

## BILL GATES WARNED US ABOUT THE NEXT PANDEMIC IN 2015

[https://www.ted.com/talks/bill\\_gates\\_the\\_next\\_outbreak\\_we\\_re\\_not\\_ready](https://www.ted.com/talks/bill_gates_the_next_outbreak_we_re_not_ready)

In 2014, the world avoided a global outbreak of Ebola, thanks to thousands of selfless health workers -- plus, frankly, some very good luck. In hindsight, we know what we should have done better. So, now's the time, Bill Gates suggests, to put all our good ideas into practice, from scenario planning to vaccine research to health worker training. As he says, "There's no need to panic ... but we need to get going." This talk was presented at an official TED conference, and was featured by our editors on the home page.

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## National Energy Market Observer:

1. **Coronavirus Outbreak Leads to Hot Sale of UV Light, Accelerating UV LED Development** - The world spreading coronavirus has brought people's attention to infection prevention with masks and disinfecting products in short supply. UV lights with disinfecting function also become popular. Conventional UV lights with mercury lamps have been in hot sale for disinfection with the outbreak of coronavirus, leading to shortage in materials such as quartz glass and lamp frame. UV LED, as another UV light source, also become a market focus as people are getting more aware of the infection. UV LED technology developers seize the opportunity to push their UV LED products and increase investment to accelerate development in UV LEDs in order to improve specification of UV LEDs so that they will be able to replace mercury lamps sooner. [https://www.ledinside.com/news/2020/3/uv\\_led\\_coronavirus](https://www.ledinside.com/news/2020/3/uv_led_coronavirus)

2. **TrendForce's Analysis of Coronavirus Impacts on LED, Panel and Related Consumer Products** -The following analysis shows TrendForce's investigations of key component and other downstream technology industries, under the impact of the coronavirus (COVID-19) outbreak, with the latest data as of February 14, 2020. The pandemic not only negatively affected the production's supply chain, but it also hurts China's consumer confidence and reduces end-market demand in the short and long run, respectively. Considering the pestilence's potentially negative impact to China market's demand, TrendForce moved down the top 3 application categories' shipment scales for the year 2020. For more information, please visit: <https://press.trendforce.com/press/20200217-3334.html>

3. **An Assessment of a Hybrid Lighting System That Employs Ultraviolet-A** - Reducing healthcare-associated infections is critically important. A new hybrid lighting system technology, designed to provide both visible white light and disinfecting UV-A radiation, was retrofitted into a modern hospital newborn intensive care unit. The UV-A dosing was set to levels calculated to be safe for human occupation. Professional staff accepted the hybrid lighting system, although its implementation in this newborn intensive care unit was not completely satisfactory. An analysis of photodegrading effects suggested that UV-A resistant equipment and furnishing may need to be installed with this technology. The present findings should form the foundation for the next generation of this lighting technology. <https://journals.sagepub.com/doi/10.1177/1477153520904107>

4. **Preparing for Outbreak: How Hospitals Brace for Infectious Diseases by Scott Cormier** - The novel coronavirus is spreading rapidly, causing facilities managers all over the world to make sure infectious disease emergency preparedness plans are up to date. But the coronavirus is not the only infectious disease affecting patients today. The CDC estimates there have been 19 million cases of the flu with 10,000 deaths this season. While the coronavirus is new and not entirely understood yet, the flu strikes every year and always takes a heavy toll. It is vital that hospitals are prepared for outbreak, whether the disease is as rare as the coronavirus or Ebola, or as common as the flu. It's no longer a matter of if an epidemic strikes, but when. There may only be a handful of the coronavirus in the United States, but the common flu is far deadlier and more widespread. Healthcare facilities must always be prepared for infectious disease outbreaks to prevent the spread of both misinformation and disease. Ensuring experts are collaborating and keeping practices up to date will not only help facilities if an epidemic hits, but when. <https://www.facilitiesnet.com/>

