

The slide features a green background with a faint, repeating pattern of hexagons. A dark grey rectangular area is positioned at the top right. The main title is centered in the white area below the grey box. The text is as follows:

# HRM STREETLIGHTING OPTIONS

Environment and Sustainability  
Standing Committee

April 16, 2012

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# Existing Streetlighting System

- Approximately 40,000 streetlights in HRM
- Annual streetlight bill exceeds \$5.0 million
- HRM owns approximately 13,000 streetlights
- HRM pays NSPI for use and maintenance of approximately 27,000 streetlights
- HRM owns all streetlights within the former City of Halifax boundary plus all decorative lighting in the Capital District and a number of underground fed streetlight systems.

# Energy Efficient Appliances Act

- In May, 2011, the Province legislated a conversion of existing streetlight technologies to Light Emitting Diode (LED) technology.
- Regulations require municipalities to submit a conversion plan to the Province for review by Dec 32, 2012.
- Streetlights will be required to be converted within a 5 to 10 year period.
- This project will cost approximately \$30 million to implement

# Benefits of LED Streetlights

- Anticipated energy reduction of 50%. This amounts to about \$1.6 million annually (after full conversion)
- Anticipated 20 ktonnes annual GHG emissions reduction (about 3500 cars off the road each year)
- Life of light source approximately 20 years versus 5 years for existing High Pressure Sodium (HPS) technology This could reduce maintenance by \$1.5 million annually (after full conversion).
- Opportunity to provide full cut-off fixture design which eliminates light pollution above the horizontal plane.

# Street Light Options

- **Status Quo** – HRM converts the remaining 11,000 fixtures the Municipality owns, NSPI converts the 27,000 fixtures it owns
- **HRM Owns all HRM Streetlights** – HRM converts all 38,000 HRM streetlights to LED
- **NSPI Owns all HRM Streetlights** – NSPI converts all 38,000 HRM Streetlights to LED

# 20 Year Life Cycle Cost Analysis

Option	Capital Cost	Energy Cost	Maintenance Cost	Stranded Cost	Delta
ALL HRM	24.9 m	26.1 m	8.5 m	0.9 m	
STATUS QUO	34.5 m	26.1 m	8.5 m	0.9 m	9.6 m
All NSPI	49.5 m	26.1 m	8.5 m	0.9 m	24.6 m

# Conclusions

- Converting to LED Streetlights is a requirement, not an alternative
- Purchasing all streetlights is the most economical ownership scenario
- Total ownership offers consistent service across the Municipality
- LED Streetlight maintenance costs are anticipated to be limited to warranty replacements for the first 10 years and equivalent thereafter
- Stranded asset valuation will not impact the economic evaluation

# Recommendations

- Develop a most economic business case and timeline for the conversion project
- Identify funding opportunities associated with the project
- Identify staffing requirements to undertake and manage the take-over and conversion of streetlights within the municipality
- Proceed with the take-over and conversion of NSPI owned streetlights and the conversion of HRM owned streetlights