



The Township of South Orange Village

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MEDIA RELEASE

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Historic South Orange Gas Lamps Experience High-tech Environmental Upgrade

South Orange Partners with PSE&G to Reduce Greenhouse Gas Emissions

South Orange, NJ (August 18, 2010) – Gas street lamps have provided street lighting and an identity and charm for the Township of South Orange Village in northern New Jersey since 1860. In 2003, a historic preservation report suggested the Village consider the gas lamps as a historic element of the town. South Orange has 1,438 gaslights which remain lit continuously – 24 hours a day. However, much has changed in South Orange since its historic gas street lamps were installed, including the price of fuel and increased awareness of detrimental carbon emissions.

In an effort to preserve the gas lamps, yet be more environmentally sensitive and cost effective, in August 2007, South Orange partnered with PSE&G to initiate development of a device that would shut off gas consumption in each gas lamp during daylight hours. This same device also would sense darkness, and re-ignite the lamps during night-time hours. The new design would provide minimal change to the appearance of the lamp, with only a few extra components added inside the lamp's globe. This device would enable South Orange to reduce lamp gas consumption by nearly half. While natural gas is an efficient, clean burning fuel, this cycling device additionally will benefit the area by reducing greenhouse gas emissions by nearly half, which currently generate annually an estimated 4.5 million pounds of carbon dioxide (CO₂) emissions.

According to Village President Douglas Newman, "South Orange's historic gas street lamps have come to symbolize our community's charm, but our commitment to environmental sustainability compelled us to pursue this groundbreaking effort with PSE&G."

Since 2008, PSE&G has been working with the Northeast Gas Association NYSEARCH Research and Development Group to develop a device capable of turning a gas lamp on and off automatically without an external electric supply. Since no electricity is available to the South Orange's existing gas lamps, a cycling device operated by batteries was required. "Surprisingly, this technology never existed for three-mantel, boulevard-style gas lamps, such as the ones used in South Orange," said Doug Sharp, a PSE&G Technical Support Specialist.

South Orange and PSE&G currently are working with Knightronix, Inc., an innovative firm that supplies a variety of cutting edge gas lamp retrofit components, to invent an automatic device to meet the desired lamp specifications and requirements for this initiative.

To ensure the safety and reliability of this device, Intertek Laboratory Services was employed to perform an engineering design review and laboratory performance testing. This testing was performed in two phases to allow for minor design modifications to be implemented, allowing the lamp to achieve optimal results. Tests were performed for measuring the effects of combustion emissions, moisture resistance, rain conditions, high and low temperatures at varying gas delivery pressures, gas leakage, light output, solenoid valve cycling and overall endurance. PSE&G partnered with three other Northeast Gas Association member utilities that include PECO, National Grid and National Fuel in funding this research project. Laboratory performance testing has been performed to ensure that the device operates properly and meets current industry standards that are applicable to gas ignition controls and gas street lighting.

Based on feedback gained from the laboratory evaluation, final design prototypes were manufactured for field installation testing. Fifteen devices are being installed and evaluated at key locations within South Orange. Municipal volunteers have agreed to monitor the operation of these devices until the year-long evaluation is completed. South Orange Village Trustee Howard Levison, who has championed this initiative from the start, observed, "This new device will help South Orange reduce gas consumption, minimize its carbon footprint, and maintain the charm gas lamps have provided South Orange for 150 years."

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