Cost of Ownership Comparison

Lutron EcoSystem® vs. 0-10V

LUTRON®

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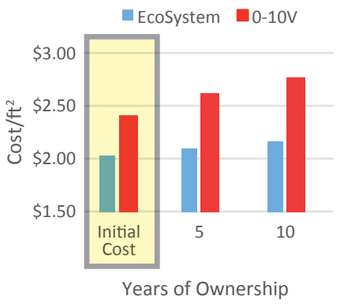
Open Office with Daylight

This analysis compares the combined initial and ongoing reconfiguration costs between a Lutron EcoSystem and a 0–10V solution. The results show that in many applications EcoSystem is less expensive than a 0–10V system, both initially and when including common changes to lighting configurations. In addition, risks in the design and construction process may add considerable cost or project delays when using a 0–10V system. EcoSystem provides significant cost savings because a single EcoSystem panel can control up to 100 zones of lighting, and power wiring does not have to match the control wiring.

Results

Cost summary	EcoSystem	0-10V
Driver Adder	$ 0.80 / ft²	—
Controls + Service	$ 0.84 / ft²	$ 1.42 / ft²
Installation	$ 0.36 / ft²	$ 0.98 / ft²
Final Installed Cost	$ 2.01 / ft²	$ 2.41 / ft²
EcoSystem has a lower initial cost.		
Cost to Churn an Area	$ 0.31 / ft²	$ 0.61 / ft²

Cumulative cost of ownership (including churn)



Assumptions

Labor Rate:
$75 per hour

Churn Rate:
5% of floor area per year

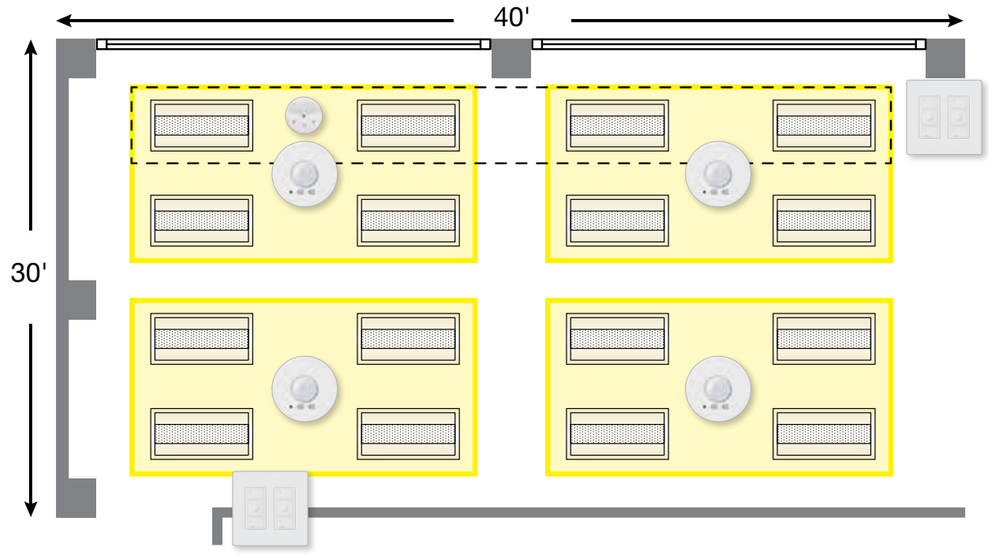
Product Cost:
75% of List

EcoSystem Driver:
$60 adder

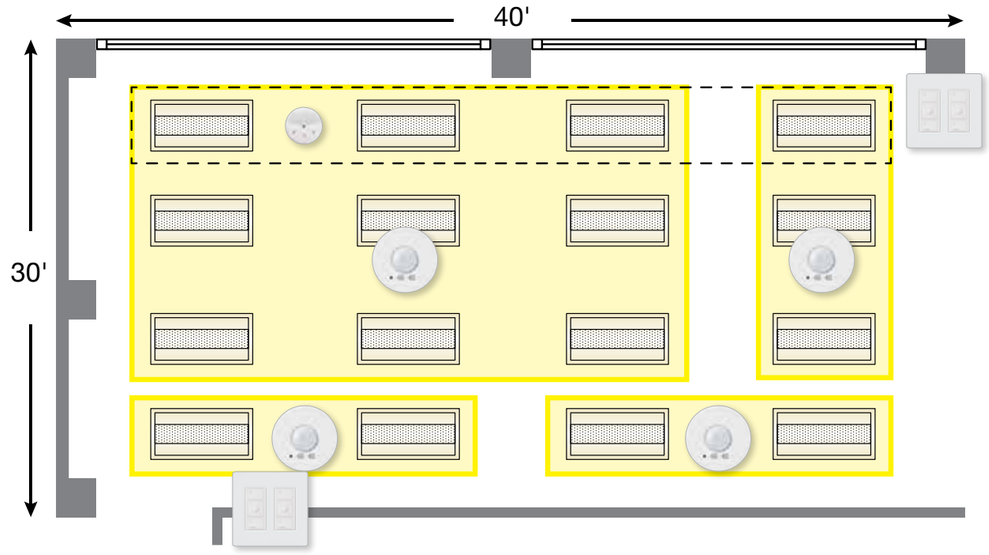
This is based on a minimum of a 10,000 square foot office building, with open offices of 1,200 square feet. This system utilizes wireless sensors and wireless switches/dimmers. ESN[1] 2Ecos are filled to 85% of their capacity, resulting in a total of 108 drivers per ESN. 0–10V ESNs are filled to 100% capacity, resulting in (4) 0–10V zones per ESN 0–10V. The results shown are for a specific set of input criteria. The actual return on investment may vary depending on the design of the space, location of installation, and amount of churned area.

