WESTCOAST LIGHTING INSIDER

Lighting as a Service: New Tool or Old Saw?

by Lois I. Hutchinson | Feb 19, 2019 | WCLI Feature Article | 0 comments

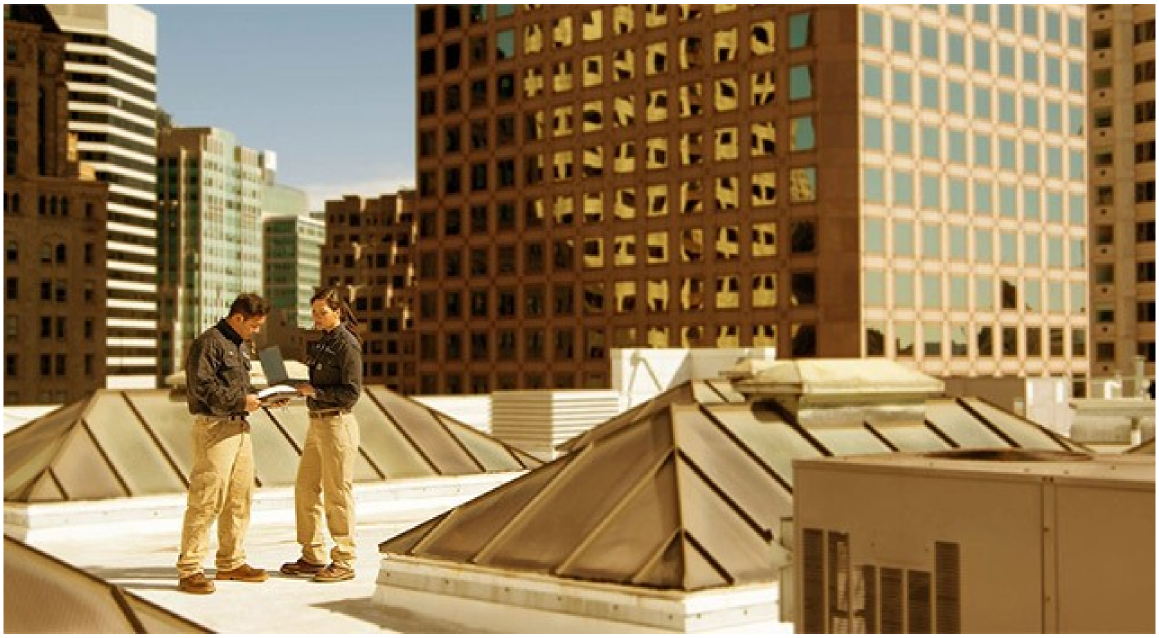
Popularized by software – where a program that one previously would own is now licensed on a subscription basis – Anything as a Service (XaaS) has spread throughout IT, the internet of things, and the worldwide web. The model is used for telephony, industrial machines, transportation, and home entertainment, of course.

Forays into solar, energy storage, HVAC and lighting pitch the as-a-service model as letting owners focus on their core business by not investing in or maintaining expensive infrastructure upgrades. That's compared to a conventional capital-expenditure (capex) project where financing, bidding-purchasing, choosing contractors and project management can be expensive in terms of cost, time invested and risk. A lighting as a service vendor (LaaS) will take on those responsibilities, potentially rolling out more projects more quickly.

Without getting into the specifics of off-balance sheet exposure and tax liabilities, LED lighting retrofits, particularly connected lighting, can turn a what have traditionally been capex projects into lighting as a service. Connected lighting provides functional and operational data, potentially enabling lighting manufacturers and channel partners in providing maintenance services and other value propositions driven by big data. Think "smart cities." A report from Navigant Research projects global revenue for LaaS will reach $2.6 billion by 2026.

Citizen Energy has been focusing on LaaS for multifamily residential. "In those places you get great opportunities to provide energy savings, better luminance, better quality lights; and [with rebates] the financial model worked. Now I think costs have come down so much for LEDs that you can go really into different marketplaces. It could be K–12 schools, office locations, universities…" said Nate Kinsey, district energy manager for the San Francisco Unified School District and an energy and project finance advisor for Citizen Energy. He explained that SFUSD has not employed LaaS, partly due to low energy costs, but other school districts are exploring LaaS contracts that include measurement and verification (M&V) technology.