**5. To Members of NEMA's Lighting Systems Division** - As you're seeing in the news, many states, counties, and cities are instituting shelter-in-place policies to slow the spread of COVID-19. This is most likely impacting your facilities, some of you may have already been forced to shut down or reduce on-site staff. NEMA's Government Relations Team is leading the effort to respond to these ordinances, seeking exemptions for electrical manufacturers as "essential," because in the case of your products and systems, lighting can represent safety and security for all establishments, and the need for replacement lighting products continues. This is particularly relevant for healthcare facilities, pharmacies and grocery stores that may not stockpile inventory. If you would like more information on the NEMA efforts, please reach out directly to Phil Squair- our VP of Government Relations (email: [Philip.Squair@nema.org](mailto:Philip.Squair@nema.org)) and Patrick Hughes our VP of Operations (email: [Patrick.Hughes@nema.org](mailto:Patrick.Hughes@nema.org)) This is a fast-moving issue, NEMA has created a special section of our Intelligence Portal Digest related to COVID-19. It includes NEMA-written articles updating Members on our response efforts. To give you an example I've attached a PDF from today's digest. If you are not receiving the Intelligence Portal Digest, please let me know and I will work to get you set up to receive them.

Stay Well,

Karen Willis

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**6. Corona Crisis: Lighting Firms Act to Keep Business Rolling** - Lighting manufacturers and design practices are implementing unprecedented measures to maintain business during the coronavirus crisis. Across the industry, business travel has halted, staff are working remotely and strict hygiene measures are being implemented by production staff and delivery drivers who are still active in the market. However, many construction sites and projects are still active across the country and deliveries of orders of lighting products are continuing.

**7. Affected by Coronavirus, Signify to Increase Price on Its LED and Lamp Products** - Signify sent a letter to its customers in the U.S. noting that the company is treating the coronavirus epidemic as a force majeure event which had led to considerable additional costs in its logistics chain. As a result, the company is going to charge a temporary increase of 3% on all LED electronics (including Emergency products), and Lamp electronics (Magnetic and Electronic ballasts) for orders placed from April 1, 2020 onwards or for future-dated shipments on orders placed in the month of March. Any existing open project quotes or special price agreements will also be subject to the new price schedule. Even though Signify said it's a "temporary" increase, it also mentioned that it does not yet know how long the increase will last as the full impact remains unclear. [https://www.ledinside.com/news/2020/3/signify\\_price\\_increase\\_coronavirus](https://www.ledinside.com/news/2020/3/signify_price_increase_coronavirus)

**8. 2020 Rebate Outlook by Craig DiLouie** - Reducing initial cost by an estimated 20-25 percent, rebates remain a strong incentive for investing in energy-efficient lighting and controls. In 2020, significant rebate opportunities are widely available for LED lighting and controls, including growing availability of rebates for networked controls. Rebates are offered by utilities seeking to avoid the cost of building new power plants by reducing demand. While custom rebates are available, the majority of rebates are prescriptive, with a cash amount awarded per installed qualifying product, and with the rebate capped at a maximum percentage of its cost. Typically, the rebate is given to the customer, though some rebates for very common luminaires and lamps are "midstream," realized at the point of sale. About three-quarters of the United States is covered by some 380 commercial lighting rebate programs, according to rebate fulfillment firm BriteSwitch. Visit the website of your local utility or click here to determine rebate availability in your area. <http://lightingcontrolsassociation.org/2020/03/20/2020-rebate-outlook/>

9. **Rebate Trends for 2020 by BriteSwitch** - Over the past few months, rebate organizations across the country have been busy updating their programs for 2020. We've noticed the following trends for this year:

- LED Rebate Amounts Decrease by 12%
- 76% of the US Offers Commercial Lighting Rebates
- Rebate Pre-approval Times Are Improving
- Anticipating the Change to DLC 5.0

Historically, we have seen the prescriptive rebates for LED products drop by around 10% on average each year. In 2019 however, we saw the first average increase of rebates. But then, in 2020, the original trend continued with a 12% decrease in the rebate amounts across all LED categories. Looking at the data, we observed a significant difference in the rebate trends for retrofit lamps versus fixtures. <https://briteswitch.com/news/2020rebatetrends.php>

