Sol
by Sunna Design®

FLORIDA CITY GOES ALL IN ON SOLAR STREET LIGHTING

Dania Beach has been building its network of solar street lights for 15 years. With 20% of its streetlights now solar-powered, the city is proof that solar is a practical, reliable solution.

Located 20 miles north of Miami along the Atlantic coast, Dania Beach has long been a beacon of urban sustainability and energy efficiency. The city is home to the world's first LEED Gold Certified water treatment plant. Its community garden provides residents with affordable, locally-grown produce. And since 2008, the city has been incrementally adding and converting its streetlights to solar.

LOCATION
Dania Beach, FL

APPLICATION
Street lighting

PRODUCT
500+ EverGen

The initial impetus for installing solar lights was to address service gaps in an underlit, low-income neighborhood. Opting for solar allowed the City to sidestep much of the labor, cost, and rigidity associated with conventional grid-powered streetlights while still achieving the goals of safety, security, and crime reduction.

The relatively small pilot project gave city engineers and installers first-hand experience of the ease and flexibility of solar lighting installations. Since solar lights operate independently from the grid, no trenching or heavy equipment was required. Poles could be placed wherever light was needed, and underground infrastructure, traffic flows, and adjacent properties weren't affected.

Most importantly, once the lights were up and running, it was clear they were no less bright than the grid-powered streetlights they were used to. The solar lights could meet and maintain IES light level targets without having to dim or shut off partway through the night to conserve energy. And they did it all with solar power, making their operating cost effectively zero.

Impressed, the City moved quickly to expand the project to other areas. They applied for—and won—multiple rounds of Community Development Block Grant (CDBG) funding, which, combined with their own general revenue, financed the purchase and installation of more than 500 streetlights between 2008 and 2023.

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Over that 15-year period, Dania Beach has installed a number of different solar lighting products, including, but not limited to, Sol's (legacy) Top-of-Pole and (current) EverGen Series. Many systems installed during the first phase are still operational and need little maintenance. Others have needed more, and still others have had to be replaced.

Fortunately for the City, wholesale replacement is a rarity. Sol has successfully retrofitted around 350 systems—Sol's and other manufacturers'—with new EverGen controllers, fixtures, batteries, and panels. The new panels are significantly more compact, capable of collecting the same amount of energy as the original arrays, despite being ~60% smaller.

Retrofitting has allowed the City to upgrade to the latest technology, extend its warranty, and take advantage of new features like remote monitoring without incurring the cost of net new systems. It has also let them try several different products and learn what works best.

With 20% of its street lighting now solar-powered, Dania Beach is living proof that solar is a practical, reliable, and affordable solution. As cities nationwide search for ways to reduce their dependence on fossil fuels and meet sustainability targets, they'd be wise to look to Dania Beach's solar streetlights as an example.