Visitors Guide
Tiny House Competition

October 15, 2016
9 a.m. – 4 p.m.
Cosumnes River College
smud.org/TinyHouse
The Sacramento Municipal Utility District (SMUD) is excited to welcome you to a first-of-its-kind competition for college and university students. Our Tiny House Competition challenges student teams to design, construct and operate solar powered, zero net energy houses on wheels.

As a community-owned, not-for-profit utility, SMUD is committed to helping customers control their energy usage and expenses while improving the performance of their homes and businesses. Because tiny zero net energy houses have to be very efficient with the energy they use, they’re a fantastic way to help showcase energy saving strategies, new technologies and sustainable design. Our hope is that when you tour these Tiny Homes you’ll learn about new tools and techniques that you can bring to your own home to be more comfortable while lowering your energy costs.

Through the Tiny House Competition, SMUD is also promoting STEAM (Science, Technology, Engineering, Art and Math) education, reflecting our commitment to supporting students and educators in our region. By providing participating students with hands-on experience and unique training, SMUD is helping to cultivate the next generation of leaders in sustainable energy and design.

For information about more free events and classes, or for expert energy advice for your home or business, visit smud.org.
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Use your smartphone to scan the QR code for additional information or visit smud.org/TinyHouse.

#tinyhouses16
The Competition

The Tiny House Competition is modeled after the Solar Decathlon created by the U.S. Department of Energy. The colleges and universities participating in the Tiny House Competition will explore zero net energy building, green building techniques and sustainable living. The teams will design and build houses on wheels, ranging between 100 and 400 square feet. These homes will feature smart energy appliances, green building techniques and the use of renewable energy, creating innovative zero net Tiny Homes.

The teams will be judged in the major categories of Architecture, Communications, Home Life and Energy.

The team with the most points out of a possible 1,000 points wins.
Contest Categories

The winner of this competition is the team that demonstrates the best architectural design, energy balance, communication presentation and home life comfort.

Architecture
With such limited space to work with, having a smart, sustainable design is crucial to the success of any Tiny House. Our architectural judges review and evaluate the drawings and construction specifications, architectural narrative and final completed homes. The judges look to make sure the home is functional and provides a comfortable living space for up to 2 people. Our judges will also evaluate if the home is designed to fit well into its end-use destination. The cost for construction goal for each Tiny House is $25,000, not including labor or the trailer costs.

Communications
Because a major goal of the competition is to help educate our customers about making smart energy choices, competing teams are judged on how well they document and communicate their process for designing and building their houses. Our judges review printed and digital documentation of the complete process of building the house, including educational videos, brochures, energy efficiency documents and how well each home is presented to the public. We also review whether or not the communication reflects the final destination environment and provides a cohesive thematic approach.

Energy
Each Tiny House should be zero net energy, meaning it produces as much electricity as it uses during a year. To determine how energy efficient it is, each house goes through an elaborate test to measure how much energy it uses and produces. It has to be comfortable, meaning you can watch a movie and take a hot shower, but it also has to be smart about how it uses energy. Energy balance is created by using good engineering design and implementation.

Home Life
Every house is designed for a specific real or fictional client. Teams will be judged on how well the house is designed to meet the needs of that owner. Homes should provide a safe and functional living space, meeting the needs of the targeted client and the final environment of the house. Homes will demonstrate efficient use of recycled and repurposed materials in construction and sustainable management of water and waste.

For complete judging criteria and rules, visit smud.org/TinyHouse.
Tiny House Public Day Schedule

9 a.m. – 10 a.m. Tiny House Competition Awards Presented — Main Stage
10 a.m. – 4 p.m. Tiny House Tours — Tiny House Village
10 a.m. – 4 p.m. Home Show — Vendor Village
10 a.m. – 4 p.m. Children’s Activities — Kid’s Zone
10 a.m. – 4 p.m. Sac EV — Electric Vehicle Exhibit
11 a.m. – 3 p.m. Food Trucks — Food Court

Main Stage

10:30 a.m. Hunter Miley
Why Are Tiny Houses So Popular?
Find out how the owner of a property management company, Hunter Miley, fell into the Tiny House Movement and where he sees it going.

11 a.m. Connie Samla
Is Your Lighting Life Changing?
Connie Samla, lighting specialist at the Energy Education & Technology Center at SMUD, will offer ways to improve the lighting in your life for better vision and health.

