



# Lighting Control Cost Analysis for LED streetlights

## Savings on all scales

The Ubicquia UbiCell lighting control platform delivers significant operational cost savings for municipalities of all sizes.

It reduces electricity consumption, minimizes maintenance and extends the lifespan of LED streetlights. Analysis shows that the average payback time is under three years, so the sooner you deploy UbiCell, the greater the financial impact on your bottom line.

20 – 40%

Additional cost savings than LED with photocells alone

3.5

Average increase in  
LED streetlight lifespan  
in years

31%

Average additional  
GHG reduction vs LED  
with photocells

# Lighting Control Savings for a Small City

Installing UbiCell lighting controls when converting from High Pressure Sodium (HPS) to LED streetlights can reduce operating expenses by **more than \$5 million** over 15 years.

## Small City Details

### Population:

< 100,000, low-medium density

### City characteristics:

Moderate urban development

### Streetlights:

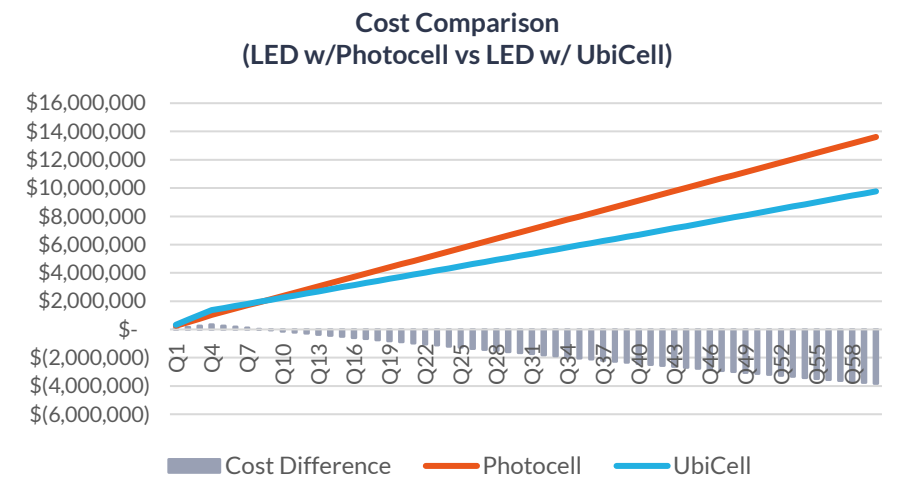
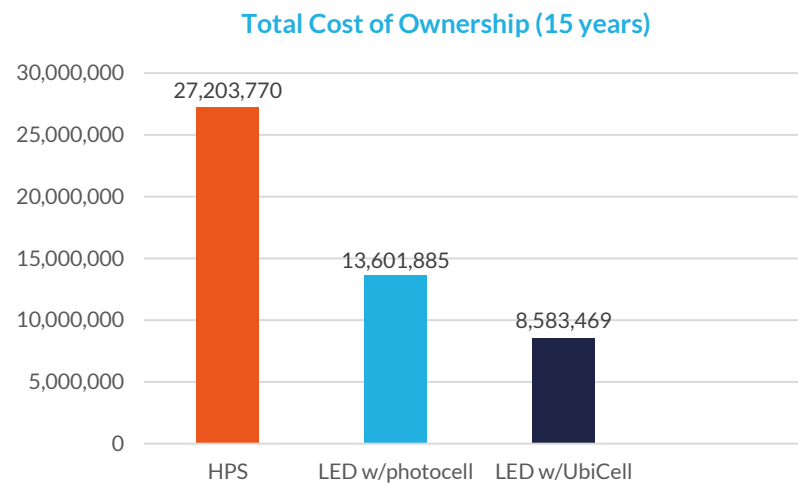
8,451 (decorative and cobrahead mix, 100-Watt LED)

### Operating profile:

12 hrs/night – 3 hrs @ 100% brightness, 9 hrs @ 30% dimmed

**Electricity rate:** \$0.1000 kWh

TOTAL COST OF OWNERSHIP		
High-pressure sodium (HPS) streetlights	LED with photocell	LED with UbiCell
<b>\$27,203,770</b>	<b>\$13,601,885</b>	<b>\$8,583,469</b>
15-year cost savings. UbiCell compared to LED only		
<b>\$5,018,416</b>		
Break-even (payback time)		
<b>2.25 years</b>		
Projections are based on the most recent estimated costs for equipment, truck rolls, etc. as of August 2022. Assumes 400W HPS replaced by 100 W LED.		