Potential installation issues with 0-10V that would add cost/risk[2]	Typical cost
Miswiring control wire (polarity)	$
Landing line (mains) voltage on control input	$
Rezoning to address post-construction design changes/errors	$
Rewiring to compensate for inrush problems with non-NEMA 410 devices	$
Miswire power direct to fixture instead of through relay	$
Source vs. Sink mismatch	$
Undesired performance variation in dimming (flicker, voltage drop, mismatched dimming curves, etc.)	$
Additional zoning and design time required to meet code	$

Initial Installation



After Churn



Daylight Sensor | Occupancy Sensor | Pico® remotes | Switching/Dimming zone | Daylight zone

[1] Energi Savr Node™. [2] User is encouraged to ask local installers about their experiences with these typical job site troubleshooting issues and factor those costs into the overall application.

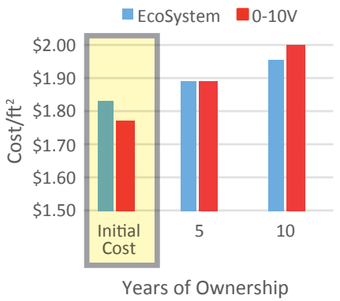
Open Office

This analysis compares the combined initial and ongoing reconfiguration costs between a Lutron EcoSystem and a 0–10V solution. The results show that in many applications EcoSystem is less expensive than a 0–10V system, both initially and when including common changes to lighting configurations. In addition, risks in the design and construction process may add considerable cost or project delays when using a 0–10V system. EcoSystem provides significant cost savings because a single EcoSystem panel can control up to 100 zones of lighting, and power wiring does not have to match the control wiring.

Results

Cost summary	EcoSystem	0-10V
Driver Adder	$ 0.80 / ft²	—
Controls + Service	$ 0.69 / ft²	$ 1.04 / ft²
Installation	$ 0.34 / ft²	$ 0.73 / ft²
Final Installed Cost	$ 1.83 / ft²	$ 1.77 / ft²
Though 0-10V has a lower initial cost, EcoSystem has a lower cost of ownership.		
Cost to Churn an Area	$ 0.24 / ft²	$ 0.47 / ft²

Cumulative cost of ownership (including churn)



Assumptions

Labor Rate:
$75 per hour

Churn Rate:
5% of floor area per year

Product Cost:
75% of List

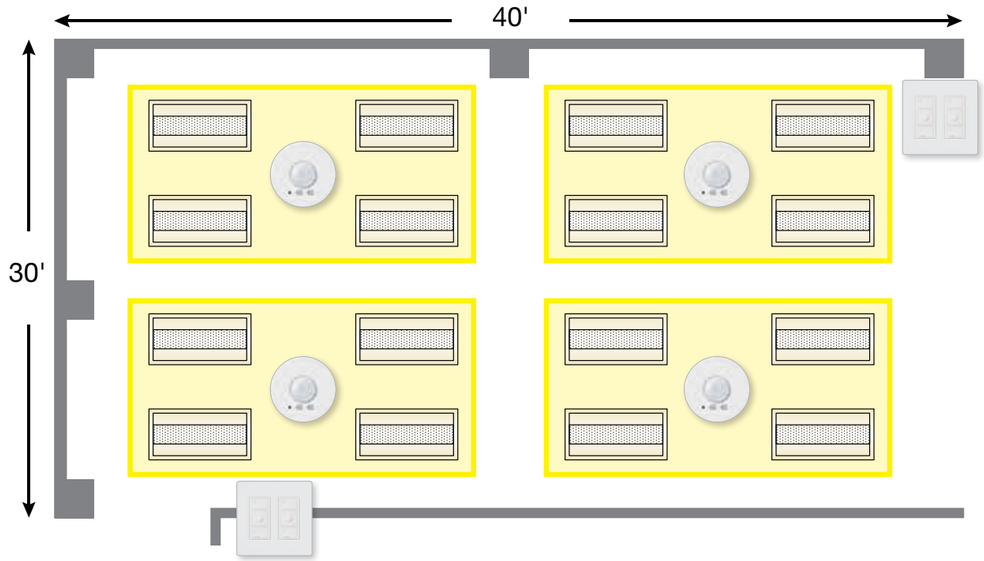
EcoSystem Driver:
$60 adder

This is based on a minimum of a 10,000 square foot office building, with open offices of 1,200 square feet. This system utilizes wireless sensors and wireless switches/dimmers. ESN[1] 2Ecos are filled to 85% of their capacity, resulting in a total of 108 drivers per ESN. 0–10V ESNs are filled to 100% capacity, resulting in (4) 0–10V zones per ESN 0–10V. The results shown are for a specific set of input criteria. The actual return on investment may vary depending on the design of the space, location of installation, and amount of churned area.

