

DC Smart Street Lighting Project



Americas Utilities/Other

Considered the nation's largest urban streetlight modernization P3 project, the \$309 million DC Smart Street Lighting Project is the District's first public-private partnership.

The project converted the city's more than 75,000 street and alley lights to energy-efficient LED technology with remote monitoring and control capabilities. This modern infrastructure will reduce the lights' energy usage by more than 50 percent, eliminating 38,000 tons of greenhouse gas emissions each year and will extend Wi-Fi coverage in traditionally underserved neighborhoods.

Project facts

Location

Washington, D.C., USA

Client

District Department of Transportation (DDOT)
Office of Public-Private Partnerships (OP3)

Value (NPV)

USD \$309 million

Consortium

Plenary Infrastructure DC (PIDC)

Plenary Americas' role

Lead developer
Equity investor

Equity partner

Kiewit Development Company

Equity partner

Phoenix Infrastructure Group

Design and construction

ENGIE North America

Asset manager

EQUANS

Financial close date

May 2022

Contract terms

15 years, DBFM

Project website

<https://street-lights.dc.gov/>

Alongside the efficient lighting technologies, the project will be installing smart city technology components, including a remote monitoring and control system and wireless access points to help solve inconsistent outage reporting. By delivering widescale Wi-Fi coverage, the DC Smart Street Lighting Project is helping to close the digital divide and advance D.C.'s progress toward its goal of citywide broadband access.



Design features

The project did not involve any changes to light pole placement or to the style of poles and luminaries, many of which reflect a historic design dating back to the 1920s; however, the streetlight upgrades will substantially reduce light pollution and improve pedestrian, cyclist and motorist safety.

The project included replacing ~75,000 street and alley lights with energy-efficient LEDs, including those that shine on “Welcome to Washington, D.C.” entrance signs, certain bike paths, underpass, and tunnel lights.

Innovations

The implementation of LED technology on this project is expected to reduce energy consumption by more than 50% and eliminate 38,000 tons of greenhouse gas emissions each year.

Additionally, this project is partially financed by “green” bonds, or municipal bonds that are designated for environmentally- or socially-conscious public initiatives.

Local economic impacts

The PIDC team used a comprehensive approach to engage local businesses including those certified as Disadvantaged Business Enterprise (DBE) to deliver the project. The team was committed to hiring and training a local workforce, and both conversion and operations work will be performed by local subcontractors.

Community benefits

The modernization of the streetlight network will greatly improve safety across the District for pedestrians, cyclists, and those travelling by motor vehicle. This project supports the District's Vision Zero campaign, which is designed to improve pedestrian and bicycle transportation safety and reduce fatalities and serious injuries to travelers of the D.C. transportation system.



“With this project, we’re doing so much more than just replacing lights – we’re making our streets safer, our communities more connected, and our city more resilient.”

D.C. Mayor Muriel Bowser

The LED technology that PIDC has implemented will make for roadways and walkways that are better lit, and the Remote Monitoring and Control System will ensure that assets are maintained (i.e. repaired/replaced) in a timely manner, both during and after the expiration of the project term.

Additionally, PIDC will be installing wireless access points in several wards within the District. This will empower those living in traditionally underserved neighborhoods to adopt remote work and school in communities where Wi-Fi may not always be available at home.

Lastly, PIDC is investing in the local community by maintaining a team that consists of local and diverse suppliers and subcontractors, during both the D&C and Asset Management phases of work.