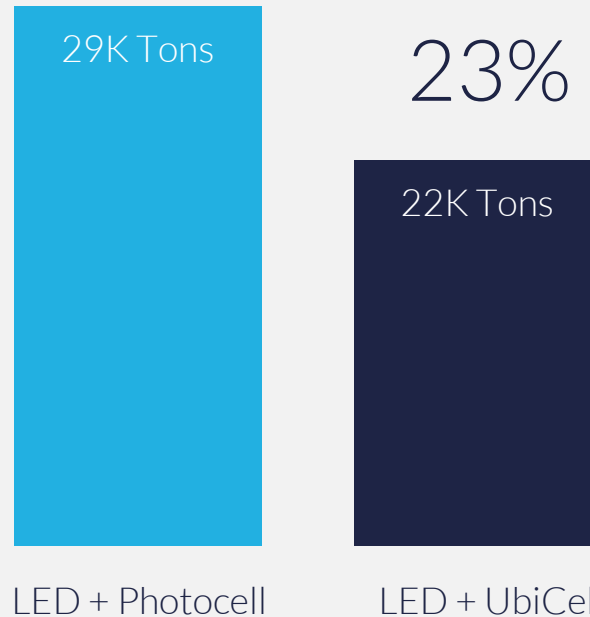




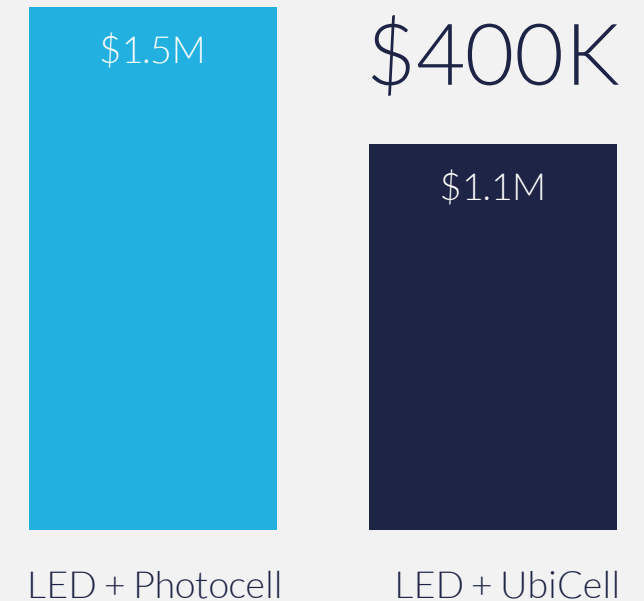
# Environmental Impact Reduced for a Small City

Installing UbiCell lighting controls has a significant environmental impact, reducing energy consumption and minimizing truck rolls for maintenance, lowering overall greenhouse gas emissions by **6,435 tons** over 15 years.

Greenhouse Gas Emission over 15 Years



Social Cost of Carbon over 15 Years



\*The social cost of carbon is an estimate of the economic costs of each additional ton of CO<sub>2</sub> emitted as an indication of the benefits of reducing emissions.

# Lighting Control Savings for a Large City

Installing UbiCell lighting controls when converting from HPS to LED streetlights can reduce operating expenses by **more than \$53 million** over a 15-year period.

