

- **Project** Masdar City Roadway and Site Lighting
- **Location** Abu Dhabi, United Arab Emirates
- **Sales Rep** Gargash Lighting Systems, LLC.
- **Product** (LOS) Shoebox Series and (LCS) Canopy Series
- **Completed** 2009
- **Description** Dual Light level. 246 fixtures producing Avg of 15 lux on roadway and 60 fixtures providing an average of 6 lux around offices



Solar Powered Roadway & Parking Canopy Lighting - Masdar City, UAE

SolarOne® Solutions, working with locally-based Gargash Lighting Systems (GLS), is providing outdoor lighting for the roadway and site offices of the world's first completely zero-carbon city, Masdar City, located in the United Arab Emirates. Prior to selecting SolarOne as their provider for outdoor lighting, Masdar evaluated Solar-powered fixtures from several world-class manufacturers. SolarOne's advanced solar powered lighting system, with patent pending SO-Bright® Technology, stood alone in riding through a severe sandstorm and multiple days of cloudy weather without difficulty.

SolarOne and GLS first worked closely with Masdar and their contractors to develop a lighting plan that would illuminate the incoming roadway and parking areas around the site offices. Through a combination of SolarOne's LOS (Shoebox Series) fixture for the parking lots and roadways, and the LCS (Canopy Series) lighting system, the designated areas are illuminated to an average of over 6 lux during peak hours. SolarOne and GLS were tapped again to provide the reliable solution for lighting the Atkins ring road that encircles much of the 6.3 sq. km city. In this case, a combination of dual and single-fixture LOS systems (using light engines at 50 watts or 60 watts) are provide an average of 15 Lux across the roundabouts, intersections and straight-aways of the roadways.

SolarOne solar powered lighting systems use high efficiency white LEDs with dedicated optics to efficiently illuminate the areas that need lighting, but do not "spill" lighting into areas that should remain dark. The broad spectrum character of the 6500 Kelvin light provides exceptional visual acuity, while the advanced optics offer un-paralleled uniformity. Philip Parker, Commercial Director for the installing contractor Al Jaber Energy Services agrees, "The SolarOne Lights provide an excellent quality of light."

The LED lamps themselves are IP65 Rated, eliminating the need for protective secondary lenses. As a result, the SolarOne system is able to deliver professional lighting characteristics using a fraction of the lumens, and therefore energy consumed, of other light sources. This translates to smaller solar panels, fewer batteries and lower cost. The SolarOne lighting system is most distinguished for its proprietary SO-Bright® Technology, which employs maximum power point tracking, temperature compensation and Battery SOC algorithms to manage the fixture's light output and adapt to low power input conditions such as cloudy days, and even sandstorms. In the United Arab Emirates, sandstorms can reduce sunlight and visibility for days at a time and bring the area to a complete standstill.



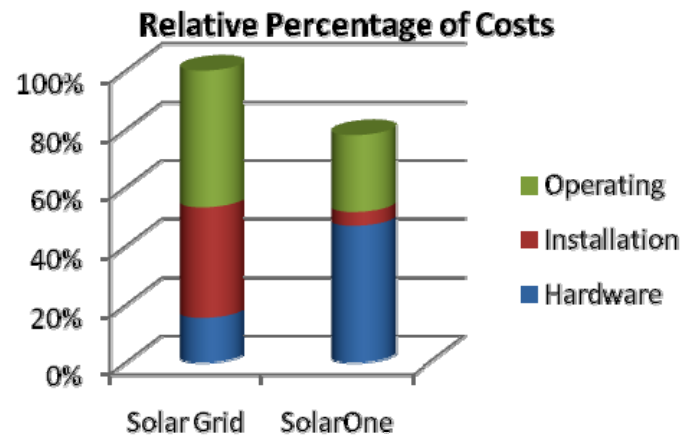


Cost and Time Savings

“When compared to a simple lamp post, the equipment costs of solar lighting are high”, explains SolarOne President Moneer Azzam, “because effectively you are buying the lights with their own power plant included. We were pleasantly surprised to learn that those costs are quickly offset by all the costs of running power lines... even if you are trenching through sand, as is the case at Masdar”.

“By using solar lights we’ve managed to get rid of all the underground cabling and ducting...which was excellent, and meant we could install the solar lights a lot quicker than traditional lights”, reported Philip Parker, “We were delighted that we were able to offer Masdar a sustainable solution with cost savings.”

Unlike conventional lighting, the systems become operational the moment that they are put into place. The site office area was illuminated within a week of unpacking the equipment and the roadway was illuminated within 3 weeks. Larry Tadeos, a construction manager at Al Jaber comments, “There really is no difficulty for the installation”. The lights are also easily relocated. This has already proven to be an important consideration to a fast-growing site like Masdar City, where needs evolve quickly and plans are prone to change.



About the Masdar City Initiative

The Emirate of Abu Dhabi, capital of the United Arab Emirates, is investing in long-term strategic development of sustainable future energy technologies. The Masdar Initiative, driven by the Abu Dhabi Future Energy Company, is a global stage for world-wide cooperation and engagement in developing solutions for: energy security, climate change and the development of human expertise in sustainability. The city is planned to cover 2.3 sq mi. and will be home to 50,000 people and 1,500 businesses, primarily commercial and manufacturing facilities specializing in environmentally-friendly products, and more than 60,000 workers are expected to commute to the city daily.

About GLS

Gargash Lighting Systems L.L.C. (GLS) is a leading lighting companies in the Gulf region based in Dubai and is a wholly owned subsidiary of the 50 year old Gargash Group. GLS has a team of well qualified and experienced professionals who have expertise in various disciplines of lighting and lighting control systems. In addition to the Masdar project, the GLS team has served some of the most prestigious in the UAE including the Shams Abu Dhabi, Atlantis, Dubai Metro, Abu Dhabi shopping mall and Emirates Headquarters Building. GLS recently announced a cooperation with the Al Fahim Group in Abu Dhabi that will go by the name of Marjan Lighting Systems (MLS) to serve the Abu Dhabi area.

About SolarOne®

SolarOne® Solutions, Inc. (“SolarOne”) is the leader in commercial-scale solar-powered LED lighting systems. The company combines highly efficient LED lamps, with its patent-pending SO-Bright® technology, to provide unparalleled performance and reliability. With systems operating in a wide range of environmental conditions since 2004, SolarOne established itself as the first to develop and deploy solar powered area lighting systems using white LED technology. Today, SolarOne and its SO-Bright® Technology is the choice of many well established municipalities and institutions including the City of Toronto, City of Los Angeles, United State Air Force and Yale University. SolarOne and it SO-Bright® Technology has also been chosen as the solar lighting partner by several major lighting and shelter companies, including Philips Lighting and Provincial Sign systems, and has representation across North America and the UAE.