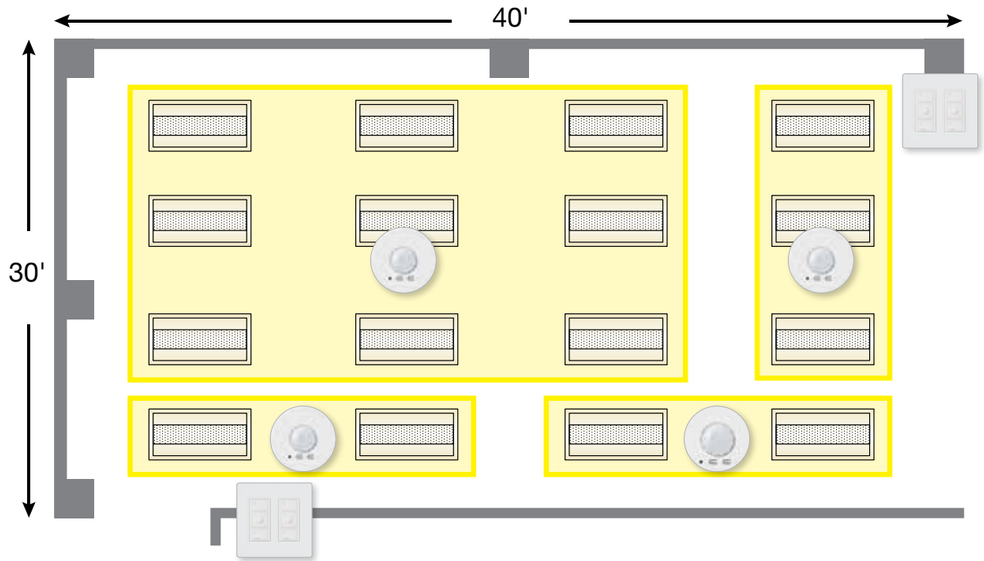
Potential installation issues with 0-10V that would add cost/risk[2]	Typical cost
Miswiring control wire (polarity)	$
Landing line (mains) voltage on control input	$
Rezoning to address post-construction design changes/errors	$
Rewiring to compensate for inrush problems with non-NEMA 410 devices	$
Miswire power direct to fixture instead of through relay	$
Source vs. Sink mismatch	$
Undesired performance variation in dimming (flicker, voltage drop, mismatched dimming curves, etc.)	$
Additional zoning and design time required to meet code	$

[1] Energi Savr Node™. [2] User is encouraged to ask local installers about their experiences with these typical job site troubleshooting issues and factor those costs into the overall application.

Initial Installation



After Churn



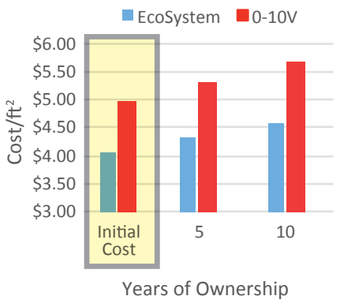
Private Office with Daylight

This analysis compares the combined initial and ongoing reconfiguration costs between a Lutron EcoSystem and a 0–10V solution. The results show that in many applications EcoSystem is less expensive than a 0–10V system, both initially and when including common changes to lighting configurations. In addition, risks in the design and construction process may add considerable cost or project delays when using a 0–10V system. EcoSystem provides significant cost savings because a single EcoSystem panel can control up to 100 zones of lighting, and power wiring does not have to match the control wiring.

Results

Cost summary	EcoSystem	0-10V
Driver Adder	$ 0.83 / ft²	—
Controls + Service	$ 2.54 / ft²	$ 3.38 / ft²
Installation	$ 0.68 / ft²	$ 1.57 / ft²
Final Installed Cost	$ 4.05 / ft²	$ 4.95 / ft²
EcoSystem has a lower initial cost.		
Cost to Churn an Area	$ 1.09 / ft²	$ 1.41 / ft²

Cumulative cost of ownership (including churn)