## Large City Details

### Population:

1 million +, medium density

### City characteristics:

Significant urban development

### Streetlights:

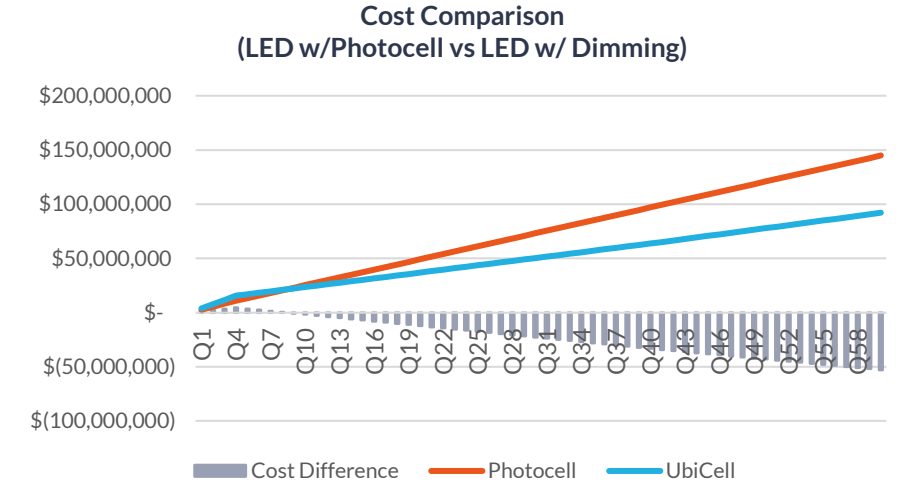
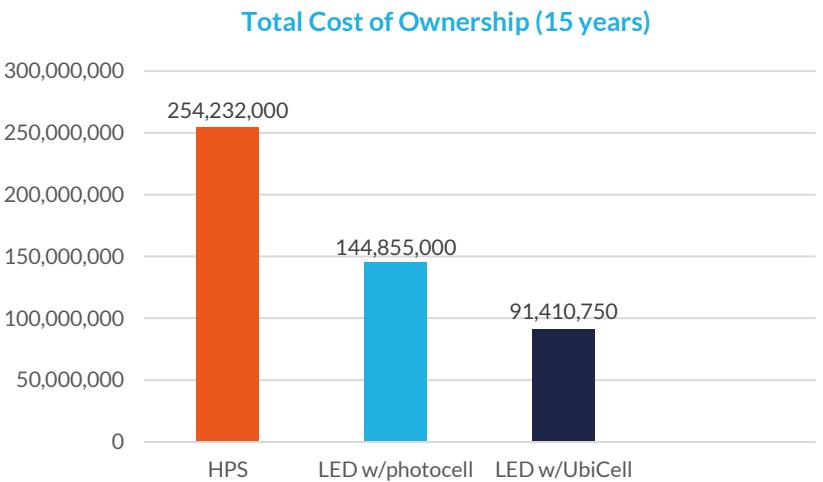
90,000 (decorative and cobrahead mix, 100-Watt LED)

### Operating profile:

12 hrs/night – 3 hrs @ 100% brightness, 9 hrs @ 30% dimmed

**Electricity rate:** \$0.1000 kWh

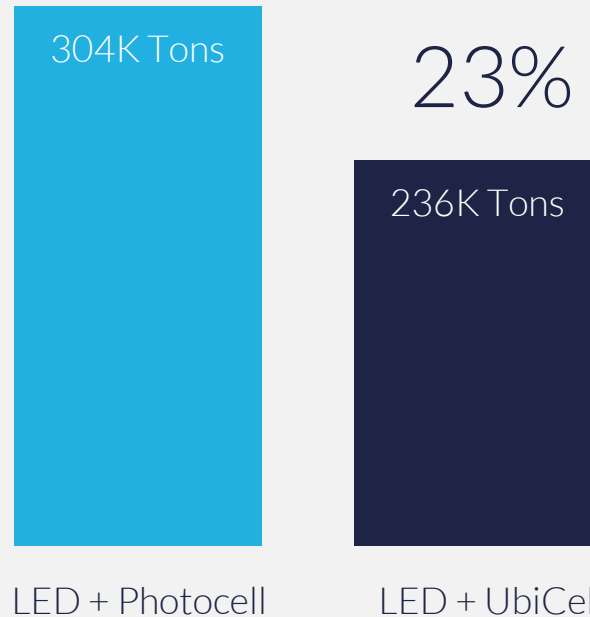
TOTAL COST OF OWNERSHIP		
High-pressure sodium (HPS) streetlights	LED with photocell	LED with UbiCell
<b>\$254,232,000</b>	<b>\$144,855,000</b>	<b>\$91,410,750</b>
15-year cost savings. UbiCell compared to LED only		
<b>\$53,444,250</b>		
Break-even (payback time)		
<b>2.25 years</b>		
Projections are based on the most recent estimated costs for equipment, truck rolls, etc. as of August 2022. Assumes 400W HPS replaced by 100 W LED.		



