

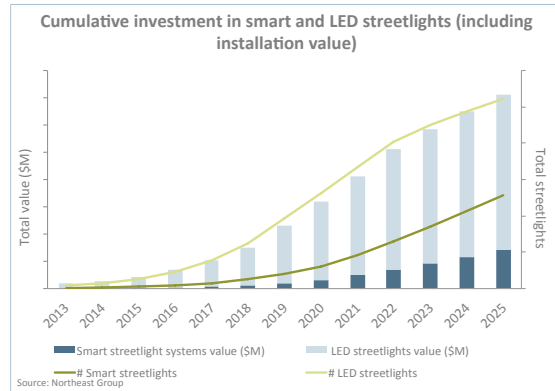
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## Global LED and Smart Street Lighting: Market Forecast (2014 – 2025)

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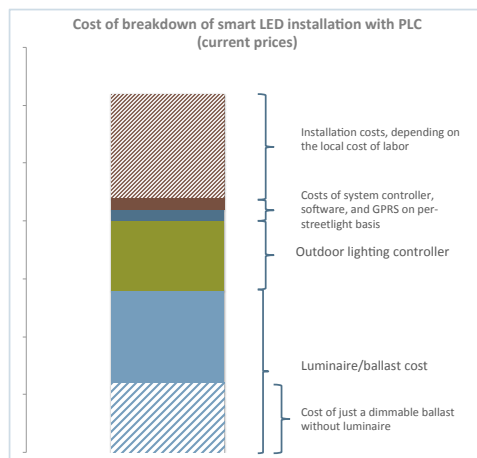
## Global LED and Smart Street Lighting: Market Forecast (2014 – 2025)

There are currently 281.4 million total streetlights in the world. This number will grow to 339.9 million total streetlights by 2025. The streetlight market is currently undergoing a period of change where legacy streetlights are being replaced with new and more efficient LED or solid-state lighting technology. Taking this new technology a step further, these LED streetlights are also being networked together with communications to become “smart” streetlights. This study analyzes and forecasts the global market for both LED and smart street lighting through 2025.



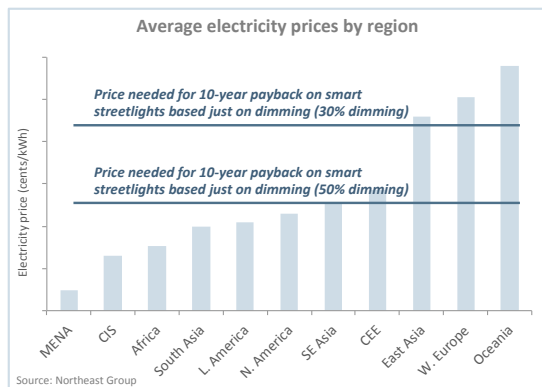
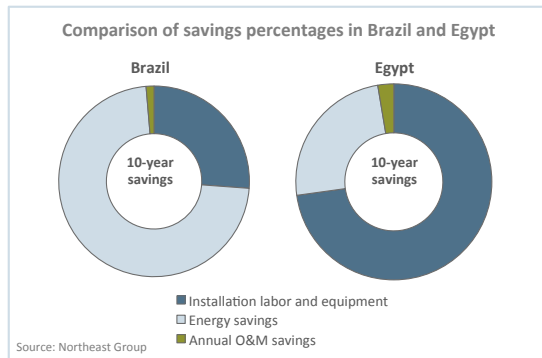
LED streetlights will transform cities and municipalities across the globe over the next decade. LEDs offer longer lifetimes, lower energy consumption, and reduced maintenance expenses when compared with legacy streetlight technologies. In most developed countries, LEDs are already an economically beneficial alternative to existing streetlights over a period of years when energy savings are considered, despite their higher upfront cost. But in the coming 2-4 years, LED streetlights are expected to reach cost parity with legacy technologies, making their benefits to costs immediately positive. At this point, they will make sense as replacements in almost all countries. With many emerging market countries rapidly urbanizing and in need of improved urban infrastructure, this creates an enormous market opportunity. By 2025, the LED streetlight market alone is projected to cumulatively reach \$57.8 billion.

But LEDs are not the sole element in modernized public lighting. Networked “smart” streetlights help cities further reduce costs through off-peak dimming and reduced maintenance expenditures. As the costs for networked streetlights also rapidly decline, these smart streetlights will find a growing role in cities and municipalities across the globe. In many developed countries, they will serve as part of larger



“smart city” concepts, where communications networks can be used to link items such as power and water meters, streetlights, traffic lights and parking meters. Smart streetlights also greatly improve safety conditions in a city by reducing the “down time” of streetlights. As soon as streetlights expire, officials are notified, so streets rarely go without lighting. In many emerging market metropolises that are managing rising street crime, this will be a particularly strong benefit.

Overall, the LED and smart streetlight market remains young, and some challenges must be overcome. Most importantly, prices must continue to fall for financing to be feasible in many countries. Existing LED deployments have often relied on government grants, and vendor-led financing (i.e. performance contracting) is still developing in this sector. In many countries, multilateral financing can help overcome these challenges, and the World Bank has recently announced a \$1 billion fund exclusively for LED street lighting. Another challenge is a lack of standardization. Particularly for networked streetlights, undeveloped standards could limit vendors' ability to meet rising demand across the globe. Finally, a general preference towards conservatism could lead some cities to stick with legacy technologies even in the face of clear savings potential from LED and smart streetlights.



Back in 2012, Northeast Group conducted a survey of over 100 US cities, towns, and municipalities that had experimented with LED streetlights. The response was overwhelmingly positive—residents complimented the better light, law enforcement officials praised safety improvement, and cities overall showed significant cost savings. Since then, the business case for LED and smart street lighting has only grown stronger. Improvements in technology have driven prices down while improving the quality of the lights. Northeast Group's most recent assessment of over 200 LED and smart streetlight projects across 68 countries shows that these benefits are shared by cities and municipalities across the globe. Given these clear advantages, LED and smart streetlights are projected to reach 78% and 38% of the total streetlight market, respectively, by 2025. This will cumulatively be a \$71.9 billion total market.

Key questions answered in this study:

- How large will the global LED, smart, and legacy streetlight markets be by 2025?
- Which cities and countries will save the most in energy and maintenance costs by modernizing their streetlights?
- How do smart streetlights fit into larger smart city plans?
- Who are the leading vendors in each of the smart streetlight market segments?
- What cities demonstrate best practices for LED and smart streetlight projects?
- How does the data breakdown for 125 individual countries over the period 2014-2025?

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