

**REQUEST FOR INFORMATION  
REGARDING HIGHWAY LIGHTING ASSETS AND SMART TECHNOLOGIES**

**ILLINOIS DEPARTMENT OF TRANSPORTATION**

Request for Information Title: **Request for Information (RFI) – Highway Lighting**  
RFI Issuance Date: **August 22, 2018**  
RFI Questions Deadline: **September 7, 2018**  
Information Due Date: **September 21, 2018**  
Information Due Time: **1:30 p.m. (Central time)**  
Reference No.: **2019-HWL**  
Official Procurement Site Bulletin:  
<https://webapps.dot.illinois.gov/WCTB/ConstructionSupportProcurementRequest/BulletinItems>

<p><b>QUESTIONS:</b> Questions regarding general RFI procedures should be directed to:</p> <p>Illinois Department of Transportation Office of Planning and Programming 2300 S Dirksen Parkway, Room 339B Springfield, Illinois 62764 Telephone: (217)782-6289</p> <p><a href="mailto:dot.p3projects@illinois.gov">dot.p3projects@illinois.gov</a></p>	<p><b>SUBMITTALS:</b> Send RFI response by the above due date and time electronically to: <a href="mailto:dot.p3projects@illinois.gov">dot.p3projects@illinois.gov</a></p> <p>Only submittals sent to the above e-mail address will be considered.</p> <p>If requesting a one-on-one meeting, send one hard copy and email of the RFI One-on-One Meeting Request Form to:</p> <p>Illinois Department of Transportation Office of Planning and Programming 2300 S Dirksen Parkway, Room 339B Springfield, Illinois 62764 Telephone: (217)782-6289</p>
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# 1. INTRODUCTION

## A. *Overview*

This Request for Information (RFI) is to gauge interest and further understand how private sector companies and other interested parties would partner and collaborate on maintenance and upgrades to highway lighting assets throughout the State of Illinois (the “State”) that are owned, operated and maintained by the Illinois Department of Transportation (IDOT), herein referred to as the Highway Lighting Project(s) (the “Project(s)”).

IDOT’s primary goals are to:

- 1) Operate and maintain a highway network that provides safe and efficient movement of people and goods across the State.
- 2) Improve system operations and adopt technologies to provide for an efficient and safe network, and accommodate future technologies implemented by system users and transportation partners.
- 3) Maximize the value of State assets in delivering transportation and other ancillary public benefits to promote quality of life as well as facilitate economic growth in all regions of the State.

### *Objective:*

The objective of the potential Project is to improve operations and performance of lighting assets, upgrade lighting technology and lighting infrastructure, achieve cost efficiencies, and where advantageous, incorporate “smart” infrastructure technologies. The last goal of incorporating smart infrastructure technology is of specific interest and importance given the forthcoming advent of connected vehicle and infrastructure technologies, particularly if commercial and financial approaches can be employed by the private sector to offset IDOT’s costs of upgrading and maintaining the lighting infrastructure.

IDOT may consider implementing this Project in cooperation and coordination with other State and local agencies, including the Illinois Department of Innovation and Technology (DoIT) and the Illinois Department of Commerce and Economic Opportunity (DCEO). Interested parties are encouraged to provide information through this RFI about development approaches, contract packages, project scopes, products, and technologies that could be used to achieve the State’s performance and cost objectives.

## B. *Purpose*

IDOT would like to thank you in advance for reviewing and responding to this RFI. The purpose of this RFI is to obtain information from interested parties that will assist IDOT with evaluating the viability of the proposed Project(s). Your comments and suggestions will be considered as IDOT evaluates interest, feasibility and potential project delivery strategies for maintenance and upgrades to the highway lighting assets.

Before a Request for Proposal (RFP), Invitation for Bid (IFB), or any other type of procurement document pertaining to the Project(s), IDOT has determined it would be advantageous to gather input from industry, including vendors/operators, investors, contractors and consultants interested and experienced in the installation and long-term maintenance of lighting assets and the use of new and more efficient lighting technologies such as, but not limited to LED; as well as smart and connected technologies.