Assumptions

Labor Rate:
$75 per hour

Churn Rate:
5% of floor area per year

Product Cost:
75% of List

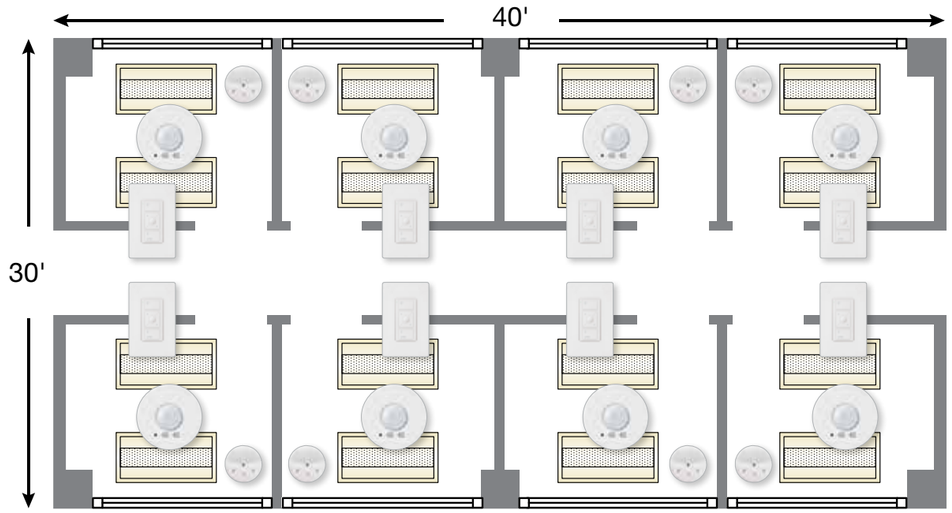
EcoSystem Driver:
$60 adder

This is based on a minimum of a 10,000 square foot office building, with private offices of 144 square feet. This system utilizes wireless sensors and wireless switches/dimmers. ESN[1] 2Ecos are filled to 85% of their capacity, resulting in a total of 108 drivers per ESN. 0-10V ESNs are filled to 100% capacity, resulting in (4) 0-10V zones per ESN 0-10V. The results shown are for a specific set of input criteria. The actual return on investment may vary depending on the design of the space, location of installation, and amount of churned area.

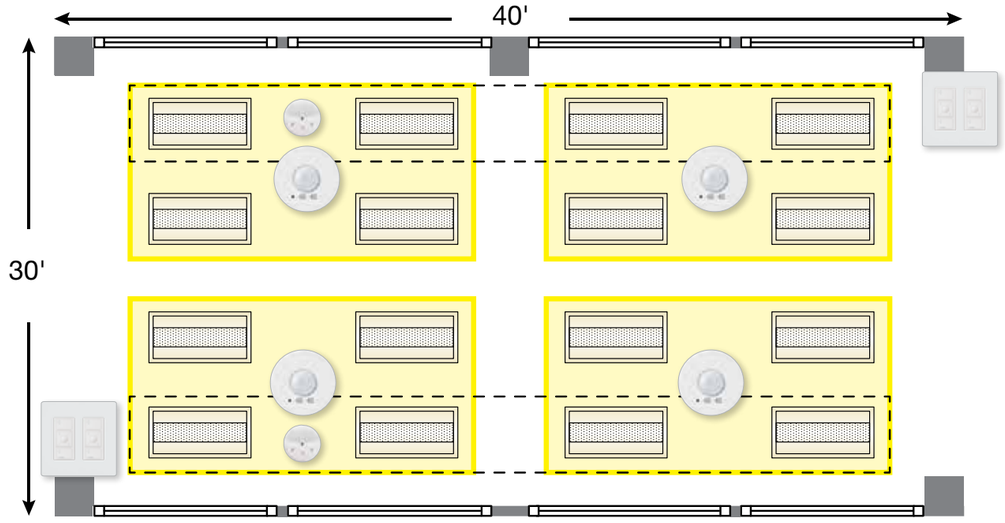
Potential installation issues with 0-10V that would add cost/risk[2]	Typical cost
Miswiring control wire (polarity)	$
Landing line (mains) voltage on control input	$
Rezoning to address post-construction design changes/errors	$
Rewiring to compensate for inrush problems with non-NEMA 410 devices	$
Miswire power direct to fixture instead of through relay	$
Source vs. Sink mismatch	$
Undesired performance variation in dimming (flicker, voltage drop, mismatched dimming curves, etc.)	$
Additional zoning and design time required to meet code	$

[1] Energi Savr Node™. [2] User is encouraged to ask local installers about their experiences with these typical job site troubleshooting issues and factor those costs into the overall application.

Initial Installation



After Churn



Daylight Sensor · Occupancy Sensor · Pico® remotes · Switching/Dimming zone · Daylight zone

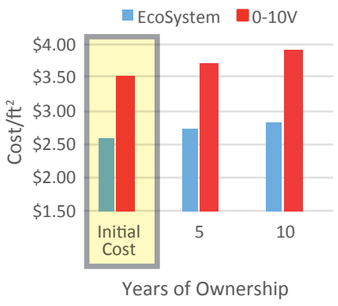
Private Office

This analysis compares the combined initial and ongoing reconfiguration costs between a Lutron EcoSystem and a 0–10V solution. The results show that in many applications EcoSystem is less expensive than a 0–10V system, both initially and when including common changes to lighting configurations. In addition, risks in the design and construction process may add considerable cost or project delays when using a 0–10V system. EcoSystem provides significant cost savings because a single EcoSystem panel can control up to 100 zones of lighting, and power wiring does not have to match the control wiring.

Results

Cost summary	EcoSystem	0-10V
Driver Adder	$ 0.83 / ft²	—
Controls + Service	$ 1.29 / ft²	$ 2.14 / ft²
Installation	$ 0.47 / ft²	$ 1.36 / ft²
Final Installed Cost	$ 2.60 / ft²	$ 3.50 / ft²
EcoSystem has a lower initial cost.		
Cost to Churn an Area	$ 0.47 / ft²	$ 0.80 / ft²

Cumulative cost of ownership (including churn)