10. **Lighting Industry Faces Fallout of COVID-19 Pandemic** - The COVID-19 pandemic is likely to have profound effects on the lighting industry and the construction industry overall, from macroeconomic effects to potential impacts on the supply chain. Here's a round up of stories speculating on the fallout: <http://www.lightnowblog.com/2020/03/lighting-industry-faces-fallout-of-covid-19-pandemic/>

11. **Ecosense Acquires Assets from Soraa** - U.S.-based LED technology company Ecosense announced that it has acquired assets from Soraa, co-founded by Nobel Laureate Shuji Nakamura focusing on full-spectrum LED lamps. Under the terms of the deal, Ecosense acquires the Soraa name, intellectual property and lamps, including the company's signature VIVID, BRILLIANT™ HL and HEALTHY™ product lines. This move is the first foray into the professional lamp category for Ecosense. To maintain consistency and quality of service, Soraa will continue to operate as its own distinct brand. [https://www.ledinside.com/news/2020/3/soraa\\_ecosense](https://www.ledinside.com/news/2020/3/soraa_ecosense)

12. **NEMA Supports Rapid Consideration and Passage of the American Energy Innovation Act of 2020** - "Households and businesses across the country are becoming increasingly electrified, and it is important to embrace technology and revolutionize America's energy infrastructure," said NEMA President and CEO Kevin J. Cosgriff. "By using more efficient electrical technologies, end-users save money, the grid becomes even more effective, and the economy can produce more value at a lower cost with fewer emissions." According to Cosgriff, the provisions in the American Energy Innovation Act promote important energy programs and activities to ensure that U.S. buildings and infrastructure possess the capabilities and attributes necessary in a 21st-century economy and society. <https://www.nema.org/>

13. **Five Lighting Projects Among Recipients of DOE Funding Awards** - In total, the five selected lighting projects will receive \$12.5 million in federal funds that, when combined with a cost-share contribution, totals \$16 million. <https://www.energy.gov/eere/ssl/articles/five-lighting-projects-among-recipients-doe-building-energy-efficiency-frontiers>

- 1) Lumileds, LLC (San Jose, CA): Selected for award negotiation to address the "green gap" and improve long-wavelength LEDs.
- 2) Nanosys Inc. (Milpitas, CA): Selected for award negotiation to develop heavy-metal-free InP-based quantum dots (QDs) to endure the high-flux requirements of LEDs.
- 3) Massachusetts Institute of Technology (MIT) (Cambridge, MA): Selected for award negotiation to improve the stability and lifetime of blue OLEDs.
- 4) OLEDWorks LLC (Rochester, NY): Selected for award negotiation to develop high-efficiency, long-lifetime flexible white OLED panels, along with processes for their manufacture.
- 5) Rensselaer Polytechnic Institute (Troy, NY): Selected for award negotiation to develop tools for lighting designers to enable dynamic light sculpting for efficient delivery of light.

