

## July 20 2010 Consortium Webcast Questions

1. **Question:** Will the Consortium consider a list of manufacturer's P/Ns [product numbers] along with measured light qualities at fixed distances that they consider reliable and feasible?

**A:** The Consortium has posted a [Manufacturer's Page](#) for submitting products to be considered for demonstration. When selecting among options available for demonstration, the Consortium will first consider those products having complete documentation. The products demonstrated will be identified in published project reports; however, the Consortium will not be maintaining a qualified products list.

2. **Question:** Q for Ms. Olay: I think you said "streetlights cannot cost-effectively achieve commercial levels of accuracy" -- ? Could you please elaborate?

**A:** The statement refers to meters. If the utility companies require municipalities to install streetlight meters to the accuracy level of residential and commercial meters, then it would not be cost effective at this time. Note that this situation may change at any time, however, given ongoing rapid developments in streetlight metering technology.

3. **Question:** Were there age demographics collected with the surveys? The fact that the eye lens yellows with age will cause problems for the aging population for the bluer end of the spectrum.

**A:** Yes, each survey contains (optional) questions on both age group and gender.

4. **Question:** What kinds of certificates are required to sell our products in the US? Which entity/ies we should get into contact to get Energy Star label?

**A:** No certificates are "required," though most buyers would refrain from purchasing products without standard safety testing (e.g., UL, CSA, TUV) certification, among other requirements such as offering a sufficient warranty. Individual users may also impose additional requirements such as ENERGY STAR® labeling, although some products aren't yet covered by the program at this time. As of publication of these Q&As, the ENERGY STAR qualifications page is located [here](#).

5. **Question:** As a dimming strategy have any of you contemplated the use of hybrid luminaires? Specifically, HID/LED, wherein, LED could be shut down late in the

evening leaving a lower Kelvin HID operating. This may be a solution for Lick Observatory

**A: We will take this into consideration where such functionality is warranted. The added system complexity may have cost, maintenance and performance implications however.**

- 6. Question:** I understand the focus on street lighting and street lighting issues for utilities including protecting the franchise value of street lights. (un-metered, liability, tariffs, etc). However, why would utilities erect barriers to LED area lighting in local government parks or parking lots on a metered general use tariff? I haven't heard a compelling rationale yet on withholding incentives on LED lights on local government accounts behind a metered general use tariff. The requirement for testing every possible variation (CCT, distribution type, specific model, etc.) for pre-qualification for incentives is unique to LEDs and amounts to increasing barriers to entry for large LED manufacturers. Induction area lighting retrofits are subject to much less rigorous engineering standards and are incented on a post-hoc basis in So Cal. This disparity in treatment results in the inevitable interpretations about utility obstructionism.

**A: The wide variation in performance and quality among LED products available on the market requires that utilities and other lighting investors proceed with caution, and conduct due diligence in their selection. The situation can be expected to become less stringent as additional field experience and familiarity with the technology is gained.**

- 7. Question:** Which wireless controls technologies did San Jose evaluate? How did they rank?

**A: San Jose has deployed both powerline and wireless technology. The ROAM system was used in one of the pilot projects and the Ripley system was used for a short term demonstration project. Products are still under evaluation.**

- 8. Question:** Aside from grants, what kind of commercial financing or other financing would be available to cities?

**A: One alternative source of financing would be Energy Savings Contracts (ESCOs) which pay for themselves over time through the savings guaranteed by the company providing the services. Numerous ESCO companies offer such financing. Note: The U.S. Department of Energy does not provide financing for equipment or installation through its GATEWAY Technology Demonstration Program; that program provides only analysis and related product testing as needed by the individual project.**

**9. Question:** How does LED compare with induction lighting? Some research that I have come across indicates induction may have better illumination characteristics and less maintenance.

**A:** Induction luminaires often exhibit low fixture efficiency, meaning that much of the rated lamp output is trapped inside the luminaire. Additionally, the relatively large physical size of induction lamps combined with their 360° output makes them difficult to optically control, often resulting in relatively small areas of coverage and poor uniformity in applications requiring wide pole spacing (e.g., as is typical in streetlighting), as well as substantial uplift. Insufficient field data exists to provide a definitive answer regarding the relative maintenance.

**10. Question:** Please comment on LED streetlights meeting Dark Sky requirements

**A:** The hemispherical emission pattern of the source often yields a downlight-only distribution for LED luminaires. Numerous LM-79 test reports are publicly available across a wide variety of luminaires that demonstrate zero direct uplift.

**11. Question:** Did one approach City's risk management and/or Attorneys with regards to LED Pilots or LED replacement projects? If one improves or lowers lighting levels were there any concerns from Risk or Attorneys? Just curious if this question ever came up.

**A:** GATEWAY strongly recommends adhering to IES (or other locally specified) minimum guidelines pertaining to the relevant application for this very reason. Potential liability from illumination levels that are below recommended practice is a cause of concern among many municipalities and other users.

**12. Question:** To panel: Are you using fixture's from Caliper program? Are they LM79, 80 TESTED?

**A:**

- a) San Jose requires all LED lights be tested according to LM79 and LM80.
- b) The two types of LED fixtures that the City of Portland has installed on demonstration projects have been LM79/80 tested.

**13. Question:** To Panel: Most cities\towns have ornamental very expensive fixtures in their systems. These types of street lighting need a retrofit led type. Have you used these types of systems as of yet?

**A:**

- a) No, San Jose has not tested any retrofit kits for the ornamental style lighting.**
- b) The City of Portland will soon receive two LED retrofit kits that will fit into our acorn-style globes. We will install both kits on one of our twin ornamental street lights near our downtown office. If we like them, we may install 44 on an upcoming project.**

**14. Question:** Has anyone evaluated the pros and cons of a "maintenance roll out", meaning installing LED instead of relamping or replacing a head?

**A: Some locations already pursue a spot replacement strategy, where instead of relamping or replacing conventional fixtures when needed, new LED luminaire heads are installed. This approach can be made to work but introduces potential issues with obtaining bulk pricing and stocking/inventory of the LED luminaires.**