11:30 a.m. Isabelle LaRue
How to Live in a Tiny House?
Isabelle LaRue knows that living in 400 square feet or less isn’t for everyone. But how much square footage is enough? Drawing from her own experience designing her version of the perfect Tiny House, and her experience with her YouTube channel, Isabelle will discuss her step-by-step process that helped her get to her number: 326 square feet.

Noon Dan Fitzpatrick
Where Do I Put a Tiny House?
Dan Fitzpatrick will discuss his passion for affordable in-fill housing. He is the owner of Pacific Pathways, a company providing strategic services to real estate clients. He has had success working with local governments to amend planning and zoning codes to permit Tiny Houses on wheels as second dwelling units. He is also working with several California municipalities on a prototype municipal code for Tiny Houses.
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<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
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<tbody>
<tr>
<td>12:30 p.m.</td>
<td>John Grindrod</td>
<td>Is an Electric Vehicle Right For You?</td>
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<td>Most Americans commute less than 40 miles per day. John Grindrod, SMUD's product service coordinator for electric vehicles will help you decide if a plug-in electric vehicle is in your future.</td>
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<tr>
<td>1 p.m.</td>
<td>Justin and Melissa Smith</td>
<td>What is it Like to Live in a Tiny House?</td>
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<td>Tiny living is about the only thing Justin and Melissa Smith do on a small scale. They built their 300-square-foot “Happy Hungry Hiker Tiny House” on Tiny House Nation (Backpack House, Season 3) and have been enjoying the many benefits of purposeful living. They are both passionate educators and outdoor long-distance adventurers who run their youth backpacking program, InspireOut, from their tiny castle.</td>
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<td>1:30 p.m.</td>
<td>Derek Ouyang</td>
<td>Why Are Design-Build Competitions Important?</td>
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<td>Derek Ouyang was project manager of Stanford’s first-ever entry to the U.S. DOE’s 2013 Solar Decathlon and has been featured as an up-and-coming designer in the Los Angeles Times, in Home Energy magazine’s “Thirty under 30” and at TEDxStanford. Derek graduated from Stanford University with dual bachelor’s degrees in Civil Engineering and Architectural Design and a master’s degree in Structural Engineering. At age 23, he is building his own practice as co-founder of Cloud Arch Studio and is a lecturer at Stanford University and at the Nueva Upper School.</td>
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<td>2 p.m.</td>
<td>Jacobe Caditz</td>
<td>How Can You Take Control of Plug Loads?</td>
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<td>The average American household uses more than 25 electronic devices, which can account for a significant amount of the energy bill, even when the devices are not being used. Jacobe Caditz from the Energy Education &amp; Technology Center at SMUD will teach several simple and convenient ways to help you take control of plug loads.</td>
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<td>2:30 p.m.</td>
<td>John Nicoletti</td>
<td>How Can Tiny Houses Help the Homeless?</td>
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<td>Yuba County Supervisor John Nicoletti will discuss how Yuba County’s 14 Forward project used the “Tiny House” concept to construct 20 emergency shelters for the homeless as a stepping stone to permanent housing. Local government, non-profits, the faith community and local businesses came together to plan and build the 2-bed structures.</td>
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<td>3 p.m.</td>
<td>Brent Sloan</td>
<td>Is Solar Right for You?</td>
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<td>If you’re thinking about going solar, let Brent Sloan, SMUD’s product service coordinator help you make an informed decision and get information on potential savings. Get additional information in the SMUD tent.</td>
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Meet the Teams
The mission statement of Fresno State’s Tiny House project is, “Through discovery, diversity and distinction, empower students to design and build an affordable, sustainable, and zero net energy ‘Tiny House’ solution for the San Joaquin Valley.”

Our 196-square-foot design meets this mission statement by incorporating the unique characteristics of the San Joaquin Valley through the selection of clients that are from our region. Our clients represent the diverse nature of our region and provide a distinct blend of urban and agricultural cultures. Our clients are a recently married Hmong freelance journalist and a Hispanic/Native American construction manager who met completing a minor in American Indian studies at Fresno State. Additionally, their chosen professions—construction management and journalism—present the challenge of balancing mobility with the modern requisites for 2 new professionals. Finally, the clients enjoy hunting, fishing, outdoor activities and have a keen interest in maintaining a sustainable lifestyle.