14. **Funds Help Trio of Hospitals Roll Out LED Lighting** - The Trust has been working with sustainability consultant, ETL, on an Energy Performance Contract (EPC) to procure and appoint an energy supplier and negotiate the best possible deal for the Trust. United Lincolnshire Hospitals NHS Trust is one of the biggest acute hospital trusts in England, serving a local population of 720,000. It will instal energy-efficient LED lighting across its main hospital sites – Lincoln County, Grantham Hospital, and Pilgrim Hospital in Boston. <https://www.luxreview.com/2020/03/05/funds-help-trio-of-hospital-go-led/>
15. **UV LEDs Tell the Quality of Your Steak, Say Scientists** - UV light exposure not only kills microorganism, it can also assess meat quality. A research team proposed a method incorporating UV light emission to classify meat into standard quality categories. The study was published in Journal of Biophotonics under the title “Autofluorescence excitation-emission matrices as a quantitative tool for the assessment of meat quality.” Conventionally, to evaluate the quality of beef, specialists pay attention to its color, pattern of the fibers (marbling), carcass weight, and more. But such measurement is time-consuming and relies on a subjective opinion of the experts to a significant extent. Fluorescence spectroscopy becomes an alternative. The team developed a method based on exposing a small sample to UV light and measuring the spectrum of emission. Fluorescence spectroscopy is capable of detecting and measuring the concentration of various compounds that can emit light of a specific frequency range. These substances include many organic molecules which can be found in meat. Researchers linked the spectrum of the fluorescence of meat with its quality defined by 3 categories from low to high: MSA3, MSA4 or MSA5. The results were additionally validated by histological (cell and tissue) analysis of the samples and measuring the concentrations of water and fat in them. [https://www.ledinside.com/news/2020/3/uvlight\\_meat\\_quality](https://www.ledinside.com/news/2020/3/uvlight_meat_quality)
16. **LightFair Postponed** - LightFair today announced postponement of its 2020 trade show and conference due to growing concerns around Covid-19, shifting industry sentiments and an overall wish to preserve health and safety. The May 3-7, 2020 event will now take place later this year in Las Vegas, pending improved conditions. LightFair’s decision to postpone the show comes seven weeks before its staging with the goal of allowing attendees, speakers and exhibitors to update their plans. <https://www.lightfair.com/>
17. **LEDucation 2020 Cancels March Event and Reschedules to August 18–19, 2020** - The Designers Lighting Forum of New York and the LEDucation committee announces the LEDucation 2020 Trade Show and Conference will be cancelled based on the growing concerns of COVID-19 in the lighting industry and the New York community. Registration passes are valid for the August 18–19, 2020 program. If you cannot attend the August program you will be given a credit for LEDucation 2021 taking place on March 16 –17, 2021. <https://www.ledsmagazine.com/company-newsfeed/article/14169486/leducation-2020-cancels-march-event-and-reschedules-to-august-1819-2020>
18. **The NAED National Meeting is Planned for May 5-8, 2020, in Philadelphia, PA** - Due to the coronavirus situation, you may be concerned about traveling and attending our events. One of our key priorities is your safety and health. Our team is monitoring the situation regularly and gauging the potential risks. As additional information becomes available, we reserve the right to cancel these meetings at anytime. In the event of a cancellation by NAED, registrant’s sole remedy will be a full refund of registration fees. <https://www.naed.org/>
19. **DOE’s PNNL Reports on Tunable SSL Research at Senior Nursing Center** - The Pacific Northwest National Laboratory (PNNL) has published a research report on a US Department of Energy (DOE)-funded study on the effects of tunable lighting on elderly patients residing in a nursing center. The study titled “Measuring Light Exposure and its Effects on Sleep and Behavior in Care Center Residents” revealed that sleep patterns generally improved for residents exposed to the tunable lighting with spectral power distribution (SPD) and output levels programmatically controlled. The lighting for health and wellbeing research took place at the 99-bed ACC Care Center in Sacramento, CA. You can peruse the full report, on the DOE website, in PDF form. [https://www.energy.gov/sites/prod/files/2020/01/f70/ssl-2019\\_acc-care-center\\_realistic-settings-report.pdf](https://www.energy.gov/sites/prod/files/2020/01/f70/ssl-2019_acc-care-center_realistic-settings-report.pdf)

## 20. NEMA electroindustry: In Control: Benefits of Connected Lighting Go Beyond Energy Savings - MUST READ:

6 The Non-Energy Benefits of Connected Lighting Steve Mesh, Principal, Lighting Education & Design

8 The Connected Retail Store: Bringing Online to On-site Neil Egan, Director, Communications, Acuity Brands Lighting

10 Specifying Light Sources beyond Color Fidelity Keeps Teunissen, Senior Scientist, Light and Vision, Signify Research

11 Lighting's Role in Energy Conservation Is Market Driven Clark Silcox, NEMA General Counsel

14 Can Connected Lighting Provide Grid Services and Effective Illumination? Michael Poplawski, Principal Investigator for Connected Lighting Systems Research, Pacific Northwest National Laboratory [https://www.nema.org/news/EI%20PDF/EI\\_MarApr20.pdf](https://www.nema.org/news/EI%20PDF/EI_MarApr20.pdf)



21. **COVID-19: Distributors Work to Keep Pace with Demand** – An immediate concern with the coronavirus is how to maintain product flow within the supply chain. Distributors share firsthand accounts about how the coronavirus is impacting their companies:

- “We’re trying to use it as an opportunity to pivot our services, consult with our clients and make the best out of a scary situation.”
- “Customers have restricted most visits other than vending support — locked doors, won’t allow visitors without appointments.”
- “Sales are actually up, along with employee anxiety and uncertainty.”
- “Our manufacturer-suppliers are running out of component parts to assemble equipment we distribute.”
- “Way too many unknowns with things changing daily.”

