

Energy Efficient Lighting is Creating Safer Cities at Lower Costs

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-Mr. Riwan Kamil, Mayor of Bandung, Indonesia

Street lighting systems improve safety for vehicles and pedestrians by increasing visibility on roads and walking paths throughout cities across the world. At the same time, however, these benefits come at a cost, with lighting accounting for **20%** of the world’s total electricity consumption and nearly **6%** of all greenhouse gas emissions. LED street lighting can achieve 50% to 70% energy savings, and reach up to 80% when coupled together with smart controls.¹

The Indonesian city of Bandung is currently pursuing an energy efficiency project to overhaul and upgrade its existing street lighting infrastructure. Bandung is the capital of West Java province in Indonesia, the country’s third largest city by population of 8.6 million people. The scope of the LED project covers the installation of 17,000 – 20,000 LED lamps and poles, plus ancillary equipment such as software, servers, and other telecommunications equipment at a total cost in the range of US \$20 million. The newly installed streetlights will significantly reduce energy consumption and other operating costs while also contributing to the city’s broader objective of achieving eco-city status.² The first phase of installation involves a US \$10 million investment in new LED streetlights that the Bandung city parliament approved in October 2014.

In support of Bandung’s energy efficiency project, USAID’s PFAN-Asia technical assistance included helping with a study tour for city officials to observe LED demonstration projects, as well as assisting with preliminary investment analysis. In addition, PFAN-Asia conducted a development and financing workshop to review LED lighting benefits and potential transaction structures, including legal and regulatory frameworks. In next steps, PFAN-Asia is assisting the University of Sebelas Maret in completing a feasibility study that will justify the initial investment, more precisely illustrate anticipated cost savings, and provide draft language for regulation on the procurement of LED street lighting equipment. PFAN-Asia also playing a facilitation role in ongoing discussions on financing with US OPIC, Indonesian commercial banks, and equipment manufacturers.

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The U.S. Agency for International Development (USAID) regional Private Financing Advisory Network-Asia program (“PFAN-Asia”) assists businesses, governments, and others in Asia’s developing countries to mobilize and scale up investments in clean energy.



Above: Streetlights covering hundreds of streets just like this in Bandung will soon be replaced by state-of-the-art, energy efficient LEDs.

¹ The Climate Group. 2014. Lighting the Clean Revolution. <http://www.theclimategroup.org/what-we-do/news-and-blogs/infographic-lighting-the-clean-revolution-the-rise-of-leds-and-what-it-means-for-cities>

² Bandung City Environmental Management Board. 2014. Environmental Management in Bandung City. <http://eri-kawasaki.jp/english/wp-content/uploads/images/S5-3-Sukenjah.pdf>