



**TAX INCENTIVE  
WORKSHOP**

# TAX INCENTIVES for Industrial Heaters

Energy Tax Savers, Inc.

Jacob Goldman | [Jacob.Goldman@EnergyTaxSavers.com](mailto:Jacob.Goldman@EnergyTaxSavers.com)



Energy Tax Savers, Inc.  
The EPAct 179D Experts

**ROBERTS GORDON®**  
INFRARED HEATING

**INFRARED HOT**

## WHERE Tax Savings Fits

### Energy Efficiency Sale

- Technique
  - Energy savings
  - Rebates
  - Maintenance savings
  - Tax savings using EPAct 179D

### Maintenance Sale

- Technique
  - Reliability
  - Speed
  - Tax savings using Q-Suite

Jacob.Goldman@EnergyTaxSavers.com

**INFRARED HOT**

We have two tax incentives available for heater projects. One geared to the Energy Efficiency type sale the other for One-for-One Replacements.

(\$39,000/35% tax rate)

## TIME VALUE of Money

	YEAR										
	1	2	3	4	5	6	...	36	37	38	39
39-yr Depreciation (Deduction)	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000		\$1,000	\$1,000	\$1,000	\$1,000
39-yr After Tax (35%)	\$350	\$350	\$350	\$350	\$350	\$350		\$350	\$350	\$350	\$350
39-yr NPV (4% discount rate)	\$6,854										
5-yr Depreciation (Deduction)	\$7,800	\$12,480	\$7,488	\$4,493	\$4,493	\$2,246					
5-yr After Tax (35%)	\$2,730	\$4,368	\$2,621	\$1,573	\$1,573	\$786					
5-yr NPV (4% discount rate)	\$12,252										
Immediate Deduction	\$39,000										
Immediate After Tax (35%)	\$13,650										

INFRARED HOT

When building assets are purchased they are typically depreciated over 39 years. Very slow way to recoup an investment. Both these tax incentives move 39 year depreciation to an immediate tax deduction. Using a discount rate you can calculate the Present value of 39 yr depreciation as well as the immediate expense. The difference is the added value expensing brings over depreciating.

# EPAct 179D

INFRARED HOT

## ENERGY POLICY ACT of 2005 (EPAAct)

- Benefits available from 1.1.06 through 12.31.16
- Incentivized areas (\$1.80/sq. ft. total):
  - Interior lighting (\$0.60/sq. ft.)
  - HVAC (\$0.60/sq. ft.)
  - Building envelope (\$0.60/sq. ft.)
- Available for **new construction** and **existing buildings**
- Also available for tenant-owned lease-hold improvements
- **Largest single building category is industrial buildings**

Jacob.Goldman@EnergyTaxSavers.com

**INFRARED HOT**

EPAAct 179D expires 12/31/16. It has expired 4 times previously. It is our belief that it will be extended but you can never be sure with the current state in Washington.

The incentive can go to the Tenant or Landlord, it only depends on who is taking money out of their pocket.

# Energy Tax Savers, Inc

Completed EPAct project map: U.S.



Jacob.Goldman@EnergyTaxSavers.com

**INFRARED HOT**

ETSI has completed over 12,000 projects nationwide

## How to **MONETIZE THE BENEFIT**

Two things need to occur for a company to achieve their EPCAct benefit

1) The building needs to meet the energy efficiency targets, i.e.,

- LEDs or efficient T8/T5 fluorescent lighting
- Efficient HVAC systems or controls

2) A capital building project needs to occur that has significant spend, i.e.,

- Major LED projects
- Roof replacements
- Window replacements
- Major HVAC replacements

Jacob.Goldman@EnergyTaxSavers.com

**INFRARED HOT**

The two things do not have to occur together. You can reach an energy efficiency target and then subsequently have an eligible capital project to apply the deduction against.

## IMPORTANT IRS Notice Rev. Proc. 2011-14

- Commercial taxpayers can now use 3115 process to catch up on all missed EAct deductions
  - Great for 2006/2007 new construction and retrofits
  - Opportunity for investor groups to avoid amended individual returns
- **Strategy** is to combine prior and current projects for the \$1.80/sq.ft.

Jacob.Goldman@EnergyTaxSavers.com

**INFRARED HOT**

For commercial projects we can get tax savings on an upcoming tax return for all projects placed in service since 1/1/2006.

