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Energy Efficiency Incentives and Case Studies

A Review of Incentive Programs and Related Case Studies

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Overview of Programs

- New Construction-Remodeling-Retrofitting
- Programs target all areas of the building envelope and operational systems
  - Mechanical
  - Electrical
  - Plumbing
  - Ancillary

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$ Incentives

- Prescriptive
- Custom
- New Construction Program
  - Engage the Consumers Team in Planning and Design
- Smart Building Pilot (retro-commissioning)
- EPAct 2005 – ASHRE Standard 90.1 2004
- Financial Assistance – Michigan Saves

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Moving Towards Energy Efficiency

- Operational costs account for 85% of a buildings life cycle cost
- Incentive Based Solutions
- Long-Term Planned Implementation
- Awareness is key

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Lighting Retrofits

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Case Study #1
Manufacturing Facility

Existing

155 (2) Lamp T12-HO

7 400 watt Metal Halide

Existing

99,154 kWh

56%

Replaced with:

140 (4) Lamp T8 F-Bay

Lighting control system

New:

43,680 kWh

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Savings

Total Project Cost:	$22,000
Utility Incentive	$9,500
Annual energy savings	$7,500
Return on investment	1.6 years

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Case Study #2
Warehouse

Existing

240 (400) watt Metal Halide

Existing

283,296 kWh

Replaced with:

160 (6) Lamp T8

Lighting Control System

New:

91,250 kWh

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Savings

Total Project Cost:	$42,000
Utility Incentive	$19,000
Annual energy savings	$23,000
Return on investment	1.05 years

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Case Study #3
Office Retrofit

Existing

340 (4) Lamp T12

Replaced with:

340 x 4 T8 Lamps

Electronic Ballasts

Existing

166,600 kWh

New:

111,720 kWh

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Savings

Total Project Cost:	$20,000
Utility Incentive	$5,600
Annual energy savings	$7,260
Return on investment	1.98 years

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Case Study #4
Manufacturing Controls

Existing

400 T8 fixtures

(retrofitted the previous year)

Existing

550,000 kWh

Added:

Central lighting control

Occupancy Sensors

New:

363,000 kWh

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Savings

Total Project Cost:	$30,000
Utility Incentive	$12,000
Return on investment	1.5 years

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The Process

- Site Visit to determine existing equipment
- Contractor's proposal

  We look at existing conditions and light requirements and engineer a solution that will provide both energy efficient and proficient lighting.
- Determine the incentive amount
- Customer approves the Proposal
- Submit paperwork to Utility to reserve incentive –(contractor)
- Utility will do a site visit to verify the existing equipment
- Project approval / reservation of funds (from utility)
- Completion of project
- Energy savings and better lighting!!

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What is in it for you?

Incentive

- Varies by utility and amount of kWh reduction
- Contractor will be able to determine what incentives qualify
- Depending on existing / proposed equipment paybacks are usually around 2 years.

Energy Savings

- Depending on existing vs. proposed we usually see a 50-55% energy savings, w/ occupancy sensors that increases and in warehouses has reduced energy usage an additional 66%, in some cases.

Advantage

- The incentive will on average cover 40-50% of the project cost.
- The energy / cost savings are permanent and reoccurring.
- The maintenance is usually substantially less expensive than what is was for the existing equipment.

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Final thoughts

- Almost any fixture can be retrofitted
- There are fixtures for a full range of ambient temperatures
- There are fixtures for a full range of conditions
- EPAct Tax Deduction available usually qualifies for a tax deduction of $0.60/sq. ft.

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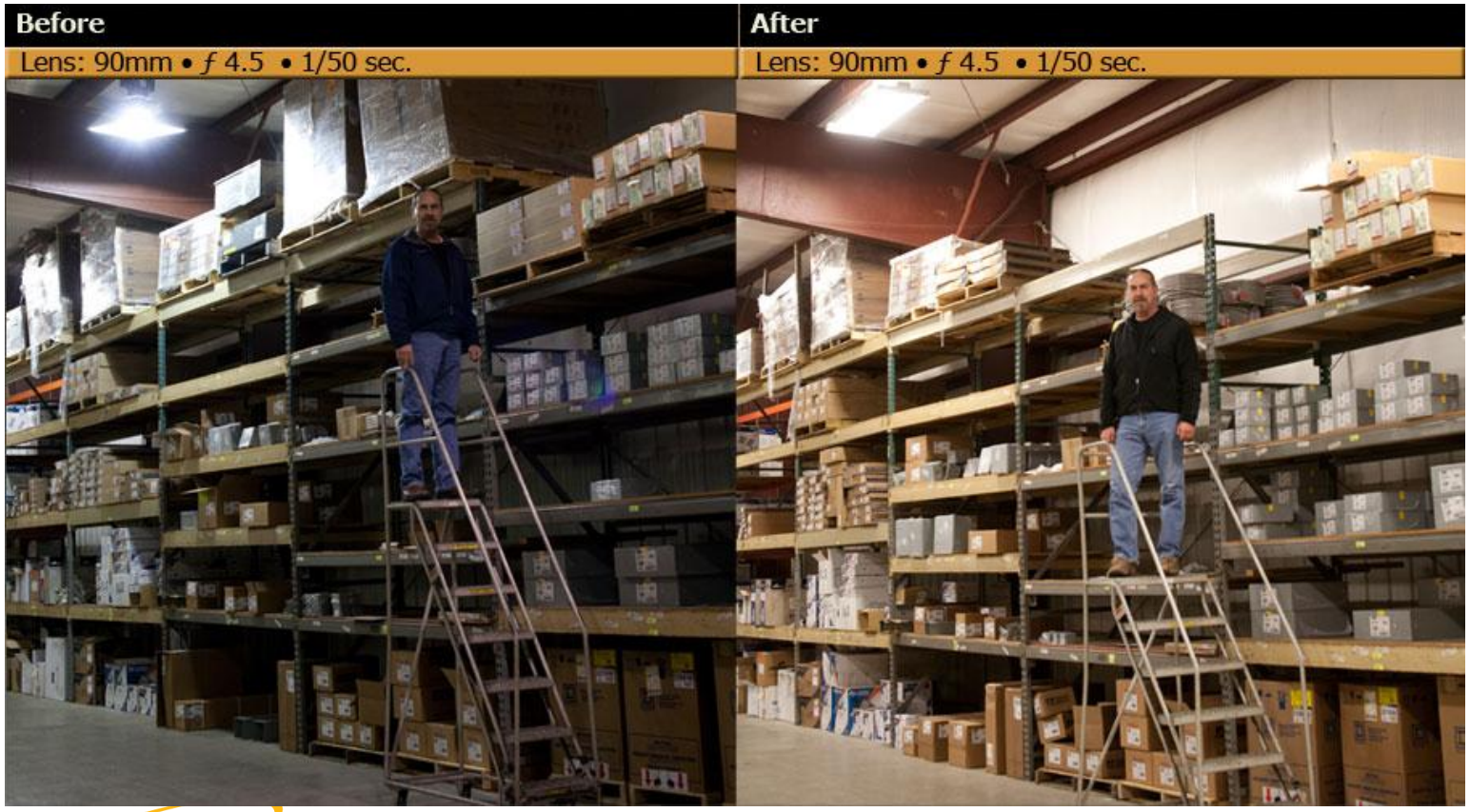
Better Quality Light



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