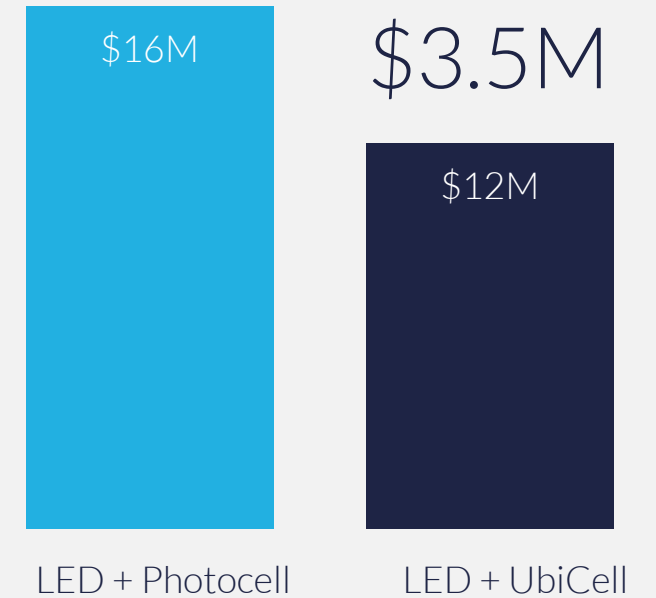
# Environmental Impact Reduced for a Large City

As the size of the city and number of streetlights increases, installing UbiCell lighting controls has an even bigger impact on greenhouse gas emissions reducing them by **23%** over 15 years.

Greenhouse Gas Emission over 15 Years



Social Cost of Carbon over 15 Years



\*The social cost of carbon is an estimate of the economic costs of each additional ton of CO<sub>2</sub> emitted as an indication of the benefits of reducing emissions.

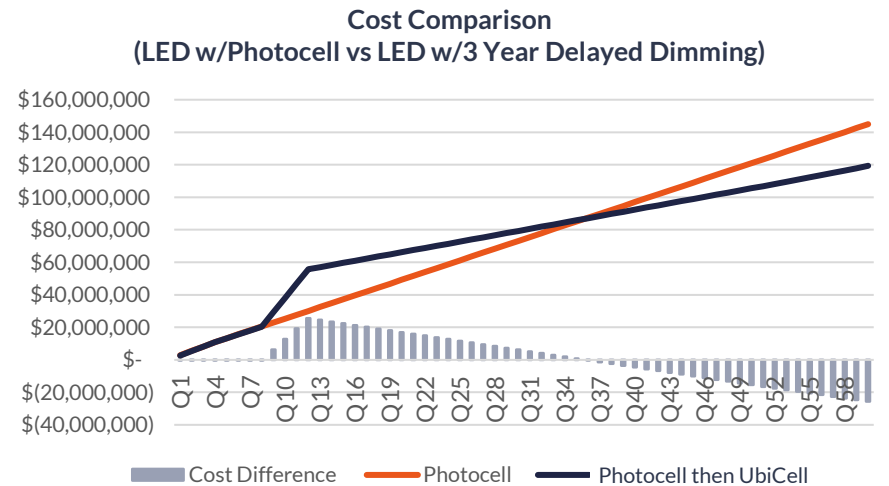
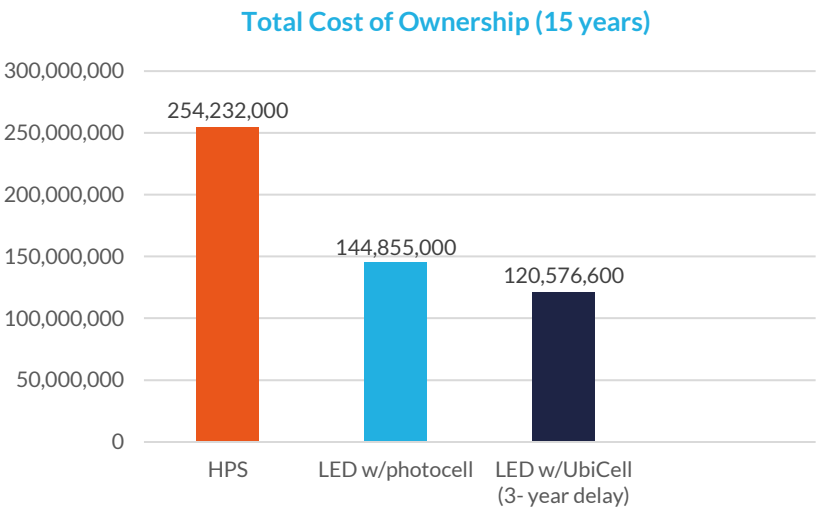


