

DC Smart Street Lighting Project

Executive Summary of Request
for Proposal Documents

Project Scope

At a high level, the project will:

- Convert DDOT's network of 75,000 streetlights to energy-efficient LED
- Install nodes in each light allowing remote dimming and monitoring
- Maintain and improve streetlight assets in a state of good repair
- Mount wireless access points to select poles to extend DC-NET public Wi-Fi
- 15-year, performance-based contract

Project Structure

- This project is being procured as a public-private partnership (P3).
- The private partner will design, build, operate, finance, and maintain the project
- The District will compensate the private partner in the form of milestone and availability payments based on project performance
- In other words, if the lights don't work, we don't pay

Project Benefits

Implementing the project will achieve the following benefits for the District and its residents:

- Equity of service
 - No longer rely on resident 311 to detect and report outages
- Energy savings
 - At least 50% reduction in energy use
- Environmental benefits
 - 38,000 tons of greenhouse gas emissions eliminated each year
 - Reduced light pollution
- Reduced lifecycle costs
 - P3 structure incentivizes preventative maintenance and operational efficiencies

Project Background

The procurement of this project:

1. Began with a Request for Information (RFI) process
2. A Request for Qualifications (RFQ) process determined the three most highly qualified bidders
3. DDOT, OP3, and technical consultants finalized the Request for Proposal (RFP) documents following rounds of one-one-one meetings with the three highly qualified shortlisted bidders

Important Terms

- AMIS: The Asset Management Information System includes datapoints such as inventory, conditions, work management, vehicle logs, and performance metrics.
- Bidder: Three highly qualified shortlisted bidders were selected after a competitive Request for Qualifications. They are DC Smart Lightning Partners II, MAB Smart Solutions, and Plenary Infrastructure DC. These teams are consortiums of multiple companies.
- Developer: The preferred bidder will become the Developer, which finances and delivers the project, after commercial and financial closes are complete.
- RMCS: The Remote Monitoring and Control System provides real-time, remote monitoring, and reporting of the performance of the luminaires in the streetlight network by communicating to individual nodes connected to each light.

RFP Documents

The RFP consists of three separate documents:

- Instructions to Proposers (ITP)
- Project Agreement (PA)
- Technical Provisions (TPs)

Instructions to Proposers

The ITP is a roadmap for how the shortlisted bidders should communicate with the District, will submit their proposals, will be evaluated, and will be selected as preferred bidder

Selection of Proposer

- The preferred bidder will be selected on a best-value basis, which means that price is one factor in the proposal evaluation process but not necessarily the determining factor
- The District will consider each bidder's price and technical plan for carrying out the work (based on financial and technical evaluation criteria set out in the RFP) to determine which proposal offers the best overall value to the District

Technical Submittal Requirements

- Part 1: Executive Summary and Administrative Submittal
- Part 2: Preliminary Performance Plans
- Part 3: Conceptual Design Narrative and Visualizations
- Part 4: Preliminary Project Baseline Schedule
- Part 5: Attachments
 - Key Personnel Resumes
 - Conceptual Design and Visualizations
 - Preliminary Project Baseline Schedule

Financial Submittal Requirements

In addition to the cost of the project, the bidders will submit the following items:

- Financial Capacity
 - Includes credit ratings
- Financial Plan
 - Cash flow waterfall
 - Balance of equity and debt
- Preliminary Financial Model

Evaluation Process

- The District will select review committees to score both the technical and financial proposals
- Examples of evaluation criteria include:
 - Conversion schedule
 - Staffing plans
 - Traffic management
 - Energy efficiency
 - Quality assurance
 - Creditworthiness
- The maximum financial score is 700 points and the technical is 300 for a total of 1,000 points

Project Agreement

The PA forms the basis for the contract between the District and the preferred bidder

Developer Obligations

- The Developer must abide by all applicable District and Federal standards and specifications
- The Developer must comply with all governmental approvals, including the environmental (NEPA) and historic preservation (Section 106) requirements
- The Developer will provide performance and payment bonds as security for the completion of the conversion work and the prompt payment to subcontractors

DBE Goals

- The PA includes the Disadvantaged Business Enterprise (DBE) participation goals for both the conversion work and the asset management work and detailed requirements regarding the hiring of DBE subcontractors

Performance Regime

- The District's payments to Developer for asset management work are performance-based. Payments are subject to deduction if the Developer fails to satisfy performance metrics set out in the Project Agreement.
- These metrics cover all aspects of asset management, including the timely response to service requests, preventative maintenance and repair standards, and continual monitoring and maintenance of the streetlights.

Additional Deductions

Deductions are also applicable

- in the event that electricity consumption is greater than forecast, ensuring that the Developer is incentivized to keep energy costs down, and
- in the event of unplanned obstruction to District roadways, bicycle paths and pedestrian walkways, ensuring that the Developer is incentivized to avoid disruption to District commuting patterns

Financial Structure

- The District's payments to the Developer for work during the conversion period are milestone-based, meaning the District will pay the Developer only after the Developer has completed specified amounts of work. This incentivizes early completion of conversion work.
- Project Agreement includes a change order mechanism that allows the District to modify the Developer's scope of work as needed during the term of the Project Agreement to address the District's needs, including the addition of new streetlights.

