



NATIONAL ASSOCIATION OF
ELECTRICAL DISTRIBUTORS

Smart Tools for Smart Distribution®



Appendix

GREEN GOES MAINSTREAM:

How to Profit from Green Market Opportunities

HIGHLIGHTS:

- >> Methodology and Background
- >> Survey Results
- >> Information Sources
- >> State Incentives

Methodology and Background

The project methodology was four-fold, consisting of

- Initial focus group interviews
- Online surveys of more than 225 industry participants
- In-depth interviews of 24 thought leaders in energy efficiency and electrical manufacturing and distribution
- Secondary research into industry literature

Focus groups

Two focus groups were conducted in June 2008 to gain information about energy efficiency-related sales, emerging technologies, and overall energy efficiency-related issues. Attendees of the Joint Council Meeting in St. Louis participated in these focus groups.

Online Surveys

Two online surveys were developed and used to collect data and perspectives of NAED manufacturer and distributor members. The survey instrument was designed by Yudelson Associates and approved by the NAED research team. It was further vetted through an ongoing examination of responses to gauge whether or not questions were generating adequate responses.

The surveys were conducted in July 2008. During that month, 165 distributors and 63 manufacturers responded.

When we asked distributors to describe their businesses, they responded as follows:

Size and nature of the businesses: (select one)

- a. Single location
29.9%
- b. National distributor
7.9%
- c. Regional independent
57.9%
- d. Other
4.3%

Manufacturers described their businesses as follows:

Annual revenues:

- a. Less than \$50 million
26.2%
- b. \$50 to \$150 million
13.1%

- c. \$150 to \$300 million
9.8%
- d. More than \$300 million
50.8%

Public or private company:

- a. Public
57.1%
- b. Private
42.9%

Product line: broad, narrow or diversified:

- a. Narrow
34.9%
- b. Broad
47.6%
- c. Diversified beyond electrical goods
19.0%

Types of products offered:

- a. Lighting
41.5%
- b. Energy management
5.6%
- c. General electrical
39.6%
- d. Miscellaneous
1.3%

Survey Results

Distributors (165 Respondents)

- a. On a scale of 1 to 10, distributors considered themselves “informed” at a level of 6.4. However, they rated the importance of the energy market opportunity at 7.8. This discrepancy indicates that there is an *information gap* between what distributors know and how important they judge the opportunity to be.
- b. One-third of the distributors estimated their current annual sales relating to energy-efficient technologies at less than 5 percent; 41 percent estimated them at between 5 and 10 percent; 17 percent of distributors estimated them at between 10 and 25 percent; and only 9 percent estimated them greater than 25 percent.
- c. Within the category of energy-efficient climate-control technology, the product families showing the greatest increase in demand (in order of importance) are: variable speed drives/motors (60 percent of respondents); building control systems (54 percent); plug load controls (45 percent) and programmable thermostats (41 percent).

- d. Within the category of energy-efficient lighting technology, the product families showing the greatest increase in demand (in order of importance) are: CFLs (78 percent of respondents); high-efficiency electronic ballasts (76 percent); LEDs (71 percent); high-efficiency T8 lamps (66 percent).
- e. Within the category of renewable energy technology, the product families showing the greatest increase in demand (in order of importance) are: electrical components for wind generators (45 percent of respondents); photovoltaic panels (36 percent); electrical components for PV systems (33 percent); and inverters (19 percent).
- f. Distributors responded with the following opinions about energy-efficient technologies: 91 percent said there is a growing demand for proven technologies; 44 percent said their companies could miss out on a significant opportunity; 26 percent said that it is difficult to justify higher initial costs to customers; 16 percent said their customers aren't comfortable with new technologies; and 1 percent (2 people) said energy-efficient technology was just a passing fad.
- g. Fifty-three percent of distributors characterized growth potential in the green market as rapid (between 10 and 25 percent per year), and 41 percent characterized growth potential as steady.
- h. Seventy percent of distributors said they were familiar with the LEED green building rating system, whereas 23 percent said they were not.
- i. Almost 70 percent of distributors wanted to sell more energy-efficient products but didn't feel they had the information to do so effectively.
- j. Distributors considered the following formats (in order of importance) as their best information sources: product cut sheets containing payback information (78 percent); additional web-based educational offerings from NAED and other sources (70 percent); an action plan for distributors (presumably from manufacturers, 68 percent); and conferences, seminars and events devoted to green/energy efficiency topics (60 percent).

