



# **Street Lighting Control and Dimming System (SLCDS)**

**July, 2014**



**Unique Technology:** a world-leading developer and producer of **Smart Metering** systems based on sophisticated technology of Power Line Communication (PLC)

- 20 years of experience in AMR/AMM and SLCDS
- Approximately 400,000 units installed worldwide
- Tenders awarded for additional 1,000,000 units



## Automated control and dimming of street lighting enables:

- Energy savings of up to 30%
- Detection of faulty lamps and ballasts
- Monitoring of maintenance and detection of faulty equipment
- Cable theft prevention
- Line extension for electromagnetic ballasts



Unique's control system operates with all forms of street lights:

- Electromagnetic ballast
- Electronic ballast
- LED lamps
- Induction lamps



# How does the System Work?

- SLCD units are attached to each lamp
- Units communicate to concentrator situated on transformer, using low voltage lines for Power Line Communication (PLC).
- Concentrator controls up to 250 lamps
- Concentrator communicates to control center using cellular or other wireless communication.
- Control center integrates with other utility systems

# Benefits and Functions of Smart Lighting System

- Two-way communication enables remote connection, disconnection and dimming
- SLCD units send detailed information including:
  - Lamp status
  - kVr
  - Voltage
  - **Optional power factor**
  - kWh consumption

A tall, slender street lamp with a single glowing light fixture, positioned on the left side of the slide.

## Dimming levels:

- Electromagnetic ballasts
  - Can be set to 3 levels (100%,80%,60%)
- Electronic ballasts
  - Fully flexible from minimum to 100%
- LED lamps
  - Dims according to lamp specification