This RFI does not constitute a Request for Qualifications (RFQ), RFP, IFB or other solicitation, nor does it constitute the commencement of any other type of procurement process for lighting maintenance or upgrades. Moreover, it does not represent a commitment to issue an RFQ, RFP, or IFB or to otherwise commence any other type of procurement process for highway lighting proposals in the future. Therefore, those choosing to respond to this RFI will not be deemed “bidders” and no such respondent will have any preference, special designation, advantage or disadvantage whatsoever in any subsequent procurement process related to highway lighting maintenance or upgrades. This RFI is for information and planning purposes only.

### ***C. Who Should Respond to this RFI***

IDOT seeks input from a variety of sources including but not limited to, lighting operators and manufacturers, infrastructure investors, firms focused on smart and connected infrastructure technology, energy utilities, telecommunications firms, contractors and other entities familiar with the installation and maintenance of new lighting technologies such as LED *as well as* smart technologies that may enable the connected and autonomous vehicle (CAV) ecosystem. While IDOT’s priority goal is to address needed lighting and infrastructure upgrades to ensure safety, the department also believes that the network of lighting assets can be optimized for CAV technologies.

IDOT is seeking early input from market participants to help ensure a viable and successful approach to the potential development, delivery and use of this project.

### ***D. Next Steps***

Following the close date of the RFI, certain respondents to this RFI, as determined by IDOT, may be invited to participate in subsequent one-on-one meetings. Please complete the attached form and submit it to the address on Page 1 on or before September 21, 2018 if you would like to participate in a one-on-one meeting. Holding the one-on-one meetings is at the sole discretion of IDOT and at a date to be determined later. The purpose of the meetings is to allow IDOT to ask follow up and clarifying questions to the responses.

### ***E. Form of Response***

Written responses should be no longer than 15 pages double sided including the one-on-one meeting request form (excluding the cover page), with a font no smaller than 12 points. Marketing materials are not to be submitted as part of a written response. Please respond to the questions contained in the attached RFI Questionnaire in numerical order, clearly identifying the question numbers. Respondents are not obligated to answer all questions and may respond only to questions of interest to them. Respondents may also include additional comments or suggestions at the end of their response. If you elect not to respond to a question in the RFI Questionnaire, please note the question number and state “No response.”

### ***F. Confidentiality/Public Records Law***

Respondents are advised that all written materials submitted by a respondent to IDOT in response to this RFI or in a one-on-one meeting are public records subject to the Illinois Freedom of Information Act, 5 ILCS 140/1 *et seq.* (the “**Illinois FOIA**”).

Under Section 7 of the Illinois FOIA, certain public records may be exempt from disclosure under the Illinois FOIA. This includes information which, if it were disclosed, would frustrate a procurement or

give an advantage to any proposer. (See Section 7(1)(h) of the Illinois FOIA.) Generally, however, responses to RFIs and information documented in the procurement file are subject to disclosure once an award is made or the procurement is otherwise concluded. IDOT does not intend to invoke Section 7(1)(g) of the Illinois FOIA as grounds for withholding information provided by respondents to IDOT pursuant to this RFI. Accordingly, respondents are advised not to include in RFI responses any information that the respondent considers trade secrets or commercial or financial information that is proprietary, privileged or confidential or that would cause competitive harm if disclosed.

A person whose request for public records is denied by IDOT, on the grounds of exemption under Section 7 or otherwise, has the right to request a review of such denial by the Public Access Counselor established in the Office of the Illinois Attorney General, in accordance with Sections 9 and 9.5 of the Illinois FOIA. A person whose request for public records is denied also has a right to judicial review of such denial pursuant to Section 11 of the Illinois FOIA.

Respondents are encouraged to familiarize themselves with the Illinois FOIA and any other laws and regulations applicable to the disclosure of documents submitted with this RFI and to the issue of confidentiality and public information (collectively, the “**Public Records Laws**”).

IDOT will not advise a respondent as to the nature or content of documents entitled to protection from disclosure under the Public Records Laws or as to the interpretation of such laws. Each respondent shall be solely responsible for all determinations made by it under applicable laws. Each respondent is advised to contact its own legal counsel concerning the effect of Public Record Laws on that respondent’s own circumstances.

