

# The Home Improvement Store EAct Opportunity

*By Charles Goulding, Daniel Penza and Daniel Audette*

Charles Goulding, Daniel Penza and Daniel Audette discuss the potential EAct benefits available to home improvement retailers, particularly Home Depot and Lowe's.

Home Depot and Lowe's are long-time competitors familiar to every virtually adult American. Two of their major product lines are energy-efficient replacement lighting and a variety of building-envelope products including roofing and insulation. Code Sec. 179D, as enacted by the Energy Policy Act of 2005 (EAct),<sup>1</sup> provides commercial energy tax incentives covering the installation of energy-efficient lighting, HVAC and building envelope components. These incentives should be viable for these home improvement retailers, particularly with a practical understanding of how to monetize the HVAC opportunities. These large store owners are particularly well suited for a large tax incentive that drives off of square footage. This article presents the potential EAct benefits available for these stores along with the case study results for numerous unrelated air conditioned store/distribution center type facilities.

## The Home Improvement Store Environment

Home Depot has made residential energy cost savings a core part of its national advertising campaign. With the economic downturn, both of these large chains

**Charles R. Goulding**, Attorney/CPA, is the President of Energy Tax Savers, Inc., The EAct 179D Experts, an interdisciplinary tax and engineering firm that specializes in the energy-efficient aspects of buildings.

**Daniel Penza**, E.I.T., and **Daniel Audette** are Energy Analysis Engineers with Energy Tax Savers, Inc.

have curtailed new store construction. Instead, these chains focus on existing store operating results and are shutting down poor performing stores. Lowe's has recently announced that it is shutting down seven poor performing stores.<sup>2</sup> One way to materially improve existing store operating results is to greatly reduce energy-related operating costs. This is particularly good practice for businesses that are in the business of selling energy-reducing products on a large scale.

## Code Sec. 179D

Under Code Sec. 179D, building owners who make qualifying energy-reducing investments can obtain immediate tax deductions of up to \$1.80 per square foot.

If the building project doesn't qualify for the maximum of \$1.80 per square foot immediate tax deduction, there are tax deductions of up to \$0.60 per square foot for each of the three major building subsystems: lighting, HVAC and the building envelope. The building envelope covers every part of the building's exterior perimeter that touches the outside world including roof, walls, insulation, doors, windows and foundation.

## Energy-Efficient HVAC for Retail Distribution Centers

The HVAC technologies that will typically produce favorable EAct tax deduction results for these types of facilities include:

- chillers in facilities less than 150,000 square feet;
- very high energy-efficient chillers;

**Table 1. Actual Facilities Results**

Project Location	Eligible Square Feet	EAct Qualifying %	EAct Tax Deduction	EAct Tax Deduction	HVAC Technology
Washington	708,345	36.45%	\$1.20/sq.ft.	\$ 850,014	DCV,VAV
Minnesota	570,567	64.63%	\$1.80/sq.ft.	\$ 1,027,021	Cambridge Gas Heaters
California	529,300	24.81%	\$0.60/sq.ft.	\$ 317,580	DCV
California	398,516	36.79%	\$1.20/sq.ft.	\$ 478,219	DCV
New Jersey	357,604	33.56%	\$1.20/sq.ft.	\$ 429,125	DCV, ERV
Washington	349,079	24.68%	\$1.20/sq.ft.	\$ 418,895	DCV,VAV
New Jersey	292,458	52.84%	\$1.80/sq.ft.	\$ 422,384	DCV, ERV
Montana	211,702	39.57%	\$1.20/sq.ft.	\$ 254,042	DCV, ERV
California	161,375	51.48%	\$1.80/sq.ft.	\$ 290,475	DCV
California	95,000	47.53%	\$1.20/sq.ft.	\$ 114,000	Chiller <150 K sq.ft.,
California	73,418	58.63%	\$1.80/sq.ft.	\$ 132,152	Chiller <150 K sq.ft.
California	69,965	51.74%	\$1.80/sq.ft.	\$ 125,937	DCV, Chiller<150K sq.ft.
California	62,069	58.16%	\$1.80/sq.ft.	\$ 111,724	DCV, Chiller<150K sq.ft.
New York	60,930	43.22%	\$1.20/sq.ft.	\$ 73,116	Chiller < 150 K sq.ft.
<b>Totals</b>	<b>3,940,328</b>			<b>\$ 5,044,685</b>	