<https://www.mdm.com/articles/40876-covid-19-distributors-work-to-keep-pace-with-demand>

22. **Experience the Hands-on Learning at the LRC Photometry Institute** - The Lighting Research Center (LRC) at Rensselaer Polytechnic Institute will hold its next Photometry Institute on May 19-20, 2020 in Troy, NY. The Photometry Institute is a two-day immersive course designed to inform engineers, technicians, and testing personnel from lighting and related companies about the latest developments in photometric testing and evaluation, including new testing requirements for solid-state light sources and systems. Anyone who wants to know more about the rapidly changing requirements for testing and evaluation of solid-state light sources and systems. <https://www.lrc.rpi.edu/education/outreachEducation/photometryInstitute.asp>

23. **CLTC Releases Residential Lighting Guide for 2019 Building Energy Efficiency Standards** - This guide assists builders and lighting industry professionals in navigating the residential lighting portion of California’s Building Energy Efficiency Standards (Title 24, Part 6) that took effect on January 1, 2020. This guide includes an explanation of the requirements for residential lighting detailed in the Energy Code and provides best-practice recommendations with sample lighting plans. The guide also includes information on current lighting technologies, energy-efficient lighting strategies and lighting design principles. Download at: <https://cltc.ucdavis.edu/publication/residential-lighting-guide-2019-building-energy-efficiency-standards>

24. **CIE Releases Two Key Publications on Ultraviolet Radiation Disinfection – for FREE** - CIE has published a number of technical reports and international standards over the years on the topic of ultraviolet radiation, how to measure it, its effects and uses – including its use as a way of disinfection. To support the international community at this time the CIE is making two of its key publications in this area freely available for the next three months.

- [CIE 187:2010 UV-C Photocarcinogenesis Risks from Germicidal Lamps](#)
- [CIE 155:2003 Ultraviolet Air Disinfection](#)

