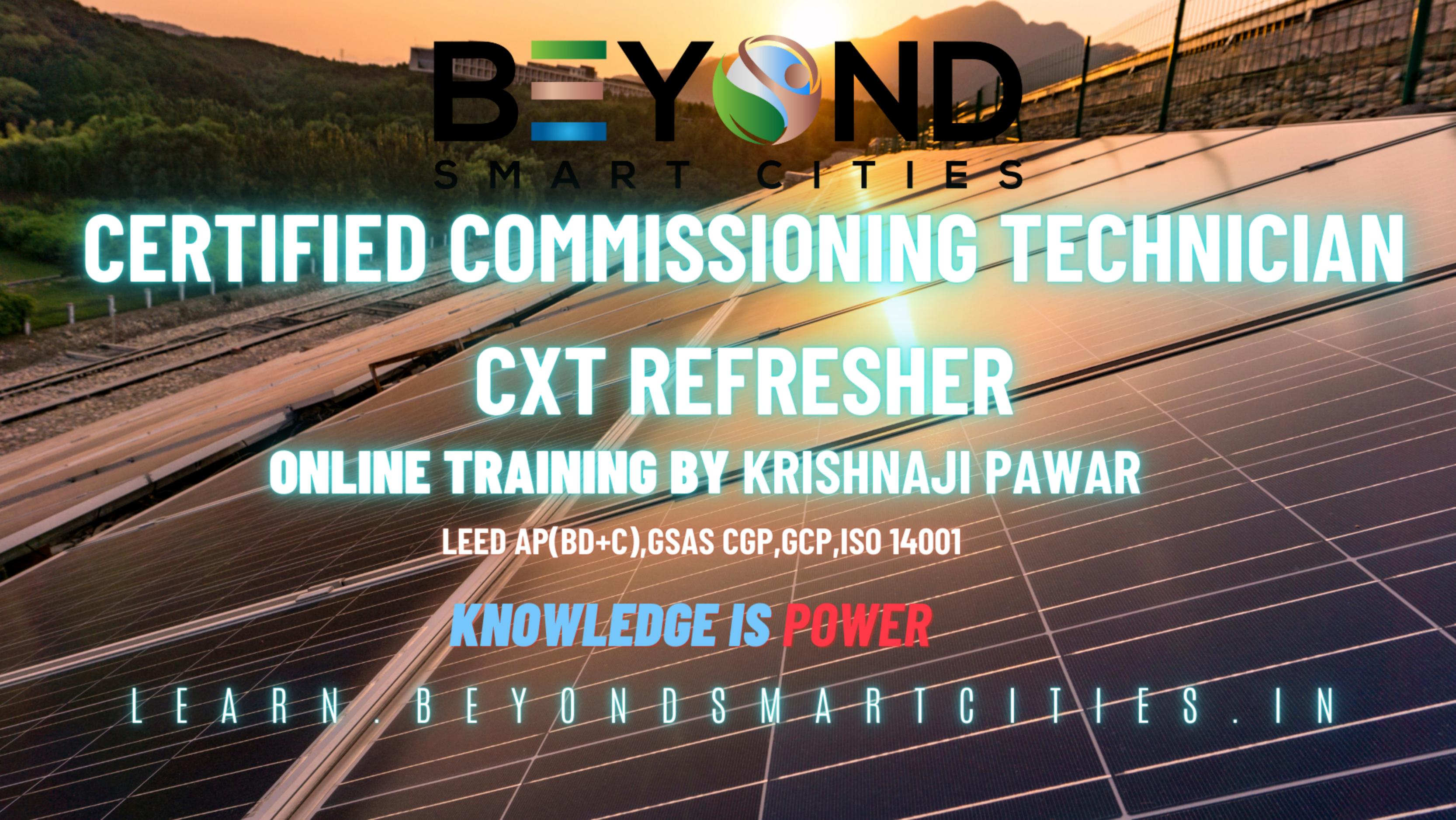


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CERTIFIED COMMISSIONING TECHNICIAN