Assumptions

Labor Rate:
$75 per hour

Churn Rate:
5% of floor area per year

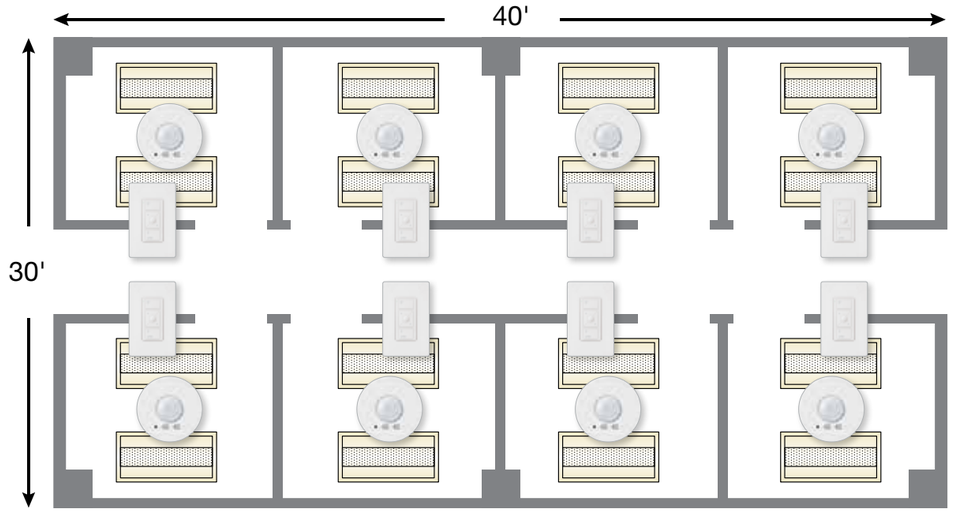
Product Cost:
75% of List

EcoSystem Driver:
$60 adder

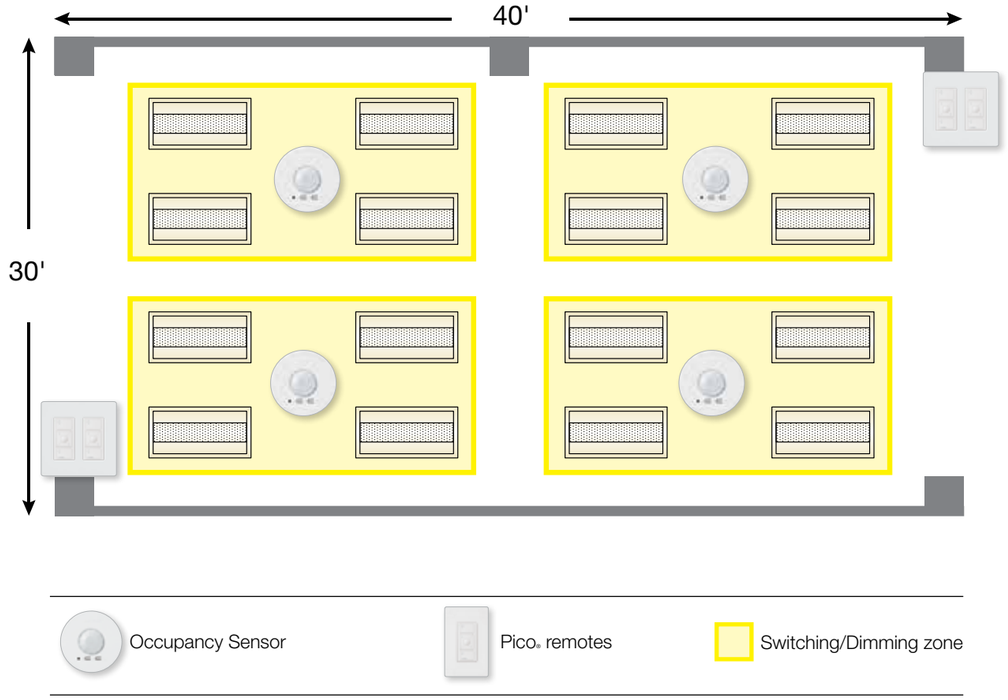
This is based on a minimum of a 10,000 square foot office building, with private offices of 144 square feet. This system utilizes wireless sensors and wireless switches/dimmers. ESN[1] 2Ecos are filled to 85% of their capacity, resulting in a total of 108 drivers per ESN. 0-10V ESNs are filled to 100% capacity, resulting in (4) 0-10V zones per ESN 0-10V. The results shown are for a specific set of input criteria. The actual return on investment may vary depending on the design of the space, location of installation, and amount of churned area.

Potential installation issues with 0-10V that would add cost/risk[2]	Typical cost
Miswiring control wire (polarity)	$
Landing line (mains) voltage on control input	$
Rezoning to address post-construction design changes/errors	$
Rewiring to compensate for inrush problems with non-NEMA 410 devices	$
Miswire power direct to fixture instead of through relay	$
Source vs. Sink mismatch	$
Undesired performance variation in dimming (flicker, voltage drop, mismatched dimming curves, etc.)	$
Additional zoning and design time required to meet code	$

Initial Installation



After Churn



[1] Energi Savr Node™. [2] User is encouraged to ask local installers about their experiences with these typical job site troubleshooting issues and factor those costs into the overall application.

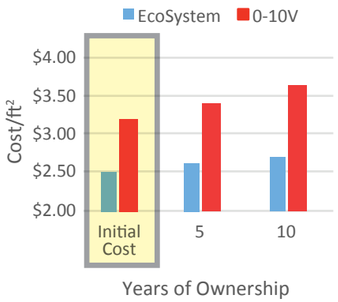
Classroom with Daylight

This analysis compares the combined initial and ongoing reconfiguration costs between a Lutron EcoSystem and a 0–10V solution. The results show that in many applications EcoSystem is less expensive than a 0–10V system, both initially and when including common changes to lighting configurations. In addition, risks in the design and construction process may add considerable cost or project delays when using a 0–10V system. EcoSystem provides significant cost savings because a single EcoSystem panel can control up to 100 zones of lighting, and power wiring does not have to match the control wiring.