## Global LED Market Observer:

25. **Lighting Events Postponed Across the World** - Exhibitions, conferences and other events in the lighting business have been cancelled or postponed across the world in response to the coronavirus pandemic. Latest at: <https://www.luxreview.com/2020/03/16/lighting-events-postponed-across-the-world/>
26. **Crisis Set to Transform UV Lighting Sector** - The coronavirus crisis is leading to an unprecedented interest in the power of passive ultraviolet lighting to disinfect workplaces. In particular, attention is centring on the use of UV-C radiation, which has a wavelength of between 200 and 280 nanometers (nm) and is invisible to the human eye. At the specific wavelength of 253.7 nm it can be used for disinfection or purification as it breaks the DNA of micro-organisms (RNA in the case of the coronavirus) and makes them harmless. In China, transport authorities are using UV-C to disinfect their bus fleet to minimise infection. Signify, the world's largest lighting company, says it is working with its partners in many countries to see how it can accelerate the use of UV-C lamps in those facilities where it can have a positive impact. In China, where the use of UV-C is much more established, Signify is already working with healthcare facilities in many places. <https://www.luxreview.com/2020/03/26/crisis-set-to-transform-uv-lighting-sector/>
27. **UV Lighting Kills Coronavirus, Scientists Confirm** - Ultra-Violet light can kill the coronavirus, scientists at China's National Health Commission have confirmed. They say the virus is sensitive to UV light and have verified that certain exposures will kill it. The NHC's latest advice says indoor rooms can be disinfected with UV light of over 1.5W/m<sup>3</sup> used for half an hour. The exposure time should be increased if the room temperature is either below 20C or above 40C and relative humidity is over 60 per cent. However, the World Health Organisation urged citizens not to use UV to disinfect their hands, as the levels needed to disinfect surfaces were harmful to skin. In China, bus operators are giving their vehicles 'UV baths' as an extra level of protection after cleaners have wiped all surfaces. <https://www.luxreview.com/2020/03/25/uv-lighting-kills-coronavirus-say-scientists/>
28. **City's Lighting-as-a-Service Deal Is a First** - The Indian city of Pune has become the first in the country to sign a so-called lighting-as-a-service deal. The historic conurbation – home to three million people – has replaced some 80,000 halogen street lights with wireless LED luminaires. Municipality chiefs hope to transform Pune into a smart city thanks to the connected street-lights. The lighting project – fully self-financed through energy and maintenance cost savings – boasts remote group control and monitoring. The Signify Interact City platform reduces energy costs and increases efficiency by collecting and analysing data. This enables better planning of maintenance, and delivers better service for citizens. through the energy savings and reductions in maintenance costs that LED technology brings. The entire project resulted in no additional expenses for the city. <https://www.luxreview.com/2020/03/02/citys-lighting-as-a-service-deal-is-a-first/>
29. **Samsung Bets on Move to 'Human-Centric' Lighting** - One of the world's biggest technology brands has unveiled so-called 'human-centric' lighting technology in the belief that the market is moving towards tuneable lighting. Korean giant Samsung announced its first human-centric LED packages, which are designed to be built into lights by luminaire manufacturers. Unusually, Samsung is claiming that its range of modules – known collectively as LM302N – helps people to adjust their levels of the sleep-wake hormone melatonin. Samsung's LM302N uses precisely designed light spectrums with optimised amounts of the precise blue which is known to influence human biology. Two 3x3mm modules are initially available: the LM302N DAY improves alertness while the LM302N NITE is designed to enhance relaxation. <https://www.luxreview.com/2020/03/11/samsung-bets-on-move-to-human-centric-lighting/>
30. **Cologne Becomes Germany's First Smart City with Connected Lighting System from Signify** - Starting in January 2019, Cologne, Germany has converted more than 85,000 public lighting points to digital and networked lighting via Signify's Interact City lighting management system to make the city smarter. The installation is expected to increase the city's energy efficiency and reduce costs while improve the safety and quality of life of the citizens. The system can also accommodate the integration of sensors into the luminaires, providing data that offer environmental benefits that go beyond lighting. RheinEnergie, which is responsible for the city's lighting, will replace all the light points with connected luminaires within the next 15 years. [https://www.ledinside.com/news/2020/3/signify\\_smart\\_city\\_cologne](https://www.ledinside.com/news/2020/3/signify_smart_city_cologne)

## Monthly Feature:

### Lighting Companies Including GE Current and LEDVANCE Sponsor Free LED Lights for Coronavirus Remote Site Testing -



The National Lighting Bureau (NLB), through its members, is offering free LED lights for the remote sites being set up across the U.S. to test for the coronavirus. The Bureau provides its services to the public free of charge with the funding of the organization's sponsors, which include individuals, professional societies, trade associations, labor unions, manufacturers, and agencies of the U.S. government. The participated associates include:

- BIOS Lighting
- Finelite
- GE Current, a Daintree Company
- Healthe by Lighting Science
- Illuminating Engineering Society (IES)
- Imperial Lighting Maintenance Company
- Inspired LED
- interNational Association of Lighting Management Companies (NALMCO)
- International Brotherhood of Electrical Workers (IBEW)
- Kurtzon Lighting
- LEDVANCE
- Lighting Controls Association (LCA)
- Lutron Electronics Company, Inc.
- National Electrical Contractors Association (NECA)
- National Electrical Manufacturers Association (NEMA)
- New Star Lighting
- Pompeo Group
- QSSI
- Truly Green Solutions
- Universal Lighting Technologies
- U.S. General Services Administration
- ZLED Lighting

Ray Kasmak, NLB Chairman, said, "We believe that quality lighting inside of the tents will increase throughput while improving the safety and comfort during the testing process." [https://www.ledinside.com/news/2020/3/led\\_lighting\\_coronavirus\\_testing](https://www.ledinside.com/news/2020/3/led_lighting_coronavirus_testing)