CXT REFRESHER

ONLINE TRAINING BY KRISHNAJI PAWAR

LEED AP(BD+C),GSAS CGP,GCP,ISO 14001

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MODULE

13

Green Building Rating Systems & Commissioning

KRISHNAJI PAWAR - CEO & FOUNDER

LEED AP(BD+C),GSAS CGP,GCP,ISO 14001

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Green building rating systems, such as LEED, BREEAM, Green Globes, and IPMVP, evaluate a building's environmental performance, promoting sustainable design practices, energy efficiency, and indoor environmental quality.

Learning Objectives

- Document Observations & Interpret Basic Terminal Unit Trends.
- Test Airside ,water,control system / Troubleshooting
- Required O&M paperwork and training Preventive maintenancetems
- Evaluate HVAC, control, lighting control, and equipment types
- Green building rating systems & commissioning
- Summary and Resources
- CxT Practice Exam: Test Your Knowledge!



INTRODUCTION

- Frameworks that evaluate environmental performance of buildings and promote sustainable design practices.
- Assess a building's efficiency in areas like energy use, water conservation, indoor environmental quality, and sustainable site development.
- Help stakeholders ensure projects meet specific sustainability criteria, contributing to reduced ecological footprints and enhanced occupant health.

MAJOR GREEN BUILDING RATING SYSTEMS

- Leadership in Energy and Environmental Design (LEED): A point-based approach for assessing sustainability of buildings.
- Building Research Establishment Environmental Assessment Method (BREEAM): A UK-based system for evaluating sustainability of buildings.
- Green Globes: A user-friendly rating system for assessing residential projects mid-construction.
- International Performance Measurement and Verification Protocol (IPMVP): A framework for measuring and verifying energy performance of buildings post-construction.



IMPORTANCE OF COMMISSIONING

- A systematic process that ensures a building's systems are designed, installed, and function according to the owner's operational requirements.
- Types of Commissioning: Design Phase Commissioning, Construction Phase Commissioning, and Operational Commissioning.



ROLE OF COMMISSIONING IN GREEN BUILDING

- Helps avoid common pitfalls of energy inefficiency and occupant discomfort that can undermine sustainability efforts.
- Without proper commissioning, a LEED-certified building may not perform as expected, leading to higher operational costs and diminishing environmental benefits.





LEED FUNDAMENTAL COMMISSIONING AND VERIFICATION & ENHANCED COMMISSIONING

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LEED COMMISSIONING OVERVIEW

- LEED is a green building certification program that promotes sustainable building practices.
- The commissioning process ensures that all building systems are designed, installed, and function according to the owner's project requirements.
- Two key components of the commissioning process are Fundamental Commissioning and Verification (FC) and Enhanced Commissioning (EC).



FUNDAMENTAL COMMISSIONING & VERIFICATION

- Confirms that the building systems meet the owner's project requirements.
- Ensures that systems are properly documented and operational performance is verified.
- Facilitates a smoother transition to operations post-construction.