The sustainable aspects of the design ensure that our clients will live in a home that meets the unique social, economic and environmental implications of “tiny living.” The design reuses materials from the local area in order to reduce building costs and impacts, while ensuring that the building envelope provides an efficient system that reduces the energy needs required to condition the space. The home generates renewable energy from several photovoltaic solar panels and incorporates efficient fixtures and appliances to achieve zero net energy.
The Wedge is Laney College’s Tiny House built by students in the Carpentry Department in collaboration with other construction disciplines. The Wedge is meant to provide caretaker housing for an urban farmer in Oakland, a hub of the food justice and urban farming world. The house got its name from the uniquely angled wall, which gives the sense of a more spacious interior and gives shape to its “forward thinking” personality.

The house includes roof-mounted solar panels, standing seam roofing, continuous insulation, high-performance windows, corrugated metal and fly ash composite siding. The house also includes 2 sleeping lofts, custom built furniture, a full bathroom and kitchen.

In addition to a refined product, our focus also emphasized process. It was built over the course of 4 semesters during class time with mostly rotating students, lectures and demonstrations given on the various aspects of construction that were encountered along the way—from design to building science, framing and finish carpentry.
The College of the Sequoias Tiny House was custom designed for the cool bay climate on the Puget Sound. The building footprint is 180 square feet. There are 2 lofts that bring the total square feet to about 300. Energy consumption is of major concern because it must operate 365 days a year without grid power.

The climate is such that cloudy days severely limit the solar regeneration value. The winter temperatures can reach a low of 30 degrees, so an efficient radiant floor heating system was designed. The primary heat source will be an external thermal panel in series with a pellet fuel heater. In addition, there is a propane water heater for a back-up heat source which also serves as heat storage.

It has a 1.5K solar array. It is well insulated including the underfloor. The only air conditioning will be 2 ventilation fans designed to move the coastal air through the living and sleeping spaces during the warmer hours of the day and evening.

Water collection is the only source of water other than importing clean water from off site. There is a rain water collection system. The final on site storage system is not part of the project.

There is a 65-gallon clean water tank and a 65-gallon greywater tank. Each system has a water pump. The greywater is filtered and can be used for toilet flushing and garden irrigation.
The University of California, Berkeley, built THIMBY (Tiny House in My Backyard) to maximize long-term affordability and sustainability.

The 196-square-foot, 1 bedroom, 1 bathroom house was designed for a newlywed, environmentally conscious couple purchasing their first home in the East Bay and is the pilot unit in a community of zero net energy Tiny Houses to be established in Richmond, CA.

The house is powered by a 2.3 kW PV array, generating electricity that can be stored in the unit’s 6.4 kWh Li Ion battery. A unique Home Energy Management System takes advantage of week-ahead weather forecasts to optimally control heating loads. A vertical “living wall” is combined with an activated carbon filter used to recycle greywater for later non-potable use. Heat pump water and space heating, rainwater collection and human waste composting also help THIMBY to cost-effectively minimize its life cycle emissions.
Cosumnes River College has committed to green technology and sustainable design, using this project as an opportunity to integrate sustainability across our curriculum as stated in our College Vision. The Tiny House team consists of students from Architecture, Architectural Design Technology, Building Inspection Technology, Construction Management Technology, Construction and Horticulture. Our interdisciplinary approach emphasizes a design-build model with close interaction between the students and instructors of the various fields. The focus of our design-build team is to develop a team that can think critically and develop solutions around issues of sustainability. Constructing a Tiny House was the perfect test case for our team. We hope to develop a model program demonstrating the effectiveness of a cross-discipline team in project delivery.

Our Tiny House was designed to be a habitable, space-efficient design that is simultaneously transportable.

The design strives to meet the needs of its inhabitants without leaving an ecological footprint. The intent is to have a livable unit that is zero emission and entirely sustainable. The finished project will be used as a “living laboratory” to help develop social equity for families in our community, a prototypical Tiny House community and a demonstration of green housing.
Santa Clara University undergraduate students have designed the rEvolve House as a short-term, low-cost housing solution for Operation Freedom Paws, a non-profit organization that prepares veterans to train their own service dogs. The Tiny House will help empower veterans to restore their own independence while providing the support needed for them to succeed. The architecture and setting of the home in a coastal contemporary environment allows a space that is calming and accommodating for any disability that the veteran may face. All areas of the house are dog friendly, so as to not inhibit the quality of service to its partner.

