Power Line Induction Clamp Light

Team 2

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Product Description

- Sustainable streetlight powered by a rechargeable battery.
- Clamps to existing distribution lines or installation near a pole. Target power line voltage: 0kV-69kV (distribution lines).
- Target input power line current: 10A-600A
- Reduces power consumption on the grid. Powered by induced magnetic field using a Current Transformer.
- Target market: 60Hz lines, USA.
- Intelligent control system and Bluetooth to provide a user interface.
Key Requirements

- Rechargeable battery design.
- CT output to provide sufficient energy to charge the battery: 11.1VDC and >~10mA at 20A of line current.
- Light efficiency: Achieve minimum required illumination with Low Power LEDs, less than 10W.
- Resistance to extreme weather conditions such as ice, snow, extensive rain, extreme heat, and sub-zero temperatures.
- Bluetooth interface for monitoring and control.