



# LED TOURS

## DOE SSL Market Introduction Workshop—Guided Bus Tour

Pittsburgh, Pennsylvania · July 17, 2012

Join us on a guided tour of selected LED lighting installations in Pittsburgh. A bus will pick up and drop off tour participants at the workshop hotel. (Registration required; \$20 transportation fee. Check at Registration Desk for seat availability.)

### Wyndham Grand Hotel

600 Commonwealth Place, 7:00 p.m.

Meet in the hotel lobby near the piano in the lobby lounge.

### Phipps Conservatory and Botanical Gardens

Schenley Park



Phipps Conservatory is a cultural and architectural centerpiece of Pittsburgh, and its new Center for Sustainable Landscapes is one of the world's first certified Living Buildings. With both new installations and retrofit lamps, LEDs illuminate the beauty of Phipps' buildings and grounds, and the nature they contain. Jason Wirick, Director of Facilities and Sustainability, will guide our tour of Phipps, provide background on the LED selection process, and share unique uses of LEDs in this historical landmark, including desk lamps (3W Finelite), under-cabinet (6W Alkco), and exterior building and site pole lighting (74W BetaLED/Cree).

After visiting Phipps, City Councilman Bill Peduto will meet the group to discuss the Pittsburgh LED Project—including the process, obstacles, and challenges. He will also talk about Pittsburgh's outdoor lighting action plan, and how the city's lighting code was developed and now works as part of a sustainable Pittsburgh.

### Carnegie Mellon University

Oakland



Carnegie Mellon University (CMU) is recognized worldwide as a top-ranked, global research university. CMU investigated LED street light replacement options for Pittsburgh, as well as how LEDs can reduce greenhouse gas emissions.

Our driving tour along the south edge of the CMU campus will view LEDs illuminating Hunt Library after dark (Philips Color Kinetics ColorBlast 12 LED wash fixtures and ColorGraze Powercore fixtures with iPlayer controller), as well as Cree THE EDGE Area Round Luminaires surrounding the library. Also visible at CMU are Hadco and Beacon 80W retrofit LED lighting sources in pole lights originally equipped with 150W metal halide lamps.

### Walnut & Bellefonte Streets

Shadyside

The site of Pittsburgh's original LED street light pilot, Shadyside is a lively shopping and dining district that requires vibrant, visually pleasing, and progressive lighting. LED street lights help keep the neighborhood safe and inviting. Using expertise at local universities, the city evaluated nearly 50 different LED street lights, and adopted a lighting code intended to bring uniformity to lighting citywide, before creating a competitive process for fixture selection. The lights currently featured on Walnut and Bellefonte Streets are from BetaLED/Cree and King Luminaire.



### GNC Store at 6th and Wood Streets

Downtown

Headquartered in Pittsburgh, GNC retails vitamin, mineral, and herbal supplements as well as sports nutrition, diet, and energy products. In 2010, GNC replaced over 55,000 incandescent lamps, and now all store displays use LED lighting. Art McSorley, Vice President of Retail Operations and Construction—who oversees the design, build out, and maintenance of over 3,000 GNC retail stores—will explain why GNC chose Sylvania 770-lumen and Lighting Science 960-lumen PAR 30 lamps for their retail storefronts, and why GNC estimates a 1.1-year payback. This site will also invite comparisons between HID and LED PAR lamps in use at a retail storefront.