The goal of the project is to create a comfortable living space that includes all the amenities of traditional housing while having a footprint that is a fraction of the size. The 238-square-foot Tiny House features a bedroom with a murphy bed to save space, and a full-sized kitchen that incorporates a sitting area and fold out table. The home will also contain a 35-square-foot wet bathroom with a dry-flush toilet, which will help reduce the house’s overall environmental impact. To further this ecological initiative, the house is powered entirely by seven 330W Suniva solar panels connected to saltwater batteries. We are using Structural Insulated Panels for their ease of manufacturing and high insulation factor. In order to improve our solar efficiency by 30% the house will be connected to a Colossun solar tracking ring allowing the entire house to revolve as the sun moves across the sky.
Mikra - The San Jose City College zero net energy Tiny House has an adaptable skin that can double the usable floor area when stationary. A smart home automation system allows you to control the unfolding panels remotely. Open the living room area or 1 of 2 additional bedrooms/work rooms when needed; fold them up when not in use or for transportation. The smart automation system is custom built out of off-the-shelf components and also controls lighting, sound, energy use, monitors air quality, etc. The entire shell of the dwelling is built out of 4.5” Structural Insulated Panels (SIPs) that can be sold as a kit for easy assembly, superior insulation value, reduced weight and replicability. The solar photovoltaic power system runs a hybrid 12v, 120v and 240v circuitry for maximum flexibility.
The University of California, Santa Cruz and Cabrillo College designed the ECOTOPIA HOUSE as a prototype for a smart, low-cost Tiny Row House that can be built in multiple numbers on urban lots to meet the affordable housing crisis across California.

The 400-square-foot structure includes an integrated solar PV and thermal system for power hot water and heating with a battery storage system; reduce sewage waste with a composting toilet and greywater system; maximize daytime lighting with strategically-located windows, and nighttime lighting with LEDs; and designed to be modular, capable of being easily assembled and disassembled, and storable in sections. The house will incorporate integrated sensors, advanced controls for water and energy systems and data management.
The California State University, Sacramento team, Sol Vespide (Solar Hornet), designed a zero net energy Tiny House for a recently graduated newlywed engineering couple. The couple were members of the Society of Hispanic Professional Engineers (SHPE) at Sacramento State and themed the house as a tribute to their alma mater, Sacramento State. The loft-bedroom, 1 bathroom, 184-square-foot house will be located in an urban environment near downtown Sacramento where the graduates can commute to their new jobs on bikes and have access to farmers’ markets to support a sustainable lifestyle. The Sol Vespide house utilizes the 3 modes of heat transfer: conduction, convection and radiation. The home features a large evacuated tube solar hot water heater that provides radiant heating during the winter and hot water year round. During the hot summer months, the house has been designed to withstand the extreme weather conditions of Sacramento, which are known to reach temperatures as high as 104°F. The thermal envelope is sealed airtight to prevent internal drafts and reducing the overuse of the HVAC system.

The walls have been designed with salvaged wood and cellulose insulation. Cellulose is composed of 85% recycled paper fibers, post-consumer waste and treated to be flame retardant. The roof features a corrugated steel reflective material for durability and to minimize heat absorption.
The Chico State Tiny House team is comprised of a diverse group of students majoring in Mechanical, Mechatronic and Civil Engineering, Urban Planning, Agriculture and Construction Management. Each team member brings a variety of inspirations to the project but we are rooted together in our common interest of creative solutions to Tiny House challenges.

The theme of Chico State’s Tiny House is, “minimizing our carbon footprint while maximizing our quality of living, increasing functionality and eliminating wasted space.”

Our organization prides itself on our core values of community and team. These are the same ideals held by our partners in the industry. We have been very fortunate to partner with many local Chico businesses along with our school’s support. Upon completion of the competition in October, our house will be donated to Habitat for Humanity and supply housing for those in need in Yuba County.
Tiny House Competition Organizers

The Energy Education & Technology Center and Community Solar® program at SMUD work to engage young people in energy education. The Tiny House Competition challenges them to be creative in searching for ways to improve building performance and incorporate renewable energy technologies while reducing energy costs. SMUD is encouraging these students to help engage the community in conversations about sustainability and our place in the environment.
Meet the Tiny House Team

Community Solar
Brent Sloan works as a product service coordinator on the SMUD Customer Solutions team and has been with SMUD for 18+ years. He manages both the Community Solar program and the Residential Retrofit Solar program. Brent is involved in every aspect of SMUD’s solar programs from design, sales, install and inspection through program management. SMUD’s Community Solar program has won multiple awards for its work with local nonprofits and for creating, designing and installing the nation’s first Solar Sunflower™, which is a self-contained solar powered learning laboratory for local middle schools.

