

BEYOND

SMART CITIES

ENERGY AND ATMOSPHERE - GREEN
BUILDING TECHNOLOGY TRAINING PROGRAM
FOR ENERGY AND GREEN BUILDING SPECIALISTS
KRISHNAJI PAWAR, LEED AP BD+C, GSAS CGP, ISO 14001:2015, GCP
ENERGY SPECIALIST CURRICULUM

ENERGY EFFICIENCY SPECIALIST

BEYOND SMART CITIES



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SUMMARY AND RESOURCES
FOR ENERGY AND GREEN BUILDING PROFESSIONALS
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SUMMARY

ENERGY EFFICIENCY SPECIALIST

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Recognize how the credits reflect the holistic approach to reducing energy use, designing for energy efficiency, and using renewable energy sources.

- Fundamental Commissioning and Prerequisite Verification
- Building-Level Energy Metering
- Fundamental Refrigerant Management
- Enhanced Commissioning
- Optimize Energy Performance
- Advanced Energy Metering
- Grid Harmonization /Renewable Energy
- Enhanced Refrigerant Management

KEY TAKEAWAYS

The Energy & Atmosphere credits, which focus first on reducing energy loads and demand, using necessary energy efficiently, and applying renewable sources where possible.

This course covers each prerequisite and credit in a credit-by-credit format presenting technical requirements and strategies that work to achieve them

Recognize how the holistic approach of addressing the reduction of energy use, energy efficient design strategies, and renewable energy sources are reflected in the credits.

Recognize synergies between multiple credits.

Recognize how credit requirements lead to higher performing buildings and market transformation



ENERGY AND ATMOSPHERE



The Energy and Atmosphere (EA) category approaches energy from a holistic perspective, addressing energy use reduction, energy-efficient design strategies, and renewable energy sources



CRITERIA IN THIS CATEGORY

EA PR FUNDAMENTAL COMMISSIONING AND VERIFICATION

EA PR MINIMUM ENERGY PERFORMANCE

EA PR BUILDING-LEVEL ENERGY METERING

EA PR FUNDAMENTAL REFRIGERANT MANAGEMENT

EA CR ENHANCED COMMISSIONING/EA CR OPTIMIZE ENERGY PERFORMANCE

EA CR ADVANCED ENERGY METERING / EA CR DEMAND RESPONSE

EA CR RENEWABLE ENERGY PRODUCTION / ENHANCED REFRIGERANT MANAGEMENT



MAXIMUM POSSIBLE CREDITS : 4 P / 33 C

ENERGY AND ATMOSPHERE

The Energy and Atmosphere (EA) category approaches energy from a holistic perspective, addressing energy use reduction, energy-efficient design strategies, and renewable energy sources.

The current worldwide mix of energy resources is weighted heavily toward oil, coal, and natural gas. In addition to emitting greenhouse gases, these resources are nonrenewable: their quantities are limited or they cannot be replaced as fast as they are consumed.

Though estimates regarding the remaining quantity of these resources vary, it is clear that the current reliance on nonrenewable energy sources is not sustainable and involves increasingly destructive extraction processes, uncertain supplies, escalating market prices, and national security vulnerability. Accounting for approximately 40% of the total energy used today, buildings are significant contributors to these problems.



ENERGY AND ATMOSPHERE +

Energy efficiency in a green building starts with a focus on design that reduces overall energy needs, such as building orientation and glazing selection, and the choice of climate-appropriate building materials. Strategies such as passive heating and cooling, natural ventilation, and high-efficiency HVAC systems partnered with smart controls further reduce a building's energy use.

The generation of renewable energy on the project site or the purchase of green power allows portions of the remaining energy consumption to be met with non-fossil fuel energy, lowering the demand for traditional sources.

The commissioning process is critical to ensuring high-performing buildings. Early involvement of a commissioning authority helps prevent long-term maintenance issues and wasted energy by verifying that the design meets the owner's project requirements and functions as intended.



RESOURCES

<https://www.usgbc.org/resources>

<https://knowledgehub.beyondsmartcities.in/>



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THANK YOU

THE WORLD'S 1ST GREEN TECHNOLOGY
MARKETPLACE