

# News

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**FOR IMMEDIATE RELEASE**

## **74% MARKET PENETRATION PREDICTED FOR WHITE-LIGHT LED. REPORT AVAILABLE FREE FROM NATIONAL LIGHTING BUREAU.**

***Silver Spring, MD:*** A comprehensive U.S. Department of Energy report predicting the market penetration of light-emitting diode (LED) white-light sources from 2010 to 2030 is available free from the National Lighting Bureau ([www.nlb.org](http://www.nlb.org)). Titled *Energy Savings Potential of Solid-State Lighting in General Illumination Applications*, the report, released last year but not updated since, predicts that growing reliance on LEDs will conserve 2,700 terawatt-hours (2.7 trillion kilowatt-hours) of energy use over the 20-year period, saving owners about \$250 billion at today's energy prices while reducing greenhouse-gas emissions by 1.8 billion tons of carbon, assuming today's power-plant generating mix stays in place.

The report predicts that, compared to conventional incandescent, halogen, fluorescent, and high-intensity-discharge white-light sources, the rate of LED market penetration will increase steadily, rising to 36% of general-illumination lumen-hour sales in 2020, and to 74% percent by 2030. "In 2030," the report states, "the annual energy savings due to the increased market penetration of LED lighting is estimated to be approximately 300

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terawatt-hours, or the equivalent annual electrical output of about fifty 1,000-megawatt power plants. At today's energy prices, that would equate to approximately \$30 billion in energy savings in 2030 alone. Assuming the current mix of generating power stations, these energy savings would reduce greenhouse gas emissions by 210 million metric tons of carbon. The total electricity consumption for lighting would decrease by roughly 46 percent relative to a scenario with no additional penetration of LED lighting in the market – enough electricity to completely power nearly 24 million homes in the U.S. today.”

According to National Lighting Bureau Chair Howard P. Lewis (*Visioneering Corp.*), who represents the Illuminating Engineering Society of North America (IES) on the Bureau's board, “The predicted reductions in energy consumption, greenhouse-gas emissions, and operating and maintenance costs are extremely positive. Nonetheless, not just a few lighting-industry insiders believe that the role of LED lighting may not be quite as prominent as forecasted, principally because of the efficiency and longevity advances being made by alternative sources, fluorescent in particular. As such, LEDs may have more competition in the years ahead, not less, all of which is a good thing. More products and more types of products will be competing on the basis of efficiency, cost, and functionality, meaning not only that the study's forecasts about energy and cost savings will likely be realized, they may even be exceeded.”

The study focused on the four principal sectors of the U.S. lighting market – residential, commercial, industrial, and outdoor stationary – where an array of lighting products competes for market share. The energy savings to be generated by steadily greater reliance on LEDs was established through comparison with a baseline model that assumed no additional market penetration of LEDs. Figure 1 (*below*) summarizes the forecasted annual electricity consumption of lighting technologies and the electricity savings resulting from the increased use of LEDs in general illumination applications, disaggregated by building sector.

Table 1 (*below*) presents data about baseline electricity consumption, LED market share, and electricity savings in each sector throughout the analysis period. The opportunities for energy savings are particularly prominent in the residential sector, where inefficient incandescent lamps currently predominate, and the commercial sector, which was responsible for 60% of U.S. lighting energy consumed in 2010.

Download a free copy of *Energy Savings Potential of Solid-State Lighting in General Illumination Applications* by clicking [here](#).

Established in 1976, the National Lighting Bureau is an independent, IRS-recognized not-for-profit, educational foundation that has served as a trusted lighting-information source since 1976. The Bureau's services are made possible by the generous funding of its sponsors; professional societies, trade associations, manufacturers, and agencies of the U.S. government, including, among others:

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- Lutron Electronics Company, Inc.;
- Magnaray;
- National Electrical Contractors Association (NECA);
- National Electrical Manufacturers Association (NEMA) and its enLIGHTen America campaign;
- OSRAM SYLVANIA;
- U.S. General Services Administration; and
- Visioneering Corporation.

Obtain more information about the Bureau by visiting its website ([www.nlb.org](http://www.nlb.org)) or contacting its staff at [info@nlb.org](mailto:info@nlb.org) or 301/587-9572.