Shared savings, performance contracting, leasing, on-bill financing, utility-owned streetlighting tariffs – these are all longstanding vehicles for selling zero-upfront, high-benefit lighting solutions. And ESCO performance guarantee contracts are commonplace in K–12. But Kinsey sees a quality-lumens-as-a-service model as preferable to an ESCO. "ESCOs are based on calculated savings, so there's not actually an M&V piece to many of the contracts. They have engineering backends, and those engineering backend calculations tend to be overly optimistic – runtimes change, people use the building differently…. If you're measuring and monitoring that lighting equipment, you know when it's on, you know when it's off. Depending on what model you use, you could charge based on when it actually is running."



Courting companies that view their energy use holistically, "data-obsessed" Carbon Lighthouse is prospecting an estimated $100 billion in wasted energy in US commercial buildings.

Benefits beyond lighting efficiency

Quality lighting for health and well-being is an established trend in high-end architecture; the potential for improved educational and productivity outcomes drives that market. Kinsey sees the WELL standard and circadian benefits as a future pull for LaaS retrofits, not necessarily an energy proposition. Connected tech, according to Bob Smith, director of energy marketing solutions for Eaton's Lighting Division, provides opportunities for out-of-the-box value propositions, such as asset tracking, either currently available or up and coming.

Kinsey added that many owners see energy use as monolithic and may not separate out lighting as a target. A whole-building company like Carbon Lighthouse combines a spectrum of efficiency measures and clean energy. Connected sensors and proprietary cloud software allow ongoing monitoring along with building adaptations and subtle optimizations.

SIB Lighting is part of SIB, which focuses on overall expense management and fixed-cost reduction. Normally, expense management consulting is paid on a contingency basis (a percentage of savings realized). But many of SIB's lighting retrofits involve the installation of hardware and fixed, monthly LaaS payments, according to David Etzler, president. He, too, relies on post-retrofit data to prove savings by showing how operating hours and wattage affect the customer's energy bill. In a simple installation like a parking garage, connected controls or submetering may not even be needed. An arena would require more-complex zoning and lighting controls.

"The majority of our deals are lighting redesigns," Etzler said. "Our customers are mostly mid-market manufacturing firms, and their infrastructure is maybe 20, 30+ years old. They've moved things around so much that it's not just about one-for-one replacement anymore. Now it's about how do we really make this system better." Because SIB's LaaS contracts usually include maintenance over 10 years, quality materials with minimal warranty issues are vital.

SIB Lighting also installs traditional capex projects. "I'm surprised by the companies that want to go with the lighting as a service compared to the companies that don't. It's hard to predict." Individual businesses have different priorities for capital, cashflow, debt load, etc. "[LaaS] definitely helps us get through the number-one objection in all projects: how do I pay for this?" Etzler explained. "This gives them the ability to use that capital [or debt] for their core business, but improve infrastructure at the same time."

The Discovery Children's Museum wanted to enhance the visitor experience and reduce the museum's energy usage and environmental impact. LightEdison and Sparkfund provided fresh lighting at a small monthly savings with no upfront costs.

Lumens as a service

LightEdison is established in LaaS, with pro forma agreements with electrical contractors in a dozen states, according to Osea Nelson, partner. He said there are five to ten major lenders in this space with "a new one popping up every day." LightEdison primarily works in industrial and distribution types of spaces: large footprints with long operating hours.

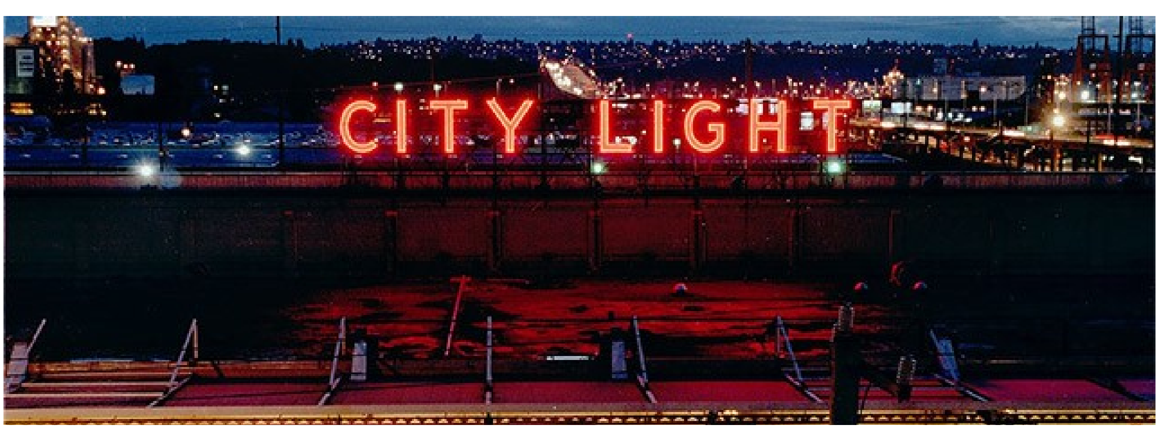
Nelson explained that stringent energy codes set a higher bar for entry in lower-hour, lower-electrical-rate facilities. “We’ve only been in California for about a year now, and California is phenomenal. The energy rates certainly help, but they’ve got [Title 24].” In those cases, he points customers toward production efficiencies or reduced downtime, safety enhancements, health and well-being benefits, sustainability and brand value, etc.