Results

Cost summary	EcoSystem	0-10V
Driver Adder	$ 1.20 / ft²	—
Controls + Service	$ 0.90 / ft²	$ 1.67 / ft²
Installation	$ 0.43 / ft²	$ 1.52 / ft²
Final Installed Cost	$ 2.53 / ft²	$ 3.19 / ft²
EcoSystem has a lower initial cost.		
Cost to Churn an Area	$ 0.35 / ft²	$ 0.83 / ft²

Cumulative cost of ownership (including churn)



Assumptions

Labor Rate:
$75 per hour

Churn Rate:
5% of floor area per year

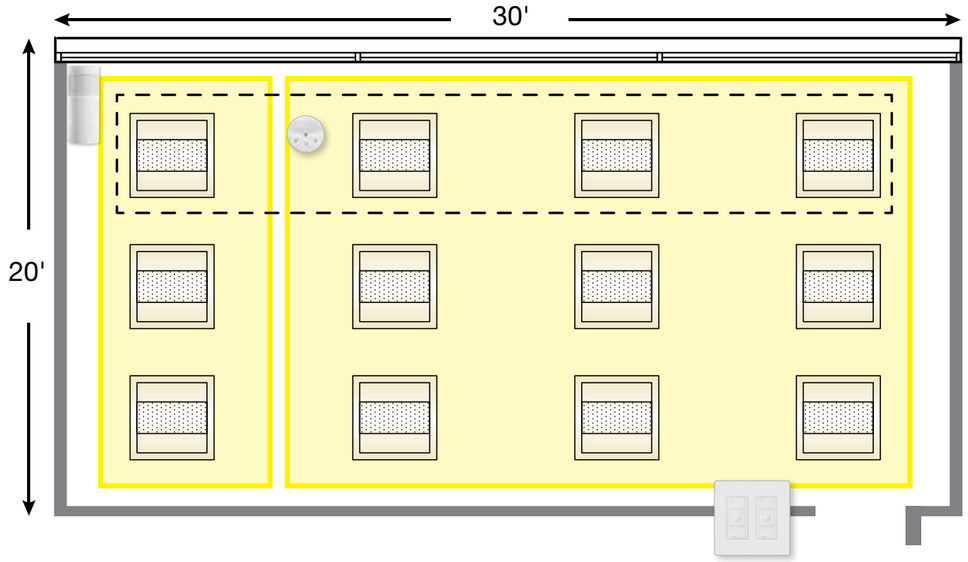
Product Cost:
75% of List

EcoSystem Driver:
$60 adder

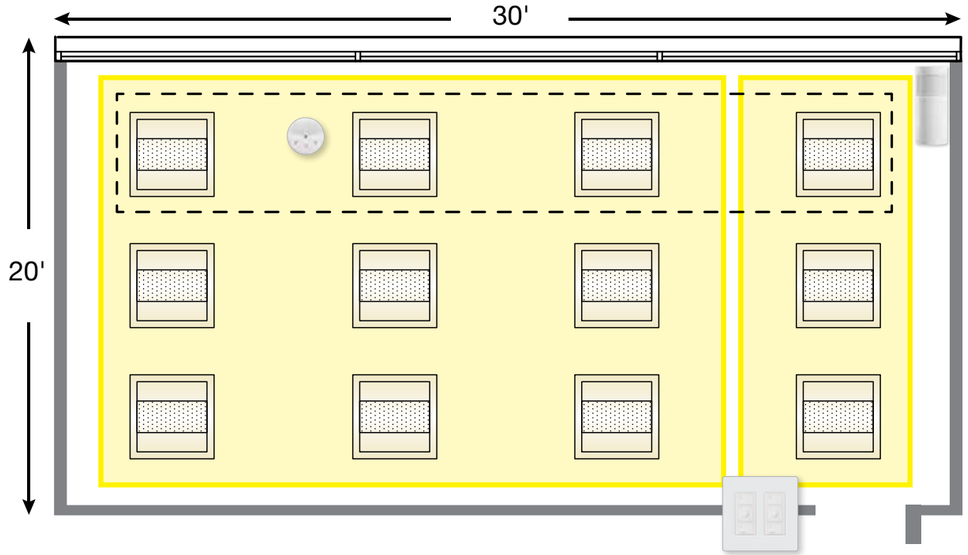
This is based on a minimum of a 10,000 square foot school, with classrooms of 600 square feet. This system utilizes wireless sensors and wireless switches/dimmers. ESN[1] 2Ecos are filled to 85% of their capacity, resulting in a total of 108 drivers per ESN. 0-10V ESNs are filled to 100% capacity, resulting in (4) 0-10V zones per ESN 0-10V. The results shown are for a specific set of input criteria. The actual return on investment may vary depending on the design of the space, location of installation, and amount of churned area.