Energy Education & Technology Center
Suzette Bienvenue is an advocate for young people, helping them make better energy choices and preparing for a future that will be less dependent on fossil fuels. She supports renewable energy programs, specifically solar as well as plug-in electric transportation, through various programs developed for the Energy Education & Technology Center at SMUD. SMUD’s award winning programs, such as the Youth Energy Summit, Solar Regatta and now the Tiny House Competition, are made possible and successful through the partnerships formed with local public agencies and community partners. Suzette received her Bachelor of Science degree from the University of New Hampshire and CSU, Chico and a teaching credential from CSU, Sacramento.

Paul Gillaspy manages and coordinates the HVAC, mechanical, building science and industrial educational classes that are offered to SMUD’s commercial and residential customers and serves as a technical resource for those customers. Paul has been in the building management and facility operations industry since 1991. Paul has a Bachelor of Science degree in Mechanical Engineering, is a registered Professional Mechanical Engineer and a LEED (Leadership in Energy & Environmental Design) Accredited Professional. He is an active member of the local chapters of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), the International Facility Management Association (IFMA) and the US Green Building Council (USGBC).

Daniel Gehringer coordinates and supports educational classes and workshops and plays a vital role in community outreach and educational events. Daniel has been in the energy industry for 18 years and holds a Bachelor of Science degree in Strategic Management as well as Business Marketing. Daniel is very knowledgeable of the transportation sector, emerging technology and air quality policy. Daniel also made an impact by developing 3 new programs for SMUD: a Share Car program, Plug-in Electric Vehicle program and Low Carbon Fuel Standard program.
Meet the Judges

The Tiny House Competition judges are distinguished leaders in their fields. The panel is composed of individuals who bring academic excellence and practical, in-the-field experience to the competition. The Tiny House organizers thank all the judges for their contributions and work.

**Architecture**

**Angela Bracco** holds a Master of Fine Arts degree in product design from the Royal College of Art, London and a Bachelor of Architecture degree from California Polytechnic State University, San Luis Obispo. She is currently teaching beginning design at Cal Poly’s Architecture Department. She has a variety of professional experiences including historical renovation, metal fabrication and exhibition design. Angela’s recent endeavors have also led her to apply her architectural training within a curatorial context. She has curated shows in New York, Milan, London and the Netherlands.

**Maria Ogrydziak**, founder of Maria Ogrydziak Architecture, is known for her valley-inspired built works and her design and policy leadership. As past president of the AIA Central Valley Chapter (AIACV), she founded the annual Sacramento Region Architectural Festival. She was a member of the AIA California Council’s (AIACC) Board of Directors and Urban Design Committee and a juror for the AIACC and AIACV Design Awards. Currently, she is the AIACV’s representative to the national Custom Residential Architects Network (CRAN). Ogrydziak studied architecture at MIT and has taught architecture and design at MIT, Stanford and UC Davis. Maria was born in Stockholm to Estonian parents and was raised in Canada and Taiwan.

**Joanna Mack** is an architectural designer at Mogavero Architects. Joanna is involved in the early design phase through production of final construction documents and construction phase services. Her professional experience spans across multiple architectural sectors such as affordable housing, high density residential, healthcare, hospitality, mixed-use, in-fill development and urban planning. Joanna has spent the last few years developing methods of innovative neighborhood transformation and design strategies that strive to transform social conditions – a passion that began in architecture school. Prior to her work at Mogavero, Joanna worked as a research leader at app.LAB, a research based design studio in Chicago. During that time, Joanna was involved in multiple tactical design efforts from supporting research teams in conceptual design development of a center for innovative waste processing to designing micro artist apartments in Chicago’s Uptown neighborhood. Joanna graduated with a Bachelor of Architecture degree and Minor in Urban Affairs and Planning from Virginia Polytechnic Institute and Virginia University.

