A Brighter Tomorrow: LED Street Lighting in BC Product Procurement

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Today's Presentation

- Review Performance Specifications
- Process
- Issues and Considerations

Issues

- LED and Adaptive Products can vary greatly in performance, quality, reliability and cost

- In the past low price often key selection element (HPS).

- Obtaining best value and lowest life cycle cost

Specifications

Appendix (Sample LED Spec).pdf

Product Procurement

With LED's and Adaptive Lighting low cost not a good method to obtain best value

Selection should be based on at least three rated criteria:

Performance
Quality and Longevity
Cost

Product Procurement

Performance (30 points)

Review and rate:

Review data submitted for correctness.

Comparison of UPD ratings. Best accepted UPD should score the highest points.

Ability to meeting light level, uniformity, and veiling luminance lighting requirements.

Rate features and options provided.

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Product Procurement

Quality and Longevity (40 points)

Review and rate:

A review of data submitted for correctness.

Review Mean Time Between Failure (MTBF) results, as this a critical element.

Review of testing data and reports for compliance.

Product review. Actual luminaire submitted should be reviewed.

Product Procurement

Cost (30 points)

Can be scored based on a relative pricing formula.

If a supplier bids $12,000.00 and that is the lowest bid price, that proponent receives 30 points 100% of the possible points for that category(12,000/12,000 = 100%).

A proponent who bids $24,000.00 receives 50% of the possible points for that category ($12,000/$24,000 = 50%), and a proponent who bids $24,000.00 receives a score of 15 possible points (50% of 30 points) for that category.

Product Procurement - Rating

Score	Interpretation
0, 1, 2	UNACCEPTABLE, does not satisfy the requirements of the criterion in any manner
3	VERY POOR, addresses some requirements but only minimally
4	POOR, addresses most of the requirements of the criterion but is lacking in critical areas
5	MARGINAL, barely meets most of the requirements of the criterion to a minimum acceptable level
6	SATISFACTORY, average capabilities and performance, meets most of the requirements of the criterion
7	ABOVE AVERAGE, fully meets all the requirements of the criterion
8	SUPERIOR, exceeds the requirements of the criterion
9	EXCEPTIONAL, feature is clearly exceptional to the requirements of the criterion

Consider minimum point score threshold that a product must meet (say below 5 is not acceptable).

Procurement

Specifications. Anyone can write a specification or copy and paste however knowledge and experience are key. Seek out those with knowledge and experience to undertake or assist.

Key efforts above and beyond the specs are:

Assessment of the inventory (what exists)
Product review and rating

Assessment of inventory is key to ensure roads are properly illuminated and maximum energy savings result. Many road are well over-lit as a result of the short comings in past luminaire optical systems.

Key to review lighting on roadways along with sidewalks. LED Cut-off can be an issue for sidewalks.

Issues / Considerations

Mass Purchase contracts – Numbers of cities form mass purchase group (typically lack administration and management)

Retrofit of existing – Detailed inventory required

New Installations – Suggest an approved product list or fixed pricing based on mass retrofit tender

Request for Information Process – Suggested for adaptive lighting systems as products are evolving.

Request for Proposal Process – Recommended for luminaires

Issues / Considerations

Cobra head replacement is fairly straight forward.

Post top and decorative luminaires not so… Options for post top replacement include:

Consider optical retrofit kit (where offered for newer luminaires)
Consider new luminaire (similar look and shape to what exists)
Consider low wattage cobra head style on special tenon

Factors include age and condition of pole and luminaire, cost, etc

Study of options required. Best option maybe a combination of the above.

Adaptive Lighting Controls

Industry still involving. No real standard. Deployments limited. Must use dimmable driver.

Consider test driving system (s) first (small pilot deployment)

Suggest a feasibility study be undertaken (many already have done so for high pressure sodium through BC Hydro)

It is likely one system will apply for entire city so it must work with all luminaires used in the city

For new installations adaptive system shall be supplied with the luminaire (onus on luminaire supplier)

For retrofits of existing luminaires the onus is on the adaptive supplier to work with luminaires which exist

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Questions and Answers