# Lighting Control Savings

## Deployment Timing Makes a Difference

Savings increase the sooner smart lighting controls are deployed. Keeping with the same large city profile, deferring UbiCell installation to year three **leaves almost \$30 million in unrealized savings** compared to installing UbiCell in year one.

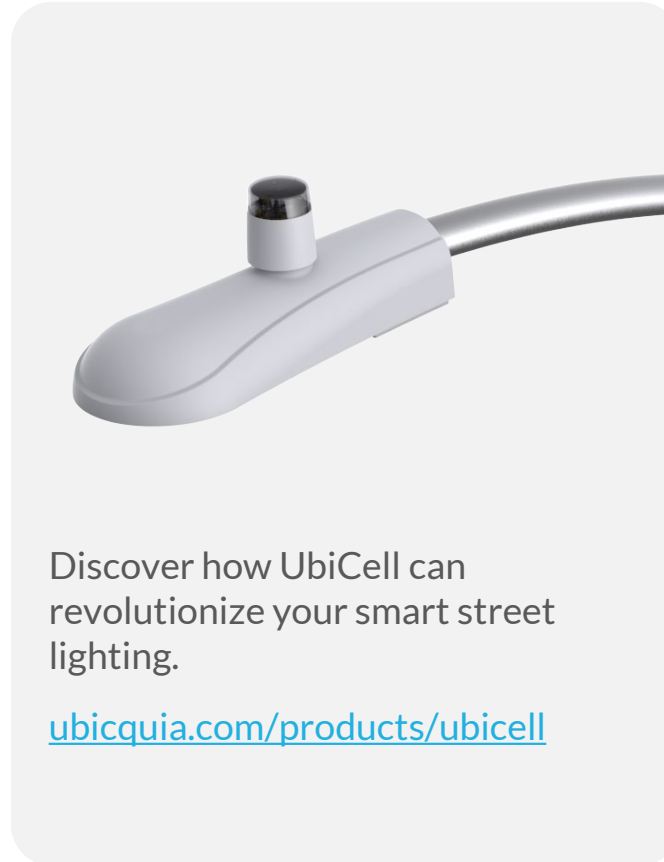
TOTAL COST OF OWNERSHIP		
High-pressure sodium (HPS) streetlights	LED with photocell	LED with UbiCell (3-year delay)
<b>\$254,232,000</b>	<b>\$144,855,000</b>	<b>\$120,576,600</b>
15-year cost savings. UbiCell compared to LED only		
<b>\$24,278,400</b>		
Break-even (payback time)		
<b>9 years</b>		
Projections are based on the most recent estimated costs for equipment, truck rolls, etc. as of August 2022. Assumes 400W HPS replaced by 100 W LED.		



# Lighting Control Cost Analysis for LED streetlights

## Powerful savings start right away

UbiCell lighting controls deliver powerful savings by allowing you to set dimming schedules and threshold alerts, track street lighting performance, identify luminaire failures in real time and more. The UbiCell platform is simple to install and to scale: plug them into a streetlight photocell socket and they connect automatically to the cellular network — delivering data in minutes so you can create lighting schedules and better manage your operations right away.



## About Ubicquia

Ubicquia® started with a simple idea: we can use existing streetlights and utility poles to make communities smarter, safer and more connected. Since then, the company has helped municipalities, utilities and communication service providers control lighting costs; accelerate 5G deployments; extend public Wi-Fi; deliver video security services; and protect against grid failures. Ubicquia's products are compatible with more than 360 million streetlights and 500 million utility poles worldwide. We are dedicated to making technology that is easy to install and affordable.