In the event of any proceeding or litigation concerning the disclosure of any response or portion thereof, or any other documents submitted by a respondent to IDOT, the respondent shall be responsible for prosecuting or defending any action concerning the materials at its sole expense and risk; provided, however, that IDOT reserves the right, in its discretion, to intervene or participate in the litigation in such manner as it deems necessary or desirable. All costs and fees (including attorneys’ fees and costs) incurred by IDOT in connection with any litigation, proceeding, or request for disclosure shall be reimbursed and paid by the respondent whose response or other documentation is the subject thereof.

Nothing contained in this RFI shall modify or change IDOT’s obligations under the Illinois FOIA or other applicable law.

## 2. THE PROJECT

IDOT believes upgrades to the State's highway lighting assets will benefit the citizens of Illinois by providing a safer, more efficient and accessible highway system. Additionally, smart technologies may present opportunities to improve public safety, monitor system congestion and asset condition, collect and disseminate data through V2I and V2X technologies, improve network connectivity across the State, and potentially provide revenue, as CAVs are deployed.

The anticipated scope of the Project may include the design, build, operations, maintenance and financing of current and future IDOT owned lighting assets during the term of the agreement. The system currently consists of approximately 57,500 bulbs (primarily High-Pressure Sodium (HPS) and Low-Pressure Sodium (LPS)) on approximately 30,500 poles and mounts (conventional, high-mast, and tunnel/ underpass) statewide. IDOT is open to a variety of commercial structures to deliver a successful Project, provided it meets the goals of IDOT, is consistent with current Illinois statute and achieves value for the Department and the State.

IDOT is considering the following objectives for the Project(s).

- (1) Much of IDOT's lighting infrastructure (wiring, foundations, and poles) are past their original expected useful life, with some installations dating back to the late 1970's. Continued aging of the assets may interfere with IDOT's ability to maintain the desired level of lighting system performance in a cost-effective manner. Therefore, IDOT is considering programmatic approaches for lighting upgrades in order to achieve economies of scale, schedule acceleration, and cost savings.
- (2) Continued advancements in lighting technology have resulted in luminaries that are more efficient than conventional light sources. In addition, newer designs allow LED bulbs to achieve similar lumens, correlated color temperatures (CCTs), and light distributions as conventional lighting. IDOT understands that newer luminaire technologies are more expensive in terms of upfront capital costs, but is interested in contracting structures that would allow it to offset installation costs against utility and maintenance cost savings over a longer term.
- (3) IDOT is also exploring smart technology components that could be implemented as part of lighting system upgrades with the goal of leveraging the network of lighting infrastructure and IDOT's right-of-way as a potential conduit to implement smart technologies and collect, share and disseminate data. This may be done in cooperation and conjunction with DoIT and DCEO, particularly if the Illinois Century Network (ICN) can be effectively and appropriately leveraged (information on the ICN can be found at <http://www.illinois.gov/icn/>). IDOT is interested in ideas that can utilize the lighting system infrastructure and highway system right-of-way to improve public safety, network connectivity, and system monitoring. Of particular interest are any smart technologies and/or components that could generate revenue or enable the State to share infrastructure installation costs across multiple initiatives.

Considering these objectives, please provide your answers to RFI Questionnaire.

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**RFI QUESTIONNAIRE**

Completed by:

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Association/Organization Name (if applicable)

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Association/Organization Representative Name (or individual's name if no affiliation)

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Address

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City, State, Zip

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Phone Number / Email Address

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Association/Organization Representative Signature (or individual's signature if no affiliation)

Please respond to the following list of questions to the extent relevant to your organization's experience.

### **General**

- 1) Describe your company or organization's primary business activity or purpose.
- 2) What is your company or organization's experience in designing, installing, maintaining, or operating highway lighting, LEDs, smart technologies and components, "internet of things" (IoT) applications, and/or communication networks?
- 3) Describe any specific project experience your company or organization has related to the design, installation, maintenance or operation of highway lighting, LEDs, or smart technologies, particularly projects that involved public sector counterparties. Include any details related to the project scope(s) and contracting mechanisms that were used in the aforementioned projects.
- 4) What aspect of a highway lighting, LED, and/or smart technology project would your company be interested in?