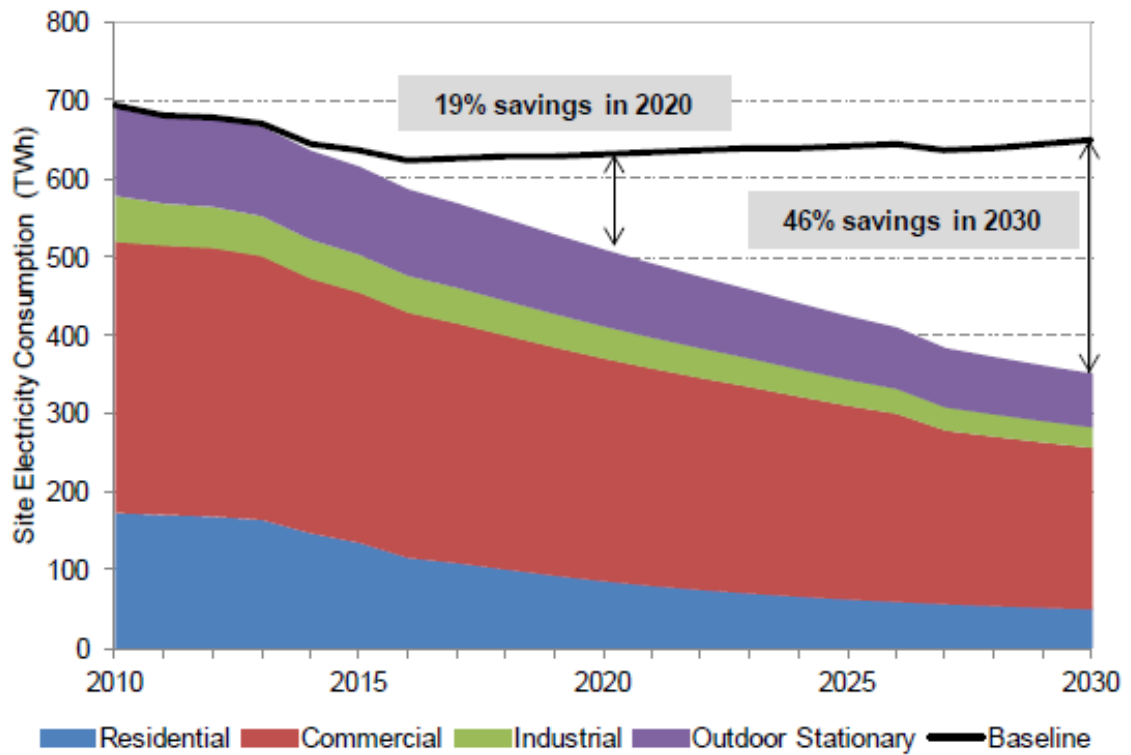


Figure 1: Forecasted U.S. Lighting Energy Consumption and Savings, 2010 to 2030

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	2010	2015	2020	2025	2030	Cumulative (2010-2030)
<b>Baseline site electricity consumption (TWh)</b>	<b>694</b>	<b>635</b>	<b>631</b>	<b>641</b>	<b>648</b>	<b>13,535</b>
Residential	173	142	138	146	153	3,105
Commercial	346	325	321	320	316	6,806
Industrial	58	49	44	41	38	947
Outdoor Stationary	116	119	128	135	141	2,676
<b>LED market share (% of Im-</b>	<b>-</b>	<b>9.5%</b>	<b>35.8%</b>	<b>59.0%</b>	<b>73.7%</b>	<b>-</b>
Residential	-	8.1%	37.6%	60.7%	72.3%	-
Commercial	-	5.0%	27.8%	52.5%	70.4%	-
Industrial	-	8.8%	36.0%	59.2%	72.3%	-
Outdoor Stationary	-	29.0%	64.2%	81.6%	87.2%	-
<b>Site electricity savings (TWh)</b>	<b>-</b>	<b>21</b>	<b>122</b>	<b>217</b>	<b>297</b>	<b>2,672</b>
Residential	-	7	51	82	102	1,009
Commercial	-	6	38	73	111	902
Industrial	-	0	3	8	11	88
Outdoor Stationary	-	7	30	54	73	673
<b>Site electricity savings (%)</b>	<b>-</b>	<b>3.3%</b>	<b>19.4%</b>	<b>33.9%</b>	<b>45.8%</b>	<b>19.7%</b>
Residential	-	5.1%	37.3%	56.7%	66.9%	32.5%
Commercial	-	1.9%	11.7%	22.9%	35.0%	13.3%
Industrial	-	0.8%	7.4%	18.3%	29.4%	9.3%
Outdoor Stationary	-	6.2%	23.7%	40.2%	51.7%	25.2%

**Table 1: Total U.S. LED Forecast Results**

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