**Jim Barnett** is a licensed architect in California and LEED Accredited Professional. He holds a Bachelor of Architecture degree from Cal Poly, San Luis Obispo spending his fifth year studies at the University of Copenhagen in Denmark. He has close to 40 years of experience in both the commercial and residential sectors of sustainable architecture and construction. Barnett has designed...
dozens of homes and commercial buildings in California. Jim has been with SMUD for the last 24 years. His current position as principal architect has him managing the photovoltaic programs that support customer-sited renewable energy generation. He also acts as part of a team to support sustainable design practices with many SMUD customers and the local design community.

**Home Life**

**Isabelle LaRue** is the creator, producer and host of the award-winning DIY home design show “Engineer Your Space.” A building engineer affectionately referred to as “MacGyver and Martha Stewart’s love child,” Isabelle designs solutions that transform less-than-perfect small spaces into beautiful and functional homes that anyone would be proud of. Building everything on her own, Isabelle uses simple tools and inexpensive materials making her projects accessible to everyone, no matter how limited their budget or space. Her clever designs and knack for breaking down everything into manageable, easy-to-understand steps has made her videos and YouTube channel hugely popular with millions of views and her website, engineeryour.space.com, a favorite destination for DIY enthusiasts.

**Andrea Lepore** founded Lepore Development in 2006, a design-driven firm producing brands, concepts and developments with the goal of improving urban neighborhoods and our quality of life in Northern California. Lepore co-founded, and serves as the creative director for HOT ITALIAN pizza bar, launched in California’s Capital City in 2009. Lepore was awarded a 2013 Chapter Commendation by the American Institute of Architects, Central Valley Chapter for “recognition of (the) significant role in supporting and promoting sustainability, design, community and the urban experience in Sacramento” and for “providing opportunities to share the value of design, architecture and the built environment to the residents of our region.” As a graduate of UC Davis, Lepore earned a Master’s Degree in Sustainable Design at Boston Architectural College in 2016.

**Tennessee Edwards** is an executive producer with 16 years of experience in the TV & Entertainment industry. Tennessee works mostly in non-scripted TV and is an executive producer at Loud TV & Leftfield Entertainment. Tennessee started his career in Los Angeles as an intern on Lord of the Rings and later fell into the world of Reality TV and never looked back. He has produced shows for FOX, CMT, DIY, A&E, MTV, SPIKE, FYI and others. Tennessee has a passion for storytelling and works in all aspects of entertainment, but has recently specialized in Home Design shows. Tennessee is known in the industry for Home Design shows, which are TV shows that deal with the building, flipping or design of homes. This is a popular area in TV since everyone can relate to buying and fixing up a home or redecorating a room. Currently, Tennessee is the executive producer of Tiny House Nation on FYI and oversees the making of the episodes and the building of 52 Tiny Homes to date. The show is currently going into its 4th season and has been part of the growing Tiny House Movement. Tennessee lives and works in Los Angeles and New York where he continues his goal of making quality TV and helping others along the way.
Obadiah Bartholomy is the manager of Distributed Energy Resources strategy development for SMUD. His current role focuses on developing new strategies for SMUD to be able to better value and leverage Distributed Energy Resources like PV, storage, demand response, energy efficiency and electric. Prior to this role Obadiah spent 12 years in Energy Research & Development at SMUD leading their Climate Change, Energy Efficiency R&D and Solar PV research areas. Obadiah is a graduate from UC Davis’ Transportation Technology & Policy program with a Master of Science degree and has a Bachelor of Science degree in Mechanical Engineering from California Polytechnic State University, San Luis Obispo. He is a registered Professional Engineer in the state of California.

Constance Crawford is a marketing professional with several years of experience building strategic marketing plans for nonprofits. After receiving her Master of Arts in Communications from CSU, Sacramento in 2009 she joined Capital Public Radio and has been leading their efforts to grow their audience and move their top-quality programming toward the digital era. Prior to joining Capital Public Radio, Constance spent several years with the Sacramento Tree Foundation shaping their campaign with a goal to plant 5 Million trees using the Greenprint Initiative for the region. Constance received her Bachelor of Arts from UC Davis. She enjoys “any activity that only requires the average amount of physical coordination,” golf, toying with new gadgets and technology and cooking with family and friends.

