

HIGH-IMPACT ENERGY SAVINGS FOR PORTS & PUBLIC SPACES

Lighting. Security. Intelligence. All in One.

TURN OUTDATED LIGHTING INFRASTRUCTURE INTO A MEASURABLE ENERGY ASSET

Across U.S. ports, municipal lots, and public spaces, **70%+ of outdoor lighting still relies on inefficient high-pressure sodium and metal halide systems.** These aging "light trees" consume excessive power, require constant maintenance, and strain electrical systems—driving up operating costs year after year.

Apollo Metro™ replaces legacy lighting with high-efficiency LED infrastructure that dramatically reduces energy consumption, improves power quality, and delivers fast, verifiable ROI—often without upfront capital.

THE ENERGY ADVANTAGE Proven, Immediate Reductions in Operating Costs

Energy Impact Area	Value Delivered
LED Conversion Savings	**Up to 62% lower energy consumption** compared to sodium and metal halide lighting
Maintenance Reduction	**~40% lower maintenance costs** through 10+ year LED lifespan and remote diagnostics
Power Quality Optimization	Reduced electrical losses, lower heat buildup, improved system efficiency
Carbon Reduction	**~60% CO_2 reduction per light**, supporting ESG and sustainability mandates
Utility Incentives	Access to federal, state, and utility rebates through Apollo's Placement Concierge

AMPLIFYING SAVINGS WITH HARMONIC FILTERS (Optional, Incentive-Covered)

Why Harmonic Filters Matter in Large-Scale Infrastructure

Ports and public facilities rely heavily on non-linear electrical loads—LED drivers, VFDs, cranes, IT systems, and automation. These loads create harmonic distortion, which wastes energy as heat and reduces system efficiency.



Apollo-supported harmonic filters address this inefficiency directly:

- **3–5% additional energy savings** in typical environments
- **10–20%+ additional savings** in facilities with high distortion
- Reduced heat stress on electrical components
- Improved equipment lifespan and system reliability

With Apollo's new grant partner, harmonic filter costs can often be fully offset through rebates—turning incremental efficiency into pure upside.

DESIGNED FOR PORTS & PUBLIC INFRASTRUCTURE

Right-Sized Illumination, Not Over-Lighting

Apollo fixtures are engineered to replace dense clusters of legacy lights with fewer, more efficient luminaires—delivering uniform, daylight-quality illumination while reducing total wattage and pole clutter.

- Port terminals & container yards
- Roadways, access lanes, and logistics zones
- Long-span parking lots and garages
- Public campuses, depots, and civic spaces

THE APOLLO SMARTLIGHT PLATFORM

Apollo Edge™
Entrances, walkways, parking areas.



Apollo Pro™
Large lots, roadways, logistics.



Apollo Sol™
Stadiums, campuses, wide-area coverage.



Apollo Sync™
Connectivity hub for remote management.



Drop Data IQ™
Real-time command, alerts, and AI analytics.



BUILT-IN SECURITY & INTELLIGENCE

While Apollo Metro is **first and foremost an energy platform**, optional integrated features can further enhance operational value:

- Optional embedded cameras (e.g., Apollo Pro+) for **perimeter awareness**
- Centralized remote monitoring and security alerts via **Apollo Drop Data IQ™**
- Reduced site visits through real-time diagnostics
- These features are **additive**, not required—allowing energy teams to lead with savings while operations teams gain visibility when needed.

Apollo camera's deter theft and potential criminal activity using motion capture, and alerts.

EXAMPLE: PORT & PUBLIC INFRASTRUCTURE ENERGY IMPACT

Representative Scenario (Single Port Facility)

- Existing lights: **1,200 legacy sodium fixtures**
- Average energy cost per legacy light: **$450/year**
- Apollo LED replacement savings: **~62% per light**

Estimated Annual Results

- Energy savings per light: **~$275**
- Total annual energy savings: **~$330,000**
- Maintenance savings: **$80,000–$120,000 annually**
- Additional harmonic filter savings: **$30,000–$60,000+ annually**

Total Annual Opex Reduction: $440,000–$510,000 per facility

APPLICATION USE CASE

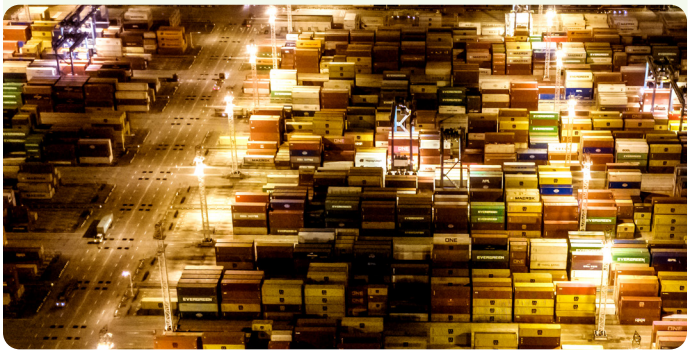
MOST PORTS ARE STILL RUNNING ON YESTERDAY'S LIGHTING

Despite assumptions that lighting upgrades are complete, many port facilities have converted only ~30% or less of their outdoor lighting to LED. The rest remains high-pressure sodium or metal halide—primarily clustered "light trees" that are energy-intensive and maintenance-heavy.