## What's It WORTH?

Sample Square Footage	Lighting		HVAC	Building Envelope	TOTAL
	MINIMUM Deduction	MAXIMUM Deduction	MAXIMUM Deduction	MAXIMUM Deduction	
50,000	\$ 15,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 90,000
100,000	\$ 30,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 180,000
250,000	\$ 75,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 450,000
500,000	\$ 150,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 900,000
750,000	\$ 225,000	\$ 450,000	\$ 450,000	\$ 450,000	\$ 1,350,000
1,000,000	\$ 300,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 1,800,000

**NOTE** – With government buildings, the benefit goes to the primary designer

Jacob.Goldman@EnergyTaxSavers.com

**INFRARED HOT**

With Gov't projects and Gov't projects alone, the designer can get the benefit. This can be an Architect, Engineer, Contractor, Specifier etc. We have some designers who have not paid any income taxes since 1/1/2006. We highly recommend design teams should share the tax deduction amongst all involved.

## Primary Designers of Government Buildings EPA Act DEDUCTION

- Stimulus package emphasizes energy efficiency in government buildings
- Architects/engineers/lighting designers
  - DOE goal to incentivize green design in **government** building sector

### Benefits passed through to the primary designer of:

#### Federal

- Offices, **military bases**, courthouses, **post offices**, laboratories, etc.

#### State

- **DOT**, offices, prisons, state universities, courthouses, etc.

#### Municipal

- County, city, town, village, etc.
- Offices, K-12 schools, town halls, **police**, **fire**, libraries, etc.

Jacob.Goldman@EnergyTaxSavers.com

**INFRARED HOT**

## METHODS to Qualify

### 1) Prescriptive Lighting Method (interim lighting rules)

- Based on watts/sq. ft., bi-level, foot candles (max \$0.60/sq. ft.)
  - Watts/ft<sup>2</sup> must be between 25-40+% better than ASHRAE 90.1.2001/2007

### 2) Modeling Method / Whole Building Method

- Needed to get \$1.20/sq. ft. and \$1.80/sq. ft. deduction – engineering model (lighting, HVAC projects)
- Overall building energy usage must be a certain percentage better than that of a reference building
  - Some buildings are lighting-driven (warehouse/industrial)
  - Some buildings are HVAC-driven (hotels, offices, schools)

A building can qualify for the HVAC and/or envelope deductions even without an HVAC/envelope project being completed in an EAct year

**INFRARED HOT**

## EIGHT WAYS to Capture Tax Deduction

- 1) Whole building (\$1.80/ft<sup>2</sup>)
  - 50% energy cost reduction below standard
- Permanent rules partial deduction (\$0.60/ft<sup>2</sup>)

	Building Envelope	Lighting	HVAC
a {	Alternative 1	2) 16%	3) 16%
	Alternative 2	2) 10%	4) 20%
b {	Alternative 3	5) 10%	6) 25%
			7) 15%

- a. Available for buildings placed in service **before** March 12, 2012
- b. Available for buildings placed in service **after** March 12, 2012

- 8) Interim lighting rules (\$0.30/ft<sup>2</sup>-\$0.60/ft<sup>2</sup>)
  - 25% to 40% prescribed Light Power Density (LPD) reduction below standard

**INFRARED HOT**

Industrial buildings qualify for \$1.80/sq.ft. and \$1.20/sq.ft. on the backs of an Energy Efficient Lighting Systems. Heaters installed in an industrial building with inefficient lighting will NOT qualify for tax deduction. The pre-existing lighting must be efficient or an energy efficient lighting project must coincide with the heater install.

## WHAT TENDS TO QUALIFY on the HVAC Side?

1. Geothermal
2. Water Source heat pumps
3. Thermal storage
4. VRF in apartments/dorms/hotels
5. Central HVAC apartments/dorms/hotels
6. Energy recovery ventilation
7. Demand control ventilation
8. VFDs on motors and compressors
9. Chillers in buildings <150,000 sq. ft.
10. **Heaters in non-AC industrial spaces**
11. Industrial space >75,000 sq. ft. with constant volume package unit
12. VAV (variable air volume devices) in buildings <75,000 sq. ft.
13. Chilled beam
14. Magnetic bearing chillers
15. Gas-fired chillers
16. Coolorado in dry climates
17. Combined heat and power

Jacob.Goldman@EnergyTaxSavers.com

**INFRARED HOT**

We used to chase after every HVAC project. We coalesced on these 17 project types that tend to qualify. Most of these qualify because they are different than what is installed in the ASHRAE reference building.

(\$1.20 and \$1.80 per square foot incentives)

## Industrial Lighting **TARGETS TO HIT**

Warehouse	2006–2015	2016
\$1.80/sq. ft.	0.45 W/sq. ft.	0.30 W/sq. ft.
\$1.20/sq. ft.	0.75 W/sq. ft.	0.50 W/sq. ft.
Manufacturing Facility	2006–2015	2016
\$1.80/sq. ft.	0.82 W/sq. ft.	0.48 W/sq. ft.
\$1.20/sq. ft.	1.37 W/sq. ft.	0.81 W/sq. ft.