Cara Chatfield is the manager of Corporate Communications at SMUD. Her responsibilities include communication strategy, content development and shaping channel strategy. Cara and her team deliver SMUD’s corporate and internal communications, including print, digital and video communications to support SMUD’s strategic direction, programs and services. Before joining SMUD in 2012, Cara worked for more than a decade in communications roles, including as a marketing communications consultant in Austin, TX and in corporate communications management positions in public power and water utilities in Australia. She has extensive experience in executive, change and employee communications, community engagement, sponsorships, government and media relations, social media management and crisis communications. A native of Ontario, Canada, Cara graduated from Brock University with a Bachelor of Arts (Honors) in Political Science.

Monica Woods is the chief meteorologist at ABC10 in Sacramento. Her forecasts can be seen weekdays at 5 p.m., 6 p.m. and 11 p.m. and heard weekday mornings on Modesto’s KAT Country 103. Monica is active on social media, posting about anything from weather to solar cooking recipes. She serves on the board for Solar Cookers International, a nonprofit organization that spreads solar cooking awareness and skills worldwide. Monica also served a term as president of Big Brothers/Big Sisters of Greater Sacramento, and sat on the organization’s Board of Directors for 3 years. She was also a weekly volunteer at the Sacramento office of the National Weather Service, where she helped compile statistical data for new forecasting areas. Monica Woods is a member of the National Weather Association and holds the NWA Seal of Approval. She is a former president of the local chapter of the American Meteorology Society, which is comprised of current and former area weather professionals.

Communications
Brian Lynaugh has been a Certified Energy Manager with the Association of Energy Engineers (AEE) since 1987. He has over 36 years of experience within the commercial temperature controls industry. Brian has held many positions in the industry from engineering, programming, performance contracting, energy auditing, technician resource management, sales and project management. He currently is an account executive for Direct Digital Controls in Sacramento, a firm focused on facilities control, system integration of various commercial control systems, utility energy metering and analytics, energy efficiency and commissioning. He currently serves as AEE NORCal Chapter Treasurer, and is one of the founding chapter members and a past chapter president.

Mark Alatorre started his career at the California Energy Commission in 2005 as an engineering student assistant for the Efficiency Division. Upon graduating in 2007 with a degree in Mechanical Engineering from California State University, Sacramento, Mark was hired as a mechanical engineer for the Building Standards Implementation Office. In this new role, Mark managed the Home Energy Rating System (HERS) providers and oversaw their recertification as the industry transitioned from the 2005 Building Energy Efficiency Standards (Standards) to the 2008 Standards. Mark was also a key member in evaluating the California Whole House Rating program, including the simulation software for whole house ratings.

In 2010 Mark moved from Standards Implementation to the Standards Development Office to serve as a member of the engineering team supporting the development and adoption of the HVAC measures of the 2013 Standards. Mark then took on the role of lead engineer for the Residential and Nonresidential HVAC measures of the now-adopted 2016 Standards, which will become effective January, 2017. Mark continues to serve in this role as the California Energy Commission moves toward the 2019 Standards. Mark is a licensed Professional Engineer in California.

Tim Clark has been a Certified Energy Manager with the Association of Energy Engineers (AEE) since 2005. He has 35 years of experience in the building efficiency industry working with numerous energy conservation projects including residential, K-12 schools, higher education, local government and industrial. From experience in both the construction and engineering fields, he possesses a wide-ranging knowledge of construction practices and energy efficiency techniques. This gives him a unique combination of energy, electrical, mechanical engineering, construction and project management knowledge and experience. He is currently an energy engineering manager for Johnson Controls Inc. in Sacramento where he is the technical development lead for complex energy conservation projects. These projects include building analysis modeling, renewable energy, HVAC and lighting and building envelope measures to reduce energy use in buildings and to create a sustainable environment. Tim also currently serves on the AEE NorCal chapter board of directors.

Jim Parks is a program manager in the Energy Research & Development department at SMUD. He currently oversees energy efficiency and grid modernization research and development projects. He recently completed a $308 million smart grid initiative (SmartSacramento®) with over 40 individual projects ranging from smart meters and distribution automation, to customer programs including demand response and energy efficiency. Jim previously worked with emerging energy
efficiency technologies, electric transportation, energy efficiency program development, energy efficiency program operations and transmission planning.