“It really is unfortunate that we always ask, Does it pencil?… There are all kinds of operational and sustainability impacts that have real dollar values for their companies,” said Nelson. “But unfortunately, it’s really hard to monetize that in the initial discussion.”

Sparkfund is offering what they term as a subscription model for “lumens as a service”: connected lighting systems for a single monthly payment. “Performance contracts, and some of the other options that are out there, have limited customers to pursue pockets of lighting that work in terms of cash flow positivity. But there’s a much larger market of customers who are looking to put in new, better energy technology, whether it be lighting or other technology, for reasons beyond just cost savings. Our model really allows for that. It allows for a single approach across all of the building energy infrastructure, and that includes lighting,” said Asher Burg, Sparkfund’s chief revenue officer. “We see customers be able to pursue lighting projects across their building portfolio that wouldn’t otherwise be achievable through some of the historic approaches that have existed; like energy savings agreements or cash or loans where [projects are] limited based on budget or debt capacity.”

Sparkfund points to the Discovery Children’s Museum in Las Vegas as a project that offered a tiny positive cashflow, but with improved aesthetics and lighting quality that can be achieved with fresh lighting. Sparkfund provided funding to LightEdison to upgrade fluorescent T8s and some other instruments to LED.

The inherent costs of project management can make some projects too small. “We really try to avoid that mentality. If you’ve got a motivated buyer and they want to help improve their business and their community through an upgrade, then that gets us excited,” said Nelson.



Utility-owned streetlighting, paid for by municipalities via tariffs, is the classic LaaS model.

Same old saw?

"Lighting as a service has been going on through the utility streetlighting market for decades. It's just how you define 'lighting as a service' is the big question," said Smith. "That product is provided to municipalities and residential homeowners for a fee, essentially as part of their power bill. Or in the case of a municipality, they may actually have a separate invoice for that."

Leasing is common in the commercial lighting market, where a third party might own the lighting equipment and the lessee pays for use at an agreed-upon rate. Smith claims that these arrangements are often termed "lighting as a service." "ESCOs, they've been offering something very similar to this, and that structure tends to be pay for performance. That's what they do day-in and day-out, but that's been around for decades, as well. But that's more of a capital lease model, not an operating lease model."

Nelson explained that LaaS funders hold the title on the equipment and enjoy any tax benefits. LightEdison contracts are generally 5 years, during which the funder is made whole, and the funder can claim the equipment at the end of the term or abandon it. "It is that wink and a nod," he said, "We're abandoning it, so you get title," Nelson said. "Sparkfund does a really good job of saying, here are the four or five options you have at the end of term that make it play like a service agreement." Of course, at the end of the contract term he hopes customers will continue with a maintenance-only contract and initiate another upgrade in short order.

"We used to think that we're delivering a lumen, so it's literally off-balance sheet, and that's what people are driving towards. For us, we haven't seen that be as big of a driver as we thought it was. It's more about the 5 year contract partnership, where the load is lifted off the company.... Someone is there with them for the 5 years of 'bumper-to-bumper' service."

About the Author | Latest Articles

About Lois I. Hutchinson

Lois I. Hutchinson is a freelance writer specializing in lighting and energy issues. She is also the content marketing mastermind behind Inverse Square LLC, a Los Angeles–based consultancy. Contact her via lightinginsider@exponation.net with your comments and any article ideas that concern the lighting community here in the Southwest.

Comments are subject to approval.

This site uses Akismet to reduce spam. Learn how your comment data is processed.

Copyright © 2020 LightShow West. All Rights Reserved | Hosted by FlyWheel