*Goal is to achieve these average wattage targets to maximize the available benefit.*

Jacob.Goldman@EnergyTaxSavers.com

**INFRARED HOT**

Our 1000's of energy simulation models have allowed us to develop a target W/sq.ft. where if the lighting is below that level we know it will qualify for certain level tax deduction regardless of HVAC system.

## EVOLUTION of Industrial Lighting



Look up and see what lighting is installed. If Metal Halides, likely no tax deductions available. If fluorescents, likely \$1.20/sq.ft.. If LED likely \$1.80/sq.ft.

Warehouse/Industrial  
**LARGE EPA<sup>ct</sup> DEDUCTIONS**

Location	Sq. ft.	W/sq. Ft.	\$/sq. ft.	Tax Deduction
Jacksonville, FL	642,219	0.69	\$1.20	\$770,663
Irving, TX	701,250	0.40	\$1.80	\$1,262,250
Franklin, NJ	140,000	0.45	\$1.80	\$252,000
Bristol, PA	273,080	0.37	\$1.80	\$491,544
Memphis, TN	463,325	0.39	\$1.80	\$833,985
Houston, TX	895,000	0.45	\$1.80	\$1,611,000
St. Tammany Parish, LA	852,000	0.44	\$1.80	\$1,533,600
Edison, NJ	95,654	0.28	\$1.80	\$172,177
Atlanta, GA	600,814	0.44	\$1.80	\$1,081,465
Edison, NJ	105,403	0.33	\$1.80	\$189,725
Eagan, MN	570,567	0.44	\$1.80	\$1,027,020
Whippany, NJ	292,458	0.39	\$1.80	\$526,424
Joplin, MO	146,901	0.31	\$1.80	\$264,422
Indianapolis, IN	533,520	0.78	\$1.80	\$960,336
Norwood, MA	263,780	0.50	\$1.80	\$474,804
Buffalo, NY	851,548	0.39	\$1.80	\$1,532,786
Minneapolis, MN	731,115	0.36	\$1.80	\$1,316,007
Harrisburg, PA	140,653	0.39	\$1.80	\$253,175
Lakeland, FL	311,250	0.60	\$1.80	\$560,250
Edison, NJ	98,915	0.43	\$1.80	\$178,047
Clifton, NJ	115,000	0.43	\$1.80	\$207,000
Buffalo, NY	589,165	0.33	\$1.80	\$1,060,497
Winston-Salem, NC	893,620	0.53	\$1.80	\$1,608,516
Edison, NJ	143,847	0.35	\$1.80	\$258,925
Harrisburg, PA	400,400	0.36	\$1.80	\$720,720
Harrisburg, PA	349,339	1.37	\$1.80	\$628,810
Port Huron, MI	143,766	0.80	\$1.80	\$258,779
<b>Totals</b>	<b>11,344,589</b>			<b>\$20,034,927</b>

Our first \$20,000,000 in Industrial tax deductions.

## MINIMUM Heating or Cooling

- Per ASHRAE 90.1:

- 2.2** The provisions of this standard apply to
- a. the envelope of buildings, provided that the enclosed spaces are
    - (1) heated by a heating system whose output capacity is greater than or equal to  $3.4 \text{ Btu/h}\cdot\text{ft}^2$  or
    - (2) cooled by a cooling system whose sensible output capacity is greater than or equal to  $5 \text{ Btu/h}\cdot\text{ft}^2$ , and

Jacob.Goldman@EnergyTaxSavers.com

**INFRARED HOT**

To qualify for \$1.80 or \$1.20 the building must have a minimum amount of heating or cooling.

## ITEMS NEEDED to Analyze EAct

- Electrical, mechanical, architectural and plumbing drawings
- LEED projects:
  - EA Credit 1 template (old LEED system)
  - EA Prerequisite 2 template (LEED 2009)
- If above materials are unavailable:
  - Lighting survey with square footage and post-project fixtures
  - Make/model of all HVAC
  - Description of wall, window and roof materials
- Project cost

Jacob.Goldman@EnergyTaxSavers.com

**INFRARED HOT**

## SAMPLE HVAC Data

Unit Type	Model #	Zone/Area Served	Additional Info
Water Cooled Chiller-1	Daikin AGZ-190DH	Office	VFDs included
Water Cooled Chiller-2	Daikin WDC-050E2216	Office	VFDs included
AHU-1	Daikin CAH025GDCC	Office	VAVs included
AHU-2	Daikin CAH040DDM	Office	Energy recovery, CO2 sensors
MAU-1	Greenheck MSX-118-H32	Kitchen – Bldg A	None
Infrared Heater 1	Gordonray BH - 200	Warehouse	None
Infrared Heater 2	Gordonray BH - 175	Production	None