Scott Tjaden holds a Master’s degree in Ecological Engineering and an undergraduate degree from the University of Maryland. Scott is currently an environmental scientist within the Advanced Technology Evaluation and Smart Grid and Technology group at Pepco Holdings, an electric utility subsidiary of Exelon in Washington, DC. He manages small scale pilots that look at how emerging technologies can be integrated with the last 20 feet of the gridlock, while helping to increase customer energy efficiency and resiliency. He was a critical part of the original design and construction of the University of Maryland’s winning 2011 Solar Decathlon entry, named WaterShed. WaterShed—now owned by Pepco—is used as a sustainability education center in Rockville, MD. Scott is developing relationships with local organizations and schools in the Maryland/DC area to increase visibility to Pepco’s various customer programs as well as providing a platform to educate customers on the bigger picture of sustainability.

Remote Measuring Captain

Dave Bisbee is a Certified Energy Manager with over 26 years of experience in the energy industry working with commercial, residential and public sector customers. He has served as a project manager for SMUD’s Customer Advanced Technologies program for the past 14 years, testing emerging energy efficient technologies in real-world environments. Dave was awarded the California Military Department Medal of Merit while serving as a resource efficiency manager for the California National Guard.

Energy Management Captain

Joe Simon is a senior engineer at the National Renewable Energy Laboratory who primarily works to support building energy efficiency, solar installation deployment and workforce development. He has extensive experience supporting educational design competitions, including the U.S. Department of Energy’s Solar Decathlon and the Race to Zero student design competition. He served as the competition manager for the U.S. Department of Energy’s Solar Decathlon—a competition challenging university students to build fully-functional solar powered houses from 2011 through 2016—and continually works to understand the role that smart building design can play in the overall energy field, including both conservation and renewable production. He has a Master of Architecture, Master of Business Administration and a Bachelor of Science degree in Architecture from the University of Illinois at Urbana-Champaign.

Costing Captain

Matt Hansen founded Takeoffs Construction Estimating- a construction estimating firm in 1984, and 650 Corp- a residential design and construction administration company in 1999. Takeoffs.com uses their proprietary estimating system to determine the materials requirements for construction projects to reduce excess materials. Matt’s estimating skills earned him the nickname “Costimator” from university students during the 2011 Solar Decathlon.
Why is a utility promoting Tiny Houses?
SMUD is using the popular topic, The Tiny House Movement, as a vehicle to grow interest among young people in Science, Technology, Engineering, Art and Math (STEAM) education and to promote renewable energy, sustainable building and energy efficiency.

Why compete?
This competition was designed for college students who want to explore zero net energy building, green building techniques and sustainable living. This is a great opportunity to showcase SMUD’s commitment to energy education and for the competing schools’ engineering, construction, environmental or architecture departments to be creative and innovative in their competitive design approach.

Will I get to see the Tiny Houses?
College teams will give tours of their respective houses from 10 a.m. to 4 p.m. on Saturday, Oct. 15.

Do I get to choose a winner for the Tiny House Competition?
The grand prize will be awarded to the team with the most points after the judging portion of the competition. You can participate in the Public Choice Award category by voting for your favorite design using the ballot and survey in this program. Please drop off the ballot/survey in the drum at the SMUD tent. The winner of the Public Choice Award will be announced on smud.org/TinyHouse.

How can I learn more about the colleges and universities participating?
Each school will host a booth promoting their college or university and the disciplines represented by the team.

Why is 400 square feet the maximum for the competition?
Tiny Houses are classified as Recreational Vehicles (RV). An RV cannot be larger than 400 square feet.

Has the Tiny House Competition been held before?
This is the first-of-its-kind design-build competition featuring off-grid, sustainable architecture. The Tiny House Competition is modeled after the Department of Energy’s Solar Decathlon competition.

What will happen to the Tiny Houses after the competition?
Some of the houses will be donated to charities or foundations and others will be sold with the proceeds seeding new construction projects. Some houses will be used as learning labs on the university or college campus.

What do the winners receive?
The winning colleges and universities will receive monetary awards, which were provided by the event partner and sponsors. The prizes can be viewed at the Tiny Houses during the tours.

Where can I get more information about the competition or help?
You can find information and first aid assistance at the SMUD tent located at the event entrance.

Where do I get more information on Tiny Houses, solar and energy efficiency?
Informative presentations will be held at the Main Stage on the half hour.
Partner and Sponsors

SMUD thanks all who contributed financial awards and prizes for this event. The Tiny House Competition could not be possible without your support.

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Raley’s

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