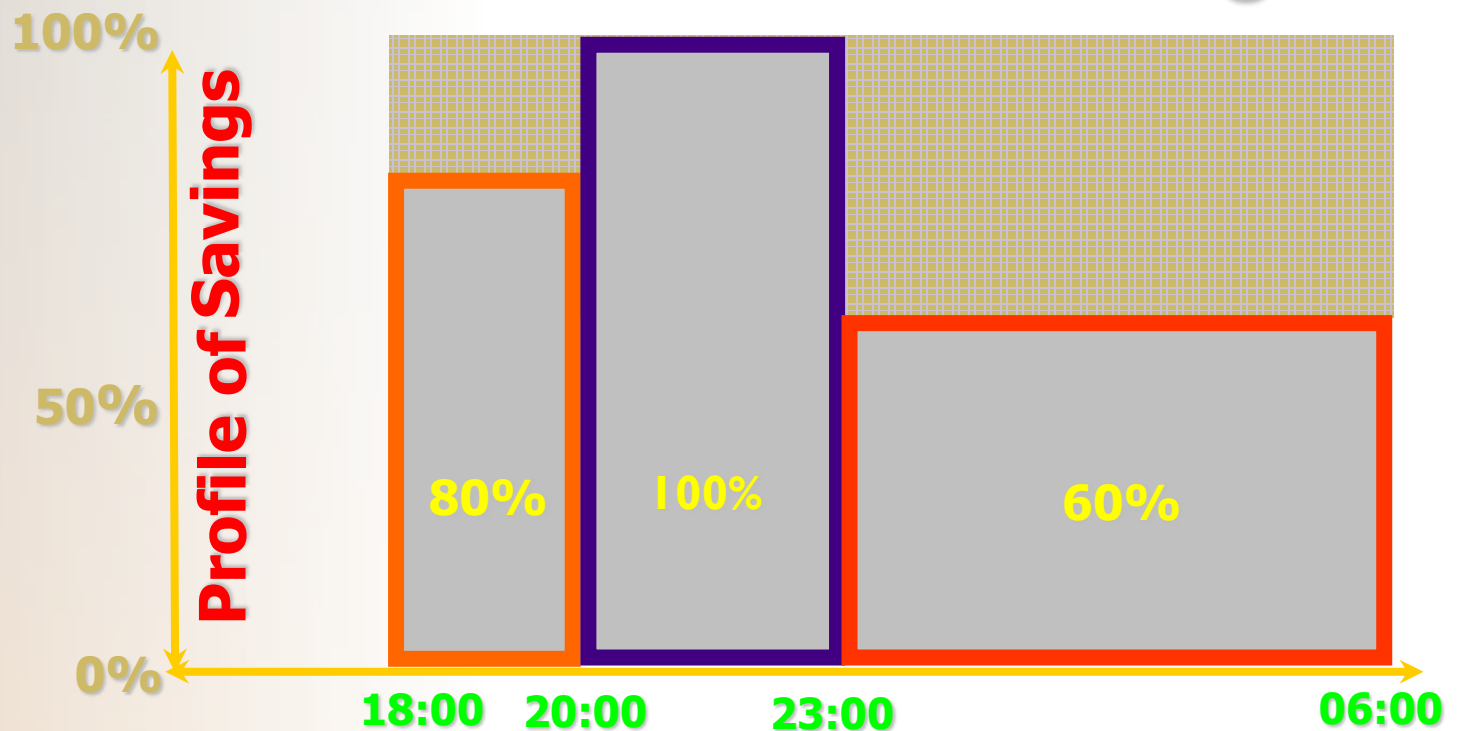


# How are Savings Achieved?

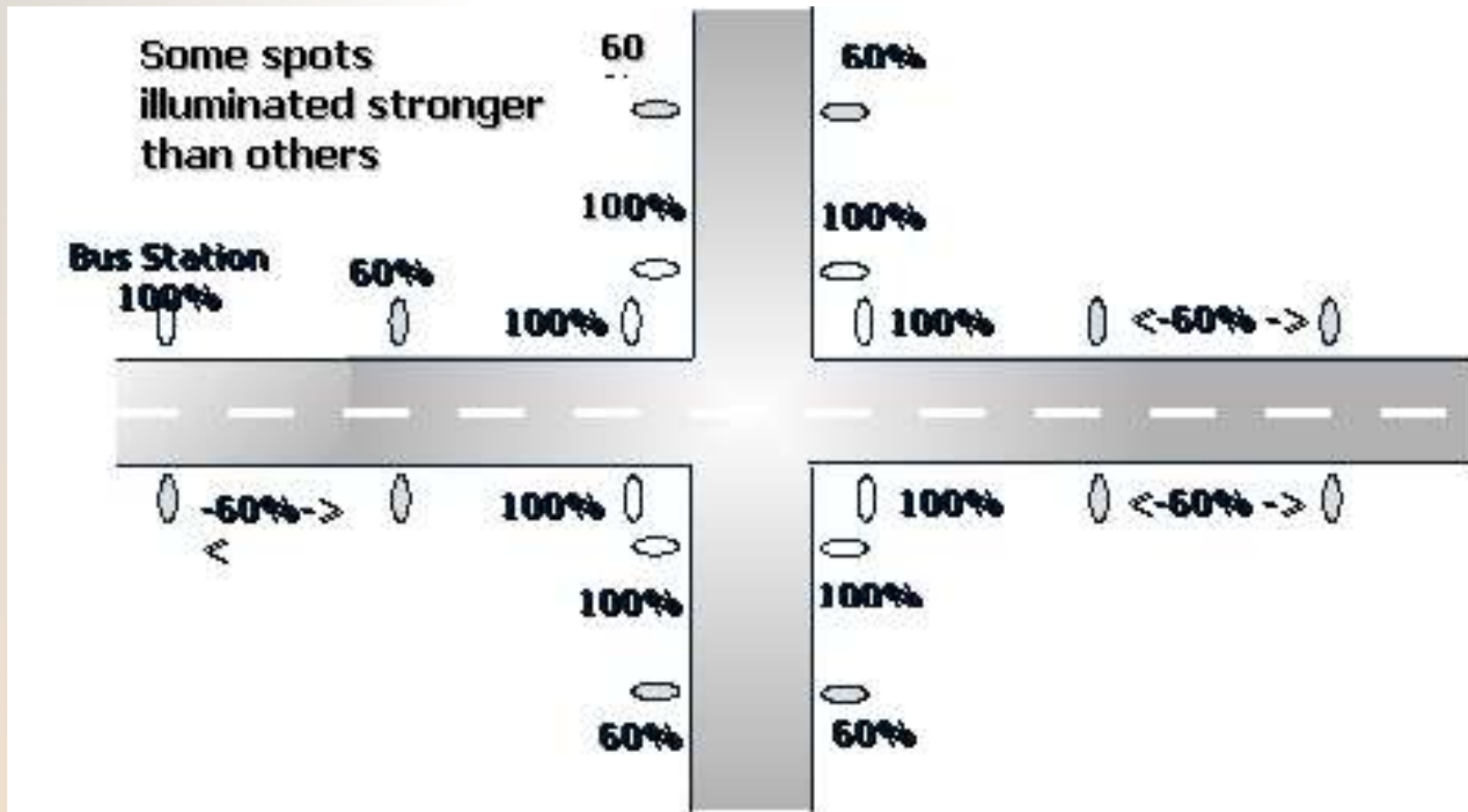
- Adjustable dimming according to hour of night
- Dimming of individual lamps according to location
- Dimming according to weather conditions (snow, rain, fog)
- Not having to dim during replacement, the system notifies the status of each lamp and ballast (faulty or not)



# Easily adjustable dimming schedule allows for maximum savings



# Brightness adjusted by location for maximum safety and efficiency





# World Wide Deployment of Unique's SLCDS System

- South Africa: NMBM Municipality (Port Elizabeth), Ethekewini Municipality (Durban)
- Israel: Kibbutz Shefaim, Holon, Petach Tikva, Ashdod, Netanya municipality
- Sweden: Sundsvall
- Chile: Two ongoing projects
- Vietnam: Four ongoing projects
- India: Pilot project
- Italy: Two ongoing projects



# Electromagnetic Ballasts - Ease of Installation