Financial Structure

- A Private Activity Bond (PAB) allocation has been sought, and approved, for the project in order to enable efficient financing
- PABs are tax-exempt bonds issued by or on behalf of a local or state government for the purpose of providing special financing benefits for qualified projects

Replacement and Termination

- The Project Agreement includes provisions that allow the District to take additional action if Developer experiences chronic underperformance, including requiring the Developer to replace key personnel or subcontractors and, if the Developer is unable to improve its performance, termination of the Project Agreement

Technical Provisions

The TPs include the engineering concepts, performance metrics, and other technical specifications of the project. It covers both the conversion and asset management periods.

Specifications for the Entire Project

Streetlight Management

- Responding to calls for service within 48 hours
- Providing for continuous access to and proper functioning of all the elements of the streetlight network to the District
- Keeping an accurate asset inventory in GIS format with conditions ratings, asset characteristics, and recent photos
- Maintaining asset elements, such as the foundation, base, pole, arm, and fixture, in a condition rating of fair or better

Public and Traffic Safety

- Providing adequate level of illumination in the public space for vehicular, bicycle, and pedestrian traffic and general public safety while limiting light pollution and light trespass
- Ensuring the safety of the public and accordingly prioritizing the safe travel of motorists, bicyclists, and pedestrians in the public space, placing the highest priority on work to remedy imminent risks to public health and safety

Performance-based Operations

- Using the Asset Management Information System (AMIS) and Remote Monitoring and Control System (RMCS) to improve overall performance and drive efficiencies in monitoring, measuring, and reporting
- Partnering, cooperating and collaborating among the Developer, District, PEPCO, Verizon and other third parties who are stakeholders in the streetlight network

Environmental and Financial Sustainability

- Reducing and minimizing the energy demands of the streetlight network during the contract term and beyond
- Ensuring the proper, long-term functioning and performance of the streetlight network
- Reducing and minimizing the lifecycle costs of the streetlight network during and after the term

Specifications for the Conversion Period

Years 1-2

Conversion Scope of Work

- Convert to LED and install RMCS
 - All 75,000 fixtures across all Wards
- Stand up AMIS
 - The central oversight and work management system
- State of good of repair work
 - Repair poor and very poor assets
- Install wireless access points
 - 239 estimated sites, per OCTO

Public Outreach

- Minimizing the risk of damages to, disturbance of, or destruction of District and third-party property
- Minimizing inconvenience and disruptions to District residents and businesses who own or occupy premises adjacent to the project sites
- Informing and fostering understanding and support of project stakeholders and the public throughout the term
- Communicating to and notifying residents through project website and materials dropped off at households before neighborhood work

Construction Management

- Minimizing disruption to and interference with the normal flow of pedestrian, bicycle, and vehicular traffic
- Complying with prohibited work times during rush hour along major roads, sidewalks, and bike lanes
 - Rush hours: Monday – Friday 7-9:30AM and 4-6:30PM

Quality and Historic Preservation

- Incentivizing responsible stewardship of the streetlight network to deliver quality performance and aesthetics
- Respecting the preservation of the historical, architectural, and aesthetic significance of the District
- Per Section 106 ruling of No Adverse Effect, the specifications include no changes to
 - Pole placement
 - Pole styles
 - Luminaire styles
- Maximum color temperature 3,000 Kelvin with most fixtures being 2,700 Kelvin

Smart City Technology

- RMCS nodes must be able to detect and report outages, dim fixtures remotely, and monitor power use
- On behalf of DC's Office of the Chief Technology Officer (OCTO), wireless access points will be installed to extend the reach of DC-Net public Wi-Fi
- The bidders will propose Smart City bundles separate from the LED Conversion bundles
- The project scope does not include the installation of sensors, cameras, or microphones

Specifications for Asset Management and Handback

Years 3-15

Asset Management

- The Developer will adhere to strict timelines for repairs:
 - 2 hours for make safe work
 - 72 hours for lights out with current
 - 15 days for lights out without current
 - 30 days for lights out without current, conduit repair needed
- The Developer will be required to perform full conditions assessments at set intervals; financial penalties will be assessed for assets below fair condition

Inspections and Handback

- The Developer will inspect new and improved assets resulting from streetscape and development projects
- The Developer will be subject to an Independent Engineer's assessment of the network before the end of the term
- The Developer will be required to hand over the network in a state of good repair at the end of the contract

Project Next Steps

- January 2021: Public hearing
- February: Council passive review
- March: Send RFP to bidders
- April: Technical proposal due
- May: Financial proposal due
- April – July: Evaluation of proposals and selection of preferred bidder
- Late Summer: Council approval of Project Agreement
- Fall/Winter: Commercial close and financial close
- Spring/Summer 2022: Work begins

All dates are estimates and subject to change

Public Comments

Send comments regarding the proposed RFP to either of the following addresses by Friday, January 15, 2021.

Email: ddot.streetlightp3@dc.gov

Mail: DDOT / ATTN: Streetlight Division

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