

CITY OF RENO, NV
AMENDMENT TO ENERGY SERVICES AGREEMENT

REV. 1 – 2/3/2025

STREETLIGHTING AUDIT SCOPE OF WORK

1. AUDIT SCOPE OF WORK

- (a) Kick-Off Meeting: AMERESCO and its selected subconsultants will attend the audit kickoff meeting where the audit and design work, deliverables, and schedule will be reviewed. This meeting will be virtual and held using Microsoft Teams or a similar software.
- (b) Progress Meetings: AMERESCO will hold monthly progress meetings where the audit and design work, deliverables, and schedule will be reviewed. This meeting will be virtual and held using Microsoft Teams or a similar software.
- (c) Terms of Nevada Energy Ownership Transfer: AMERESCO will assist the City of Reno (CITY) with determining the terms of ownership transfer, including metering requirements, location of the demarcation between the CITY and Nevada Energy (NVE), estimated value of the infrastructure, and a listing of known or observed deficiencies within the streetlighting system.

Deliverable: Proposed terms and conditions for the transfer of ownership between the utility and the CITY.

- (d) Streetlighting Audit: AMERESCO will complete a comprehensive audit of the streetlighting luminaires and poles identifying the locations and characteristics of the streetlight assets based on the geospatial data and compiling all streetlight inventory data in electronic format.

The audit will verify the number of streetlight fixtures, establish the roadway type associated with the streetlight, provide a unique number for each fixture to allow for tracking. Existing attributes from the CITY's streetlighting GIS database (shape file) will be maintained and the new data will be added to the existing database. This audit will include the lighting owned by the City of Reno, the lighting owned by Nevada Energy, and other lighting within the City limits. The City and Ameresco will review the existing streetlighting to determine if any streetlighting that will be designated as Out-of-Scope.

Deliverable: Develop a fixture-by-fixture GIS database that is a useful and working project document to correlate existing pole and luminaire location and characteristics for use during the implementation of a streetlighting LED upgrade project.

(e) Streetlighting Engineering Study:

- (1) Lighting Design: Based on the CITY's existing lighting design criteria, AMERESCO will develop a lighting design strategy that standardizes luminaire selection based on the design criteria. This strategy will incorporate the existing characteristics: roadway classification, roadway physical characteristics, pole configuration, pole spacing, luminaire mounting height, and other attributes. The design strategy will be used in the photometric analysis to confirm luminaire selections.
- (2) Photometric Analysis: AMERESCO will utilize streetlight audit and the existing physical attributes of the streetlighting installations to provide a luminaire selection based on key criteria for both typical applications (local, collector, major street classifications and intersections).

AMERESCO and its subconsultant will prepare a photometric analysis including the manufacturer's data regarding lumen output and distribution types and compare the results to IES RP8-21 for each application. The photometric analysis will also indicate potential light trespass onto adjacent property. The CITY will select a luminaire for each application, and this selection may not meet the requirements of IES RP8-21 in all characteristics. With this selection, each luminaire location will be assigned to a specific luminaire selection, and this will become the basis of the construction project pricing.

Deliverable: Twelve (12) photometric analyses will be prepared for review with the CITY.

Deliverable: Selection of a limited number of options for streetlighting luminaires (not to exceed four (4) manufacturers).

- (f) Energy Analysis: Upon completion of the streetlighting audit, AMERESCO will review the full inventory of the luminaires and wattages to determine the future energy usage associated with the new luminaires. Based on the current NVE energy rates, the Year 1 (after conversion to LED) energy savings will be determined. The baseline energy usage will be established from the billing accounts associated with the existing streetlights.

Deliverable: Estimated energy savings for the LED upgrade project.

- (g) Pole Replacement Definition: The existing CITY Streetlight Pole standards will be used for the pole replacements. AMERESCO and the CITY will use the existing GIS data and the audit information to determine the quantity and location of any proposed streetlight pole replacements. This selection will use the limited condition assessment documented from the audit, and any data from the CITY, to determine the final quantity of streetlight poles that will be replaced as a part of the project. The CITY will review the poles (visually) to determine if additional work is required (e.g., anchor bolt replacement, etc.) that may impact the construction cost. The intent is to only replace the pole and mast arm.

Deliverable: Summary of each pole replacement documenting location, pole type, height, additional work, and other notes for use in determining the final pricing.

- (h) Power Wiring Assessment: AMERESCO will survey a statistically representative sample of the wiring that can be observed within the pole (at the handhole) or streetlighting junction box to determine its condition. This survey will result

Deliverable: Results of the power wiring assessment for evaluation and consideration by the CITY.

- (i) Lighting Control Options: AMERESCO will provide up to three (3) streetlighting control options for inclusion within the overall project pricing. These control options will allow operational control of the streetlighting, including on/off functions, status and power loss alarms,

Deliverable: Summary of features and pricing for the proposed streetlighting control options, including their ability to integrate into any Smart City components.

- (j) Maintenance & Operation Estimate: AMERESCO will provide an estimate of the annual operating and maintenance costs for the streetlighting system.

Deliverable: Estimate of annual operations and maintenance costs, including any 3rd Party costs for streetlighting monitoring systems.

- (k) Estimate of Implementation Costs: Based on the information developed above and decisions made by the CITY, AMERESCO will provide a pricing summary for the construction of the project. This pricing will provide a breakdown between luminaire and control node costs, installation costs, streetlighting pole replacement costs, soft costs, contingency, and other aspects. This pricing would be based on Prevailing Wage Rates and the as-found project conditions and assumptions.

Deliverable: Estimated Project Implementation Pricing based on the streetlighting equipment selected by the CITY.

2. ASSUMPTIONS & CLARIFICATIONS

The following assumptions are included in the pricing and this Scope of Work:

- Ameresco understands that the proposed audit work will uncover some unknown aspects within the streetlight infrastructure that will need to be addressed and that our approach will be flexible to the needs of the CITY. However, in order to be cost-effective in the audit process, it is difficult to anticipate these infrastructure needs, and our pricing does not reflect any unknown conditions or assessments.
- Lighting included in the audit will be roadway lighting that is owned by Nevada Energy (NVE), the City of Reno, Nevada DOT (within City limits), and accessible private roadways.
- All lighting that is not specifically included above (e.g., inaccessible Private Developments, commercial establishments, parking lot lighting, park or trail lighting, pedestrian walkway lighting, etc.), is excluded from this scope.
- Additional photometric analysis in excess of the analysis described within the audit section of this scope of work will be Additional Services and costs.
- Analysis for the implementation of a private cellular network, including all hardware, software, programming, pole modifications, wiring, etc., is not included and any additional studies for a cellular network will require Additional Services and costs to this amendment.
- Identification of streetlight pole condition is a visual survey, and no specific testing or sounding of the poles to determine their integrity is included, nor is testing or evaluation of the streetlight pole foundations.
- Identification of the power wiring condition will be visual, and no specific testing (tension tests, insulation breakdown (megger), etc.) are included in this audit.
- A Pilot Project to allow assessment of new lighting types or manufacturers, or comparison between manufacturers is not included in this audit.
- Pricing for any Smart City components, other than the control nodes and internal control options within the streetlight luminaires, is not included.