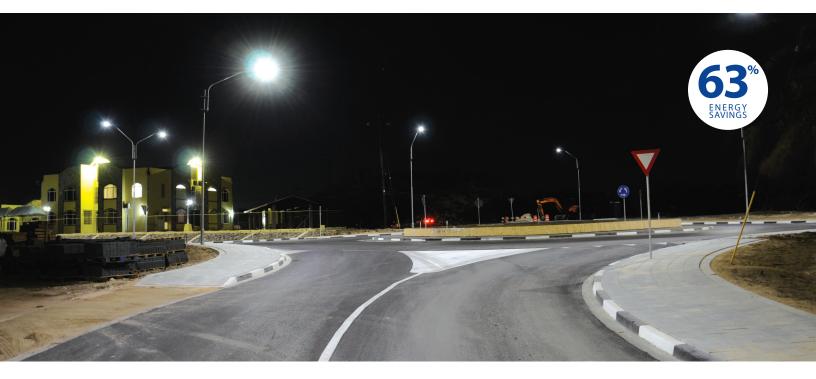
## NXT™ SERIES: ROADWAY CASE STUDY

**ISLAND OF ARUBA** 





In October of 2015, LRL entered a supply contract with NV ELMAR and the Government of Aruba for a full conversion of Aruba's public street lighting system to LED technology. Once completed in 2017, the installation will consist of approximately 14,000 smart grid-enabled NXT luminaires. The NXT luminaires are equipped with onboard NIC (network interface cards) cards, in cooperation with technology partner lugenu, an innovator in smart grid network technology.

NV ELMAR has already installed more than 2,000 such luminaires, the first in 2011. The photo above shows NXT luminaires installed on the newly constructed Hato Roundabout located north of the city of Oranjestad.

The conversion to LED roadway lighting will result in energy savings of approximately 63% versus the incumbent technology. In addition to energy and maintenance cost savings, this conversion is an important element in Aruba's long-term sustainability program. Over 20 years, it is expected that the conversion will yield GHG reductions of 44,223 tonnes.

#### LOCATION:

Island of Aruba

### CLIENT:

Government of Aruba and NV ELMAR

#### **PROJECT SCOPE:**

14,000 Smart Grid enabled NXT series luminaires

#### **PRODUCT:**

NXT series luminaires equipped with Ingenu NIC cards



# NXT™ SERIES vs. MERCURY VAPOR ISLAND OF ARUBA







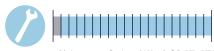
4.9\* Years Asset Payback

Total Lifecycle Cost Savings (20 Years) \$28,570,696



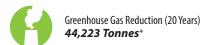
Energy Savings (1Year) **\$1,118,582 (4,068 MWh)** 

Energy Savings (20 Years) **\$27,178,596 (81,351 MWh)** 



Maintenance Savings (1 Year) \$347,472

Maintenance Savings (20 Years) \$6,965,687





\* Asset Payback is based on capital payback of replacing 80W and 125W mercury vapor luminaires. Year 1 estimates are based on the full conversion. Re-lamp cost of \$100 per luminaire. Re-lamp schedule is 4 years. Energy cost \$0.275 per kWh. Annual energy cost increase rate (multiplier) is 2%. Length of study (20 years). Daily on-time (12 hrs/day).

<sup>+</sup>Assumes that the tonnes of CO2 produced per MWh of energy is Equivalent in Aruba to the US.