Aging High-Pressure Sodium or Metal Halide Fixtures

- **High-Pressure Sodium Light Trees**
- **Metal Halide Yard Lighting**
- **Legacy High-Wattage Fixtures (1,000–1,500W each)**

Representative port terminal: dense clusters of legacy lighting consuming excessive power and producing uneven illumination.



Modern Apollo LED SmartLight Solutions

- **Up to 62% Energy Reduction per Fixture**
- **Fewer Fixtures, Better Coverage**
- **Uniform, Daylight-Quality Illumination**
- **Reduced Electrical Load Across the Yard**

Improved use of energy, hardware management, lighting coverage, security, and safety.



"Ports don't have a lighting problem; they have an energy efficiency opportunity hiding in plain sight." — MATT SANDVIG, APOLLO CEO

SUPPORTING BENEFIT OF APOLLO SOLUTIONS

Property & Casualty Insurance

- Improved visibility reduces incidents
- Optional video evidence for claims validation
- Potential premium reductions

Facility & Traffic Intelligence

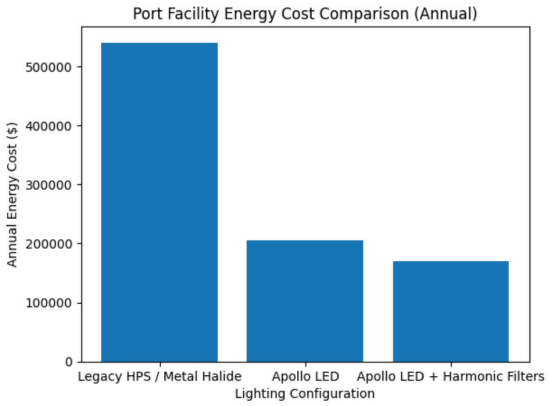
- Optional data capture for:
- Vehicle flow
- Yard congestion
- Inbound/outbound patterns
- Supports better asset utilization & planning

Security

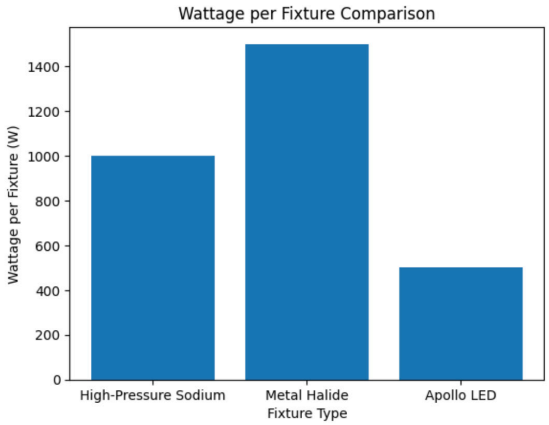
- Embedded cameras where needed
- Perimeter awareness without separate poles
- Centralized access via Drop Data IQ™

WHAT ENERGY SAVINGS LOOK LIKE AT SCALE

Despite assumptions that lighting upgrades are complete, many port facilities have converted only ~30% or less of their outdoor lighting to LED. The rest remains high-pressure sodium or metal halide—primarily clustered "light trees" that are energy-intensive and maintenance-heavy.



Representative port facility with ~1,200 fixtures. Apollo LED reduces annual energy spend by ~62%, with harmonic filters delivering an additional 3–20% savings by improving power quality and eliminating wasted electrical losses.



- Legacy fixtures are drawing 2–3× more power per pole
- Apollo LED achieves equal or better illumination at ~⅓ the wattage

Ports don't save energy one light at a time — they save it thousands of times over.

WHY APOLLO METRO

Infrastructure That Pays for Itself

- High-output, U.S.-assembled LED systems rated for 10+ years
- Proven deployments delivering **62% energy savings at scale**
- Incentive and grant navigation handled end-to-end
- Designed for ports, municipalities, and significant public and private assets

Apollo Metro transforms outdoor lighting from a fixed operating expense into a measurable energy-savings program—potentially cash-flow positive from day one.

RoHS Compliant IP65

Assembled in the USA

www.apollometro.com www.dropdata.ai

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