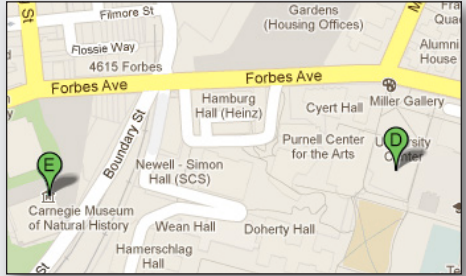
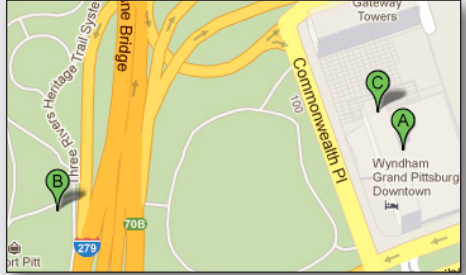
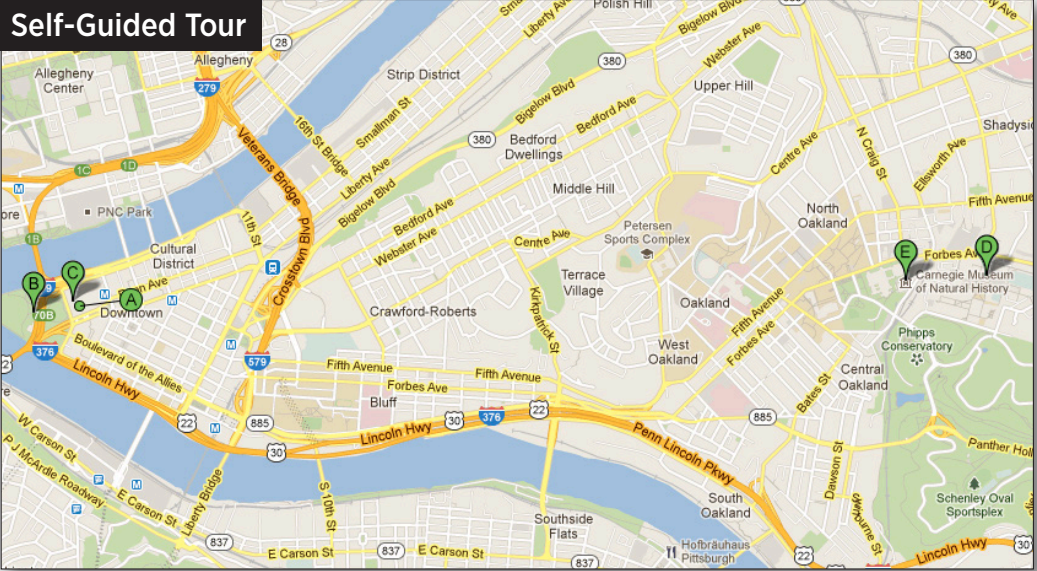


The bus will return to the Wyndham around 9:30 p.m.

# DOE SSL Market Introduction Workshop—Self-Guided Tour

## Pittsburgh, Pennsylvania

Visit these installations on your own as your schedule allows.



**A Wyndham Grand Hotel**  
600 Commonwealth Place

**B Point State Park**  
Located directly across from the hotel

Steeped in history, Point State Park sits where the Monongahela and Allegheny Rivers meet to form the Ohio River in downtown Pittsburgh. In this former trading post and military fort, HPS cobra head fixtures are being replaced with LEDs. (Only one has been replaced at the time of printing.) Also, the original sites of both Fort Duquesne and Fort Pitt are marked by a granite tracery (outline) and illuminated with LED lights.

**C Gateway Center Parking Garage**  
Entrance at 400 Liberty Avenue (adjacent to Wyndham)

Park on or visit the second-floor deck to see Appalachian Lighting Systems ALLED CL2 fixtures with an embedded wireless control and monitoring system. The 33W ALLED CL2 lights are 67 percent more efficient than the HPS lights they replaced. An underground walkway connects the Gateway Garage to the Wyndham.

**D Carnegie Mellon University**  
5000 Forbes Avenue, Oakland

An evening walk through campus will allow a view of the Randy Pausch Memorial Bridge (Philips Color Kinetics ColorGraze Powercore fixtures with Pharos LPC-20 controller), where the architecture and lighting reflect themes from Pausch's book, *The Last Lecture*. In addition, stop by the Hunt Library to view LEDs seen on the guided bus tour (details on front side of flyer).

**E Carnegie Museum of Natural History**  
4400 Forbes Avenue, Oakland

Carnegie Museum of Natural History collects and cares for specimens and artifacts that document the history of life on Earth. The museum is converting selected gallery and case lighting to LED, and visitors can see Juno Trac 12 spotlights in cases in the Hillman Hall of Minerals and Gems (particularly the Birthstones case in the Wertz Gallery). Also, in the entrance to Polar World in the Wyckoff Hall of Arctic Life, Superbright LEDs 50W PAR 30 lamps are installed in track fixtures overhead, and Superbright LEDs strip lights are in the cases.

### Business districts around Pittsburgh

LED street lights have been installed in several Pittsburgh business districts, including Walnut and Bellefonte Streets in Shadyside (also seen on the guided bus tour), Carson and 24th Streets on the South Side, 21st and Mary Streets in the South Side Flats, and at various locations along Fifth and Forbes Avenues in downtown Pittsburgh.