



- Start Immediately
 - Available 24/7
 - Come and go as you please
 - Print certificate upon completion
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Harnessing Resources: New Construction Opportunities

#AIABLTI202

Credit(s) earned on completion of this course will be reported to AIA CES for AIA members. Certificates of Completion for both AIA members and non-AIA members will be available to print upon completion of this course. This course is registered with AIA CES for continuing professional education.

Course Description

Even as technological innovation creates new construction possibilities, incorporating energy-efficiency into building projects can not only provide a better quality of life, but also protect the environment. A comprehensive approach to resource and energy efficiency is the best method to achieve a resource and energy efficient building.

Renewable energy is contributing more and more to the world's ever-rising energy demands. Solar energy generation systems are about to reach a level of affordability that will allow them to be considered equal to conventional power generation systems like fossil fuel plants and hydro-electric dams. Industry experts should know what products are on the market, and what rebates and incentives are available for customers who want to take advantage of new energy efficient resources and components. This three hour **online video course** will explore new and innovative considerations for resource and energy efficiency.

After completing this course participants will be able to:

- Identify innovative design considerations incorporating energy efficient resources and components.
- Describe the design and development of solar energy, and how it compares to more conventional systems.
- Identify and describe the benefits that small business and home owners can realize when resource efficient designs are incorporated into their project.

- Evaluate the structural considerations when installing/mounting these new systems.

Course Syllabus

Energy Efficient Building

***Learning Objectives:** 1) Have an appreciation for energy consumption and the need for healthy, "green" energy. 2) Understand the importance of building placement on the lot, "Brownfield" site clean-up methods and the need for soil erosion control and basic methods. 3) Have an understanding of material properties, recycling and finally, the process for LEED certification.

1. Environmental Concerns and Implications
2. Evaluating the Site and Remediation Strategies: Building orientation, erosion, water
3. "Green" power generation: solar, performance, varying sources
4. Photovoltaic, geothermal, recycling, air quality, LEED Rating System

Assessment

Solar Energy Use I

***Learning Objectives:** 1) Understand the difference between "passive" and "active" solar energy use. 2) Know what PV stands for, and how PV solar energy collection varies from traditional solar heat collection. 3) Gain an awareness of the benefits of solar energy: for residential and commercial use as well as how solar energy benefits the environment.

1. Solar Energy: Passive/Active
2. Solar Photo Voltaic
3. Industry Acronyms and Terms
4. Residential and Small Business Solar Use
5. Rebates and Incentives

Assessment

Solar Energy Use II

***Learning Objectives:** 1) Understand some small business or home owner advantages. 2) Realize there is a price to pay for clean, green energy. 3) Recognize pros and cons when considering solar.

1. Small Business Systems
2. Residential Use
3. Solar Pros and Cons
4. Structural Considerations
5. Installation and Mounting Considerations

Assessment

Solar Energy Use III

***Learning Objectives:** 1) Be aware of the history of man harnessing the sun's energy. 2) Know the amount of solar energy versus conventional fuel produced energy in the United States. 3) Learn some new terms and gain an appreciation for what "green energy" really means.

1. Solar Harvesting
2. Solar Power Plants
3. Industry Acronyms and Terms

Assessment

Course instructors will be available by email or telephone between 9am and 5pm Eastern Standard Time. They will assist you with questions regarding course content.