### **Project Scoping and Contracting Mechanisms**

- 5) What are the key value drivers and considerations for IDOT in developing the Project?
- 6) What should IDOT and its potential partner agencies, including DoIT and DCEO, consider in developing the Project scope?
- 7) How can IDOT achieve its primary goals of upgrading and maintaining lighting assets while staying within current funding levels?
- 8) What are the potential advantages and disadvantages of leasing the lighting infrastructure to third party communication providers?
- 9) What opportunities may be available for IDOT to generate ancillary revenue or share installation costs by incorporating smart technology components?
- 10) What are potential Project scope elements for IDOT to consider, and what are the advantages and disadvantages of each? Note that IDOT would consider various geographic packages (e.g., by Region(s), District(s), etc.), horizontal packages (e.g. luminaire replacement only vs. full pole, foundation, and circuitry replacement), pole types (e.g. high-mast vs. conventional), and risk allocation within scopes (e.g. installation only vs. installation and long-term maintenance).
- 11) What contracting mechanisms (traditional delivery, DBFM, ESCO, etc.) should IDOT consider in order to achieve competitive pricing and consistent long-term operational performance? What are the overall pricing implications of each of the proposed models?
- 12) Is there a desired project term that is necessary to make the Project feasible for your organization?
- 13) How can IDOT transfer long-term maintenance responsibility to the private sector in a cost-effective manner?
- 14) Please describe the current lifecycle of LED lighting technology and the anticipated advancements that should be factored into a term of an agreement, particularly as it relates to the refresh cycle and implications of lifecycle maintenance and risk.

- 15) How can IDOT achieve long-term warranties and/or performance guarantees under various contracting mechanisms? What is a typical term for warranties and/or performance guarantees in the current market?
- 16) What payment mechanisms should IDOT consider if it pursues an alternative contracting mechanism? Under IDOT's current funding levels, how can a payment mechanism be structured?
- 17) What background information will be helpful to your company if it were to submit a committed bid for a potential project?
- 18) Are there specific new technologies that should be used that would be beneficial to this type of project? If so, please describe in detail.
- 19) What additional information not provided in this RFI would you need before submitting a proposal?

### **Smart Technology Considerations**

- 20) What potential smart technologies should IDOT consider relative to the highway lighting network (e.g.: DSRC, small cell, 4G LTE, possible 5G as well as IoT sensors and nodes)?
- 21) Describe the utility/power requirements that IDOT should consider to support these technologies?
- 22) Describe any cyber security/ data security challenges and recommendations related to smart technologies and IoT that IDOT should be considering.
- 23) How would your organization leverage or use the ICN to deploy smart technologies?
- 24) Would there be interest from your organization in establishing its own backhaul network on IDOT's right-of-way in parallel to the lighting assets? If so, how would this network impact the Project?
- 25) In general terms, please describe what data would be beneficial to collect and exchange between IDOT and your organization.
- 26) Please indicate your organization's approach and willingness to share Application Programming Interfaces (APIs) with IDOT.

### **One-on-one meeting**

Please indicate on the attached form with your RFI submittal if you would like to participate in a one-on-one meeting and provide contact information on or before September 21, 2018.

### **Question Submission**

Please submit all questions concerning the RFI to IDOT at [dot.p3project@illinois.gov](mailto:dot.p3project@illinois.gov) by September 7, 2018. All questions received by the deadline indicated below will be answered and posted to the Illinois Procurement Bulletin:

<https://webapps.dot.illinois.gov/WCTB/ConstructionSupportProcurementRequest/BulletinItems>

Only responses sent through the [dot.p3project@illinois.gov](mailto:dot.p3project@illinois.gov) mailbox will be accepted.

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**RFI ONE-ON-ONE MEETING REQUEST**

If you will be responding to this RFI and would like to participate in a one-on-one meeting, please complete the information below and submit by 1:30pm (Central time) on September 21, 2018 via email to: [dot.p3projects@illinois.gov](mailto:dot.p3projects@illinois.gov)

Completed by:

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Association/Organization Name (if applicable)

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Association/Organization Representative Name (or individual's name if no affiliation)

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Address

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City, State, Zip

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Phone Number / Email Address

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Association/Organization Representative Signature (or individual's signature if no affiliation)