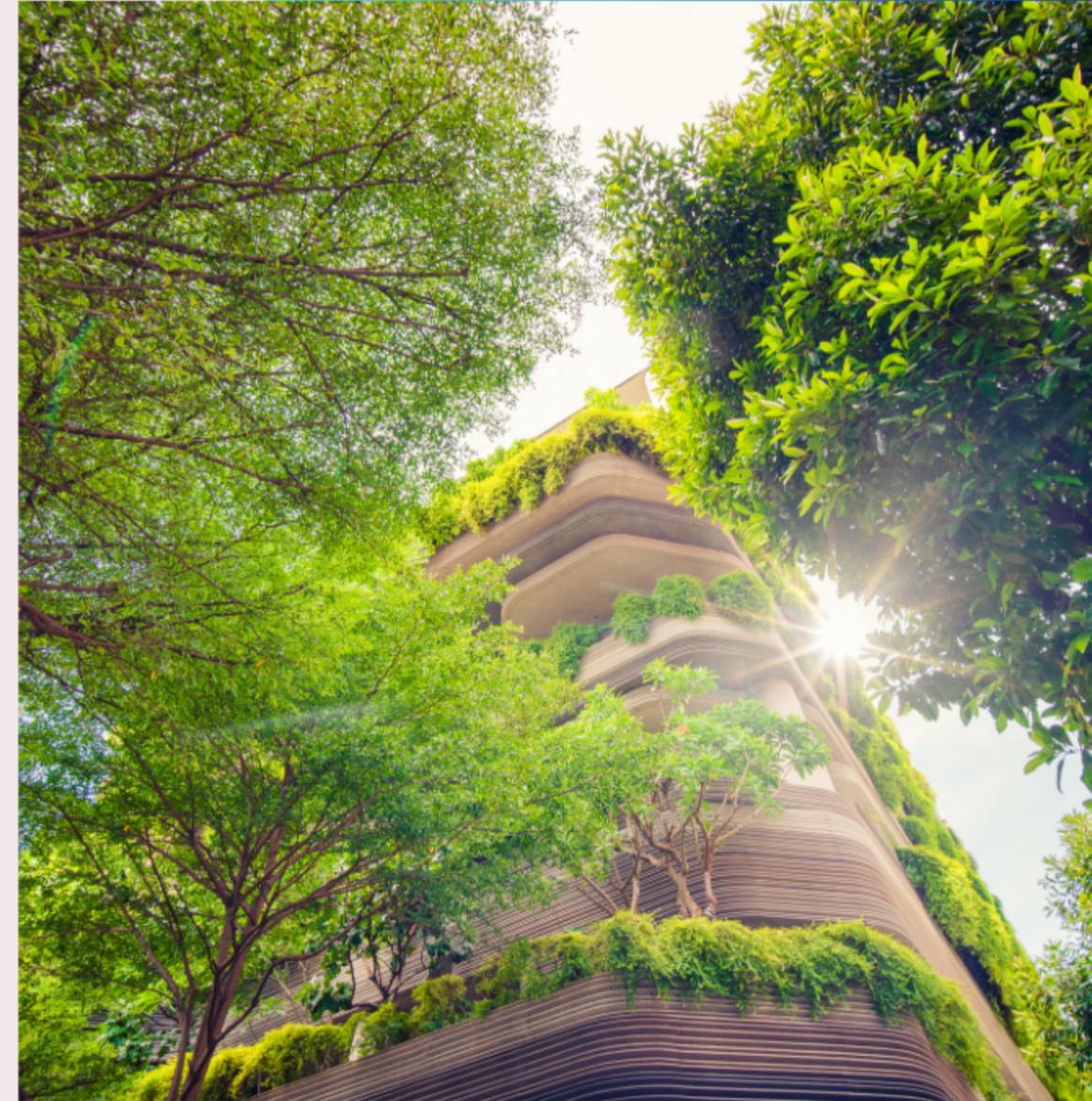
Key Components of FC

- Design Phase Commissioning: Establishes the Owner's Project Requirements (OPR).
- Commissioning Plan Development: Develops a comprehensive commissioning plan detailing the commissioning process, responsibilities, and the schedule for activities.
- Installation Verification: Regular inspections and testing during construction to verify that systems are installed correctly.
- Functional Testing: Verifies that systems operate correctly under various conditions.
- Documentation and Training: Comprehensive documentation of the commissioning activities, results of the functional tests, and the establishment of a system manual.



ENHANCED COMMISSIONING

- Goes beyond the fundamental requirements to improve the building's operational performance further and optimize energy efficiency.
- Includes all the steps outlined in Fundamental Commissioning but adds additional activities that focus on ongoing performance and improvements.





CONTACT US



+91 6363032722



info@beyondsmartcities.in



learn.beyondsmartcities.in



#55,HMR Layout ,Bengaluru ,India



THANK YOU