**Table 2. Home Depot**

Property	Estimated Total Square Footage	Lighting		HVAC Maximum Deduction	Building Envelope Maximum Deduction	Total
		Minimum Deduction	Maximum Deduction			
<b>Number of Stores Nationwide</b>						
1976 (105,000 average sq ft)	207,480,000	\$ 62,244,000	\$ 124,488,000	\$ 124,488,000	\$ 124,488,000	\$ 373,464,000
<b>Distribution Space Nationwide</b>						
Distribution Space	35,400,000	\$ 10,620,000	\$ 21,240,000	\$ 21,240,000	\$ 21,240,000	\$ 63,720,000
<b>Corporate Office in Atlanta, Georgia</b>						
Office Space owned	2,400,000	\$ 720,000	\$ 1,440,000	\$ 1,440,000	\$ 1,440,000	\$ 4,320,000
Office Space leased	1,700,000	\$ 510,000	\$ 1,020,000	\$ 1,020,000	\$ 1,020,000	\$ 3,060,000
<b>Totals:</b>	<b>246,980,000</b>	<b>\$ 74,094,000</b>	<b>\$ 148,188,000</b>	<b>\$ 148,188,000</b>	<b>\$ 148,188,000</b>	<b>\$ 444,564,000</b>



**Table 3. Lowe's**

Property	Estimated Total Square Footage	Lighting		HVAC Maximum Deduction	Building Envelope Maximum Deduction	Total
		Minimum Deduction	Maximum Deduction			
<b>Number of Stores Nationwide</b>						
1753	193,000,000	\$ 57,900,000	\$ 115,800,000	\$ 115,800,000	\$ 115,800,000	\$ 347,400,000
<b>Number of Distribution Centers Nationwide</b>						
27 (1,100,000 average sq ft)	29,700,000	\$ 8,910,000	\$ 17,820,000	\$ 17,820,000	\$ 17,820,000	\$ 53,460,000
<b>Corporate Offices</b>						
Customer Support Center Mooresville, NC	400,000	\$ 120,000	\$ 240,000	\$ 240,000	\$ 240,000	\$ 720,000
Customer Support Center Wilkesboro, NC	165,000	\$ 49,500	\$ 99,000	\$ 99,000	\$ 99,000	\$ 297,000
<b>Totals:</b>	<b>223,265,000</b>	<b>\$ 66,979,500</b>	<b>\$ 133,959,000</b>	<b>\$ 133,959,000</b>	<b>\$ 133,959,000</b>	<b>\$ 401,877,000</b>

- energy recovery ventilation (ERV);
- demand control ventilation (DCV); and
- for facilities 150,000 square-feet or greater combinations of very efficient chillers ERV and/ or DCV.

The actual case study results for similar air conditioned facilities across the country are found in Table 1.

The facilities represented in Table 1 that qualify for the full \$1.80 per square foot EAct tax deduction typically account for this result is by combining energy-efficient lighting along with the specified HVAC.

## Home Depot and Lowe's EAct Potential Benefits

An estimate of the potential benefits for both store chains and their distribution centers are found in Table 2 and Table 3.

## Conclusion

The large home improvement retailers have a major opportunity to reduce their energy-related operating costs. They are experts on lighting and building envelope products. By focusing on

energy-efficient HVAC they should be able to both save energy and obtain large EAct tax incentives for doing so.

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**ENDNOTES**

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- <sup>1</sup> Energy Policy Act of 2005 (P.L. 109-58).
- <sup>2</sup> *Lowe's Posted Flat Income in Quarter*, N.Y. TIMES, available online at [www.nytimes.com/2011/08/16/business/lowes-posts-flat-income-in-quarter.html](http://www.nytimes.com/2011/08/16/business/lowes-posts-flat-income-in-quarter.html), Aug. 15, 2011.



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