



Case Study:



Hamilton

With 65 waterfalls in its boundaries, the City of Hamilton, Ontario, is known locally as the “City of Waterfalls.” The city’s rich cultural heritage is authentically preserved and displayed in museums including Dundurn Castle, Battlefield House Museum and park and the Canadian Warplane Heritage Museum.

The Niagara Escarpment also runs through the City of Hamilton. It is one of the world’s unique natural wonders, part of a gigantic geological formation composed of rock strata with a long slope on one side and a steep scarp of cliff on the other. In the shape of a gigantic horseshoe, the Escarpment can be traced from near Rochester, New York, south of Lake Ontario to Hamilton, then north to Tobermory on the Bruce Peninsula.



Tews Falls, part of the Niagara Escarpment in the City of Hamilton



Hamilton

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***MIKE FIELD
Project Manager,
Engineering Services Division
City of Hamilton***

Mountain Brow Boulevard runs along a section of the Niagara Escarpment, and the City added a multi-use pathway for residents to walk, bike and enjoy the area. Lighting was required so residents could enjoy it safely into the evening and throughout the year. Hamilton already had an aggressive program to reduce street lighting costs and energy usage by replacing High Pressure Sodium (HPS) lights to more efficient LEDs throughout the City. The land around the Niagara Escarpment presented unique challenges however.

With less than one foot of topsoil, installing traditional electric lighting would have required quarrying through solid rock for over 2 kilometers in length, an expensive and difficult undertaking. With these challenges, City personnel investigated the feasibility of using solar-powered lighting instead.

The financial analysis determined that solar lighting would offer payback from day 1, through large savings on installation costs versus traditional lighting and no ongoing energy costs. After public input and consultation with local residents, the City of Hamilton decided to install decorative poles and light fixtures to complement the beautiful surroundings.

The City chose to work with Tymat Solutions, a Toronto-based manufacturers’ representative for outdoor lighting with over twenty years of experience in the industry. Tymat recommended the City install Smart Off-Grid lighting from Illumient. With the most advanced lighting control and management system in the industry, Illumient systems deliver the high reliability the City could count on.

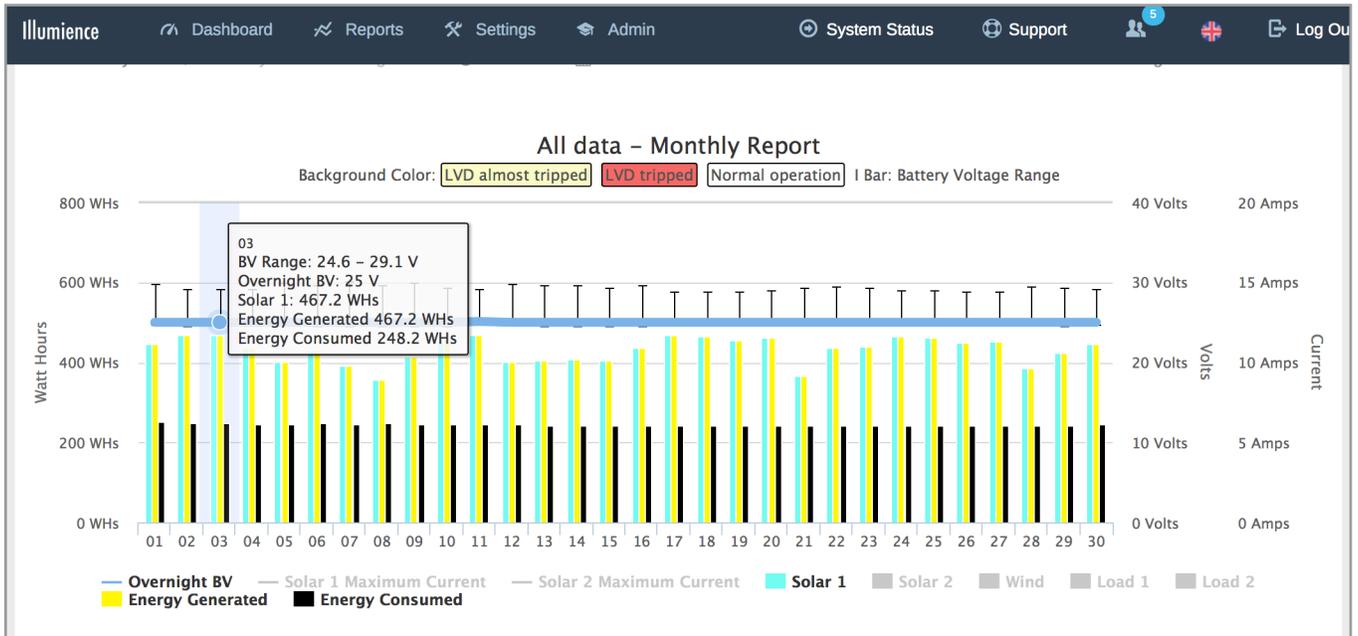
In 2015, 40 Illumient solar street lights were installed along Mountain Brow Blvd. According to Mike Field, a project manager with the Engineering Services Division within the Public Works Department, response from the community has been excellent since the lights were installed. “There were no pedestrian facilities in this area before the pathway and lighting were installed. We have received so many positive comments from local residents, who are so pleased to be able to use this pathway year round and after dark,” Mike noted.



Illumient Smart Off-Grid Lighting along Mountain Brow Blvd, City of Hamilton.

Tyler Plumb, president of Tymat, pointed out that “this project is a great example of a cost-effective and highly attractive approach that would benefit any municipality looking to add lighting in new areas. Without the high cost of cabling and trenching needed to run new electric lines and the environmental benefits of green energy, solar powered lighting makes great sense. Illumient’s Smart Off-Grid technology also ensures that the lights will deliver the service needed year round, even in challenging Canadian winters.”

Illumience Smart Off-Grid receives data around the clock from each light pole, enabling proactive maintenance, real time lighting profile changes and 7x24 monitoring, all accessible over the Internet.



Sample monthly report from one solar light pole at Mountain Brow Blvd.

The Illumience cloud software service is unique in the lighting industry. Every Illumient light comes with built-in wireless connectivity which automatically sends real time information to Illumience. Data captured includes voltage and current readings for two independent solar panels, two independent load ports, batteries and battery temperature. For systems configured with wind support, voltage and current is captured for AC and DC inputs as well as turbine frequency. Over 24 other indicators are also sent to the cloud to monitor services.

Illumience does a lot more than monitoring. Through Illumience you can set up and change lighting profiles and control all other aspects of the system. Predictive weather forecasting enables action to be taken to ride through periods of bad weather, by intelligently using lighting control and dimming to preserve battery power. To find out more please visit www.illumient.com.