Potential installation issues with 0-10V that would add cost/risk[2]	Typical cost
Miswiring control wire (polarity)	$
Landing line (mains) voltage on control input	$
Rezoning to address post-construction design changes/errors	$
Rewiring to compensate for inrush problems with non-NEMA 410 devices	$
Miswire power direct to fixture instead of through relay	$
Source vs. Sink mismatch	$
Undesired performance variation in dimming (flicker, voltage drop, mismatched dimming curves, etc.)	$
Additional zoning and design time required to meet code	$

Initial Installation



After Churn



Daylight Sensor | Occupancy Sensor | Pico® remotes | Switching/Dimming zone | Daylight zone

[1] Energi Savr Node™. [2] User is encouraged to ask local installers about their experiences with these typical job site troubleshooting issues and factor those costs into the overall application.

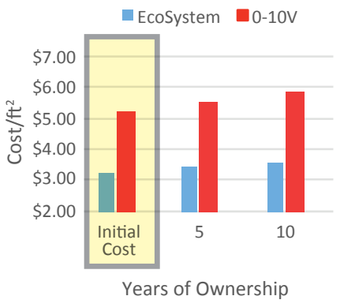
Multi-purpose Room with Daylight

This analysis compares the combined initial and ongoing reconfiguration costs between a Lutron EcoSystem and a 0–10V solution. The results show that in many applications EcoSystem is less expensive than a 0–10V system, both initially and when including common changes to lighting configurations. In addition, risks in the design and construction process may add considerable cost or project delays when using a 0–10V system. EcoSystem provides significant cost savings because a single EcoSystem panel can control up to 100 zones of lighting, and power wiring does not have to match the control wiring.

Results

Cost summary	EcoSystem	0-10V
Driver Adder	$ 1.20 / ft²	—
Controls + Service	$ 1.58 / ft²	$ 3.25 / ft²
Installation	$ 0.50 / ft²	$ 1.97 / ft²
Final Installed Cost	$ 3.28 / ft²	$ 5.22 / ft²
EcoSystem has a lower initial cost.		
Cost to Churn an Area	$ 0.66 / ft²	$ 1.18 / ft²

Cumulative cost of ownership (including churn)



Assumptions

Labor Rate:
$75 per hour

Churn Rate:
5% of floor area per year

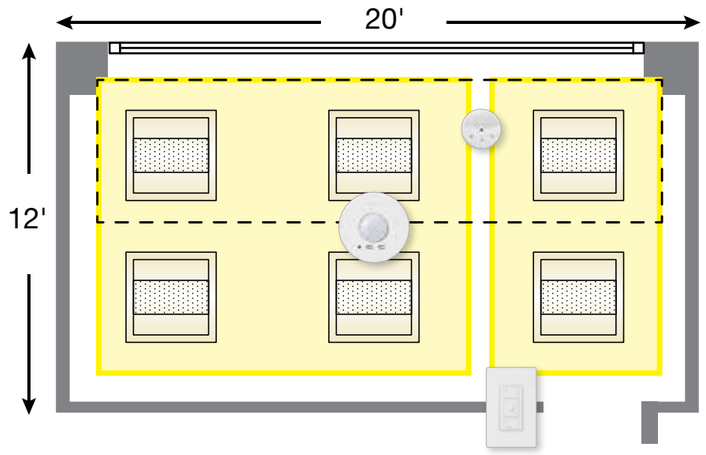
Product Cost:
75% of List

EcoSystem Driver:
$60 adder

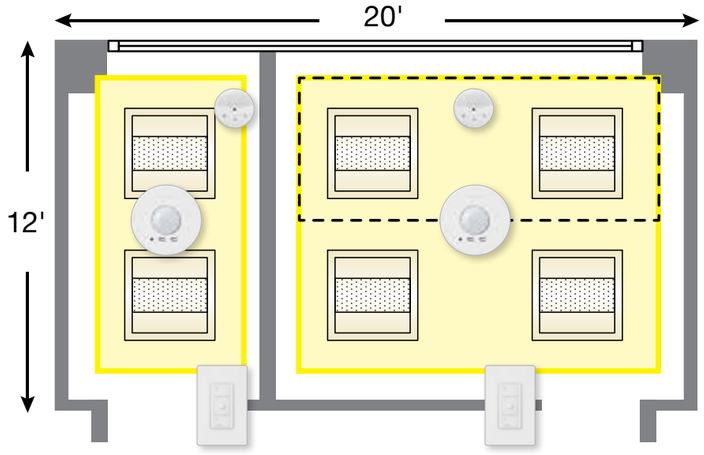
This is based on a minimum of a 10,000 square foot office building, with multi-purpose rooms of 240 square feet. This system utilizes wireless sensors and wireless switches/dimmers. ESN[1] 2Ecos are filled to 85% of their capacity, resulting in a total of 108 drivers per ESN. 0–10V ESNs are filled to 100% capacity, resulting in (4) 0–10V zones per ESN 0–10V. The results shown are for a specific set of input criteria. The actual return on investment may vary depending on the design of the space, location of installation, and amount of churned area.

Potential installation issues with 0-10V that would add cost/risk[2]	Typical cost
Miswiring control wire (polarity)	$
Landing line (mains) voltage on control input	$
Rezoning to address post-construction design changes/errors	$
Rewiring to compensate for inrush problems with non-NEMA 410 devices	$
Miswire power direct to fixture instead of through relay	$
Source vs. Sink mismatch	$
Undesired performance variation in dimming (flicker, voltage drop, mismatched dimming curves, etc.)	$
Additional zoning and design time required to meet code	$

Initial Installation



After Churn



Daylight Sensor | Occupancy Sensor | Pico® remotes | Switching/Dimming zone | Daylight zone

[1] Energi Savr Node™. [2] User is encouraged to ask local installers about their experiences with these typical job site troubleshooting issues and factor those costs into the overall application.

