Fall 2020
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Building Design/Performance

Transforming How We Build - Free Architecture Series for 2020
SMUD’s Energy Education & Technology Center and the AIA Central Valley are proud to present a year-long series dedicated to high-performance, regenerative design. It will cover carbon-neutral and net-zero architecture, social equity and other innovations that transform ideas and processes to address climate change. AIA credit will be provided.

Demystifying Net-Zero Energy & Carbon Neutrality
This presentation will bring clarity of achieving net-zero energy and carbon neutrality across a variety of project types. An overview of current standards and code requirements as well as multiple project examples will be provided detailing solutions and lessons learned.

Meeting Climate Change Goals with FastOx® Gasification and Yolo County’s Path to Zero Waste
FastOx® gasification breaks down waste at the molecular level converting it into energy-dense syngas and inert stone and metals without burning; this system is a community scale waste to renewable energy technology and ideal as an add-on to recycling and waste diversion sites. It also provides the final phase solution for product recovery from remnant and non-recyclable waste, reduces GHG emissions and increases energy security and resiliency.

Embodied Carbon of Building Materials
Embodied carbon, the emissions from making the materials of our built environment, is a larger source of global warming than we thought. Getting to zero by 2050 to avert our 1.5-degree tipping point means reducing embodied carbon is more urgent than ever. Join us as we discuss the tools and resources to tackle embodied carbon head on.

Architecture as a Catalyst for Change
Architecture can promote a regenerative future and be a catalyst for positive social change and has a transformative power to reach beyond the property lines to help address some of the larger challenges in our communities – affordable housing, innovative education, aging with dignity, homelessness, disability rights and climate change. Design excellence provides a consistent framework with the profession’s most pressing concerns in mind: advanced sustainability, social equity, and integrated practice.

Acoustics Explained: Why Rooms Sound the Way They Do
This two-part series will uncover the relationships between materials, shape and the sound of rooms. Zackery Belanger will present an overview of room acoustics for novices and experts alike. Concepts, misconceptions, history, and the future of acoustic architecture will be covered. Attendees may attend one or both parts of the series. AIA credit will be provided.
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Introduction to ISO 50001

ISO 50001 is a framework to help organizations integrate energy management into their overall efforts to improve quality and environmental management. This workshop will cover the benefits of developing a policy for more efficient use of energy, use data to make better decisions about energy use and measure results.

2019 Title 24: Envelope

California’s 2019 Title 24 Energy Standards took effect on January 1, 2020. Martyn Dodd will cover the numerous changes to the building envelope residential and nonresidential sections including updated retrofits, acceptance test requirements and forms.

HVAC

2019 Title 24: Mechanical

California’s 2019 Title 24 Energy Standards took effect on January 1, 2020. Martyn Dodd will cover the numerous changes to the residential and nonresidential mechanical sections including HVAC efficiencies, ventilation, exhaust, domestic hot water and forms.

Lighting

Innovators in LED Lighting

Your game show host and lightologist Therese Lahaie will guide you through the quality of light metrics on how you can affordably improve wellbeing at home, light layers enhancing dimensionality of your projects and optics technologies. Join us to gain fluency in LED lighting technology through this engaging educational conversation.

Designing with Title 24 in Mind: Nonresidential Applications

The 2019 Standards have tight lighting power allowances but with LED technology designers can still achieve a good-looking project at reasonable cost. Jim Benya will include controls, daylighting and both indoor and outdoor lighting. Outdoor lighting will also include a quick review of CALGreen and the additional challenges it presents.

Designing with Title 24 in Mind: Residential Applications

The 2019 Standards don’t change very much from 2016 but there are many important tweaks and tricks that designers will need when working with this new version. Jim Benya will address how the changes affect multi-family and senior living facilities. There will be a special focus on the challenges that Title 20 and JA8 bring to projects as well.

Renewable/Sustainable

Commercial Battery Energy Storage

Is buying a commercial battery storage system cost-effective? Will it provide back-up power and demand charge reduction? This workshop, taught by SMUD’s battery storage experts, will cover the many facets of battery storage such as energy consumption, upfront costs, bill savings and payback.

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All workshops will be held online unless otherwise noted.
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Video Library

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- **Title 24 2019: Non-Residential Indoor Lighting**
  - Duration: 29:55
- **Title 24 2019: Residential Lighting**
  - Duration: 3:30
- **Title 24 2019: Non-Residential Mechanical**
  - Duration: 10:32
- **Title 24 2019: Outdoor Lighting**
  - Duration: 8:20
- **Commercial Battery Storage: Overview**
  - Duration: 7:46
  - Learn the basics of commercial battery storage
- **Commercial Battery Storage: Applications**
  - Duration: 14:48
  - Explore the best uses for commercial battery storage
- **Commercial Battery Storage: Costs**
  - Duration: 5:14
  - Find out if a commercial battery storage system is right for your business
- **Lighting for Restaurants**
  - Duration: 3:46
  - Discover ways to make your food pop for customers
- **Refrigeration for Restaurants**
  - Duration: 3:10
  - Learn how to manage your refrigeration costs, and find out how much you can expect to save using simple strategies from SMUD