City cuts energy bill by 54% at its outdoor parking space

“This is a beautiful solution for outdoor parking spaces. Why isn’t this applied everywhere?”

Visitor
Park+Ride, Transit Hub
Outdoor lighting accounts for over one-third of our total energy usage. We want to reduce our energy bill and lower our maintenance costs.

Harry van der Wal
Energy Manager, City of Groningen
Background

Located on the outskirts of the city, the Park + Ride (P+R) transit hub is a large outdoor parking lot used by over 2,500 individuals per day. Commuters park their cars at the P+R and use the onsite public transport system to enter the city. While most of the cars are parked during the day, about 10% of the cars stay throughout the night. To ensure public as well as vehicular safety, over 100 lamps were lit at full brightness all night.

Challenge

With continual pressure on the city’s budget, the City Council sought ways to lower its energy bill as well as reduce maintenance costs. At the same time, there were complaints from the neighboring community concerning the excessive lighting at this location.

Although switching off the lights after midnight is a financially attractive option, this would severely compromise public safety. The city wanted a solution that would lower its energy bill without compromising safety.

Solution

The City Council opted for Tvilight’s dynamic lighting solution and installed CitySense units throughout the parking lot. The solution works in a simple manner. The lights automatically dim (to 20%) during off-peak hours when there is no one around. As soon as any presence is detected, all the lights surrounding the occupant glow to full brightness. This ensures that there is sufficient light around occupants making them feel safe and comfortable. The City Council also adopted Tvilight’s remote monitoring and control software, CityManager, to collect statistical data and failure reports.

The results are astonishing. The city has achieved energy savings of 54% on its conventional lighting and the community has hailed the city’s efforts and given positive feedback about their experience.

Benefits

- **Municipality**
  - Over 50% energy cost reduction
  - Reduced maintenance costs of up to 50%
  - Excellent reduction in energy use without compromising safety
  - Fits into the ‘Smart City’ vision
  - Energy data and failure reports through CityManager

- **Citizens**
  - Feel safe, and are not afraid to leave their cars parked all night
  - On-demand lighting
  - Reduced skyglow

- **Planet**
  - Significant reduction of CO₂ emissions
  - Reduced light pollution

*Data from CityManager*