

## **BeyondFire™ Sustainable Utility Nodes™ (SUN) Post-Conference Workshop**

Too long have we burned fuels for our community's energy needs. We currently rely on hunting and gathering dwindling and volatile fossil fuels to provide the power we need for supporting our societies progress. The external costs of this system are too high. We envision a world where buildings are distributed energy generation nodes that harvest electricity and power without the side effects of pollution, security threats, and price volatility. Each building can form an individual SUN and function within the grid infrastructure already built. With innovative financing and a dedicated mission, renewable energy can help all our communities progress into a future of health, safety, and prosperity. Fossil fuels have long caused combustion in both energy and politics and it is time to move beyond this harmful addiction, BeyondFire.

### **BeyondFire Workshop Schedule**

#### ***8:00-8:30am***

Coffee, bagels, registration and Networking

#### ***8:30-11:00am***

Opening speeches:

- Introductions (Karl Johnson, BeyondFire Institute cofounder)
- A short history of fire (John Perlin, UCSB; author)
- What does it mean to be BeyondFire? How we can bring SUN to our campuses! (Lucas Johnson, BeyondFire Institute, cofounder)
- PV solar powering direct current (DC) building loads like lighting and energy efficient motors leading us closer to zero net energy buildings (Paul Savage, CEO, NEXTEK)
- UCSB Sustainability Plan Overview (Mo Lovegreen, Campus Sustainability Manager, UCSB)
- Panel Discussion: Key Factors for creating Sustainable Utility Nodes (SUNs) on campus
  - Economics and Policy (William McTague, Student Affairs at UCSB)
  - Planning (TBD)
  - Planning and Facilities (TBD)
  - LED Lighting Overview (Steve DenBaars, UCSB)
  - Solar and Renewable Energy (Terry Peterson, Solar Power Consulting)
- Quick closing summary explaining what will happen during the afternoon brainstorming breakout sessions (Karl Johnson, and others)

#### ***12:30-1:30pm***

Lunch and networking

### **1:30-3:30pm**

Three breakout sessions to discuss:

How to best implement sustainable zero net energy and carbon in our community?

(1) Economics and Policy: *What policy changes need to occur for zero net energy buildings to become clear in their necessity? What new economics exist?*

(2) Planning and Facilities: *Which approaches to evaluation would show that both externalities and life-cycle-costing analysis support the construction and retrofitting of buildings for zero net energy?*

(3) Science and Technology: *What are the best options available for energy efficiency, renewable energy input, and energy storage? What further research is necessary and what new technologies could this research generate?*

Note: In each breakout session there will be a note taker and a section leader to guide the discussion.

### **3:30-4:00 pm**

Time to catch your breath before closing workshop section

### **4:00-5:00 pm**

Closing summary of breakout sessions. We will make a list of four key points for each of the three breakout sections. This will lead to a unified top twelve goals for implementation SUNs on earth over the next two years.