Jacob.Goldman@EnergyTaxSavers.com

**INFRARED HOT**

## WHAT DATA Does EAct Require?

Room	Sq. Ft.	Fixture	Count	Watts/ Fixture	Total Watts	New?	Bi-Level	Average Foot Candles
Office 201	400	F43SSILL	4	72	288	New	x	39
		F42SSILL	2	48	96	Retained	x	
				Total	384			
Office 202	100	F42SSILL	2	48	96	New	x	42
Office 203	100	F42SSILL	2	48	96	New	x	42
Office 204	100	F42SSILL	2	48	96	New	x	41
2 <sup>nd</sup> Floor Men's Room	130	FU1LL	3	32	96	New		14
2 <sup>nd</sup> Floor Ladies' Room	175	FU1LL	4	32	128	New		13

Jacob.Goldman@EnergyTaxSavers.com

**INFRARED HOT**

# Q-SUITE

INFRARED HOT

## THE NEW HVAC Tax Incentive Rules are Effective January 1, 2014

- After almost a decade of proposed regulation and discussion, the IRS has finally issued the regulations related to tax incentives for existing building HVAC replacements
  - TD-9636
- The new regulations can be very favorable and we believe they will change the way property owners, HVAC sellers and specifiers will approach HVAC replacement business planning

Jacob.Goldman@EnergyTaxSavers.com

**INFRARED HOT**

In the FedEx case FedEx won the ability to expense the replacement of jet engines. We use the case to defend the expensing of one-for-one replacements of building equipment. IRS came out with formal rules in 2014.

## What is the New HVAC Tax Incentive **WORTH?**

**The new incentive is equivalent to a 20% price reduction**

Installed Job Cost	Cost with Tax Savings	Value of 20% Savings
\$ 25,000	\$ 20,000	\$ 5,000
\$ 50,000	\$ 40,000	\$ 10,000
\$ 75,000	\$ 60,000	\$ 15,000
\$ 100,000	\$ 80,000	\$ 20,000
\$ 150,000	\$ 120,000	\$ 30,000
\$ 200,000	\$ 160,000	\$ 40,000
\$ 250,000	\$ 200,000	\$ 50,000

Jacob.Goldman@EnergyTaxSavers.com

**INFRARED HOT**

All costs – labor/installation, materials, design  
Expensed. Ordinarily you would amortize over 39 years. Replace after 15 years.

# FAVORABLE HVAC Q-Suite Treatment

Passing (Under) the B-A-R Betterment - Adaptation - Restoration

## What defines a BETTERMENT?

1. Material condition or defect at acquisition or production
2. Material addition, including a physical enlargement expansion, extension, or addition of a major component, or a material increase in the capacity
3. Reasonably expected to materially increase the productivity, efficiency, strength, quality or output

**NOTE:** High efficiency are unlikely to constitute a betterment.



## What are some ADAPTATIONS?

- Office building to hotel
- Warehouse to office building
- Office building to retail

## What defines a RESTORATION?

1. Component loss
2. Gain/loss on sale of a component
3. Casualty loss
4. Return to former operating condition, no longer functioning
5. Rebuild to like new condition after the class life
6. Replacement of a major component or part substantial structural part

**INFRARED HOT**

Adaptation: same continual principal use

Restoration: Can't be essentially a new purpose.

## IRS Q-Suite Examples

IRS Example	Changed Units	Total Units	Percent Changed	Q-Suite Eligible?
Sinks	8	20	40%	Q-Suite Eligible
Furnace	1	3	33.3%	Q-Suite Eligible
Windows	100	300	33.3%	Q-Suite Eligible
Package Unit	3	10	30%	Q-Suite Eligible
Windows	200	300	66.7%	In-Eligible

- **Does not** comprise a significant portion of this major component of the building
- **Not a Betterment**
  - Not a material addition to or a material increase in the capacity
  - Not expected to materially increase the productivity, efficiency, strength, quality or output

**INFRARED HOT**

## ETSI's DIVERSE Client Base:



## WHY Energy Tax Savers?

- First EPCa service provider–founded 2005
- Completed more EPCa projects than any other firm–10,000+
- Diverse background of firm professionals
  - *Attorney, CPA, MBA, LEED AP, Enrolled Agent*
- ETSI is the only firm that NEMA and NRDC have used for the EPCa extension process
- Department of Energy consulted with ETSI before changing HVAC EPCa standards
- Over 150 published articles in various publications
  - *Corporate Business Taxation Monthly, Building Operating Management, IMARK Magazine, Retrofit Magazine, Parking Professional*



# Energy Tax Savers, Inc.

[www.EnergyTaxSavers.com](http://www.EnergyTaxSavers.com)

## Energy Tax Savers, Inc.

144A Jackson Ave | Syosset, NY 11791

**Phone:** 516.364.2630

**Fax:** 631.240.5165

**Email:** [Jacob.Goldman@EnergyTaxSavers.com](mailto:Jacob.Goldman@EnergyTaxSavers.com)

**INFRARED HOT**