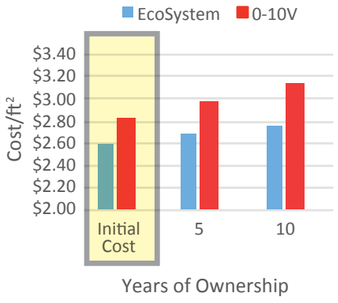
Multi-purpose Room

This analysis compares the combined initial and ongoing reconfiguration costs between a Lutron EcoSystem and a 0–10V solution. The results show that in many applications EcoSystem is less expensive than a 0–10V system, both initially and when including common changes to lighting configurations. In addition, risks in the design and construction process may add considerable cost or project delays when using a 0–10V system. EcoSystem provides significant cost savings because a single EcoSystem panel can control up to 100 zones of lighting, and power wiring does not have to match the control wiring.

Results

Cost summary	EcoSystem	0-10V
Driver Adder	$ 1.20 / ft²	—
Controls + Service	$ 0.98 / ft²	$ 1.73 / ft²
Installation	$ 0.40 / ft²	$ 1.07 / ft²
Final Installed Cost	$ 2.58 / ft²	$ 2.81 / ft²
EcoSystem has a lower initial cost.		
Cost to Churn an Area	$ 0.36 / ft²	$ 0.64 / ft²

Cumulative cost of ownership (including churn)



Assumptions

Labor Rate:
$75 per hour

Churn Rate:
5% of floor area per year

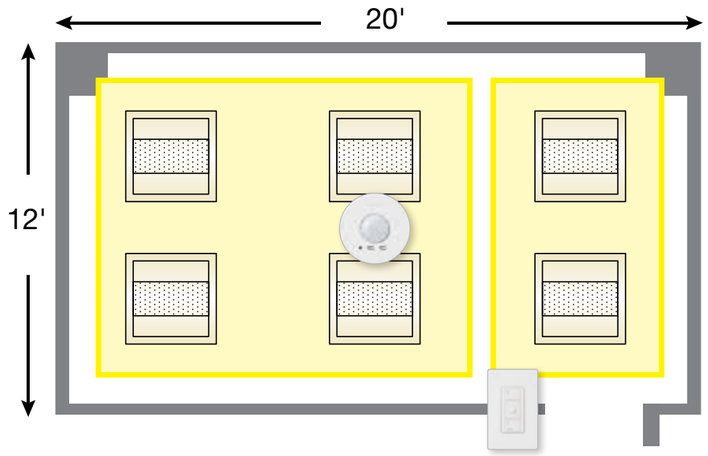
Product Cost:
75% of List

EcoSystem Driver:
$60 adder

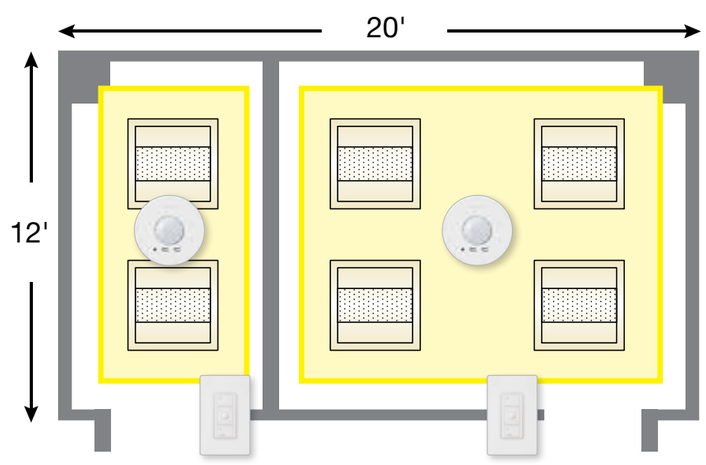
This is based on a minimum of a 10,000 square foot office building, with multi-purpose rooms of 240 square feet. This system utilizes wireless sensors and wireless switches/dimmers. ESN[1] 2Ecos are filled to 85% of their capacity, resulting in a total of 108 drivers per ESN. 0–10V ESNs are filled to 100% capacity, resulting in (4) 0–10V zones per ESN 0–10V. The results shown are for a specific set of input criteria. The actual return on investment may vary depending on the design of the space, location of installation, and amount of churned area.

Potential installation issues with 0-10V that would add cost/risk[2]	Typical cost
Miswiring control wire (polarity)	$
Landing line (mains) voltage on control input	$
Rezoning to address post-construction design changes/errors	$
Rewiring to compensate for inrush problems with non-NEMA 410 devices	$
Miswire power direct to fixture instead of through relay	$
Source vs. Sink mismatch	$
Undesired performance variation in dimming (flicker, voltage drop, mismatched dimming curves, etc.)	$
Additional zoning and design time required to meet code	$

Initial Installation



After Churn



[1] Energi Savr Node™. [2] User is encouraged to ask local installers about their experiences with these typical job site troubleshooting issues and factor those costs into the overall application.

Notes

lutron.com
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