Manufacturers (63 Respondents)

- a. On a scale of 1 to 10, manufacturers considered themselves "informed" at a level of 6.7. However, they rated the importance of the energy market opportunity at 7.6. This discrepancy indicates that there is an *information gap* between what manufacturers know and how important they judge the opportunity to be.
- b. Manufacturers estimated their annual revenues as follows: less than \$50 million (26 percent); \$50 to \$150 million (13 percent); \$150 to \$300 million (10 percent); more than \$300 million (51 percent).
- c. Manufacturers described their product line as follows: broad (48 percent); narrow (35 percent); and diversified (beyond electrical goods, 19 percent).
- d. Manufacturers characterized the Information sources they typically use to obtain information about energy-efficient technologies and issues (in order of importance) as follows: trade magazines (91 percent); sales and marketing feedback (70 percent); industry conferences (67 percent); professional organizations (65 percent); other sources including consultants, Internet, general media, co-workers, corporate headquarters, prospective clients, networking, code review meetings, and the competition (22 percent)
- e. Eighty-one percent of manufacturers said their R&D departments were working on energy-efficient products, and 44 percent said that more than 25 percent of their total R&D effort was devoted to such products. An additional 28 percent of manufacturers said 10 to 25 percent of R&D was focused on such products.
- f. Thirty percent of manufacturers estimated that less than 5 percent of their current annual sales related to energy-efficient products; 18 percent estimated them to be between 5 and 10 percent; 20 percent estimated such sales to be between 10 and 25 percent; and 32 percent of all respondents estimated them to be greater than 25 percent. Far more manufacturers estimated current annual sales relating to energy-efficiency products to be greater than 25 percent than did distributors.

- g. Within the category of energy-efficient climate-control technology, 64 percent of respondents answered “not applicable” to the question of which product families showed the greatest increase in demand. Sixteen percent of respondents identified variable speed drives/motors as the product family showing the greatest increase in demand; 28 percent indicated building control systems; 5 percent indicated plug load controls; and 13 percent indicated programmable thermostats. It is evident from the survey responses that manufacturers of electrical goods do not consider climate-control technology that important.
- h. Within the category of energy-efficient lighting control technology, 43 percent of respondents answered “not applicable” to the question about which product families showed the greatest increase in demand. Forty-three percent of respondents identified occupancy sensors as the product family showing the greatest increase in demand; 44 percent indicated lighting control systems; 41 percent indicated dimmable ballasts; 39 percent indicated daylighting control systems; and 21 percent indicated indirect ambient and/or task-lighting systems.
- i. Within the category of energy-efficient lighting technology, the product families showing the greatest increase in demand are CFLs (38 percent of respondents); high-efficiency electronic ballasts (46 percent); LEDs (51 percent); high-efficiency T8 lamps (43 percent). Forty-three percent of manufacturer-respondents do not make such products.
- j. Within the category of renewable energy technology, 60 percent of respondents answered not applicable” to the question of which product families showed the greatest increase in demand. Thirty-three percent of respondents identified electrical components for wind generators as the product family showing the greatest increase in demand; 10 percent identified photovoltaic panels; 14 percent identified electrical components for PV systems; and 8 percent identified inverters. Adjusted for “not applicable” responses, these answers are roughly equivalent to distributors’ answers.
- k. Seventy-five percent of distributors said they were familiar with the LEED green building rating system (slightly more than the distributors’ 70 percent), whereas 21 percent said they were not.
- l. Among manufacturers, 59 percent said they made a special effort to educate their customers on energy-efficient technologies and products. Manufacturers focused their customer education efforts (in order of importance) as follows: 73 percent on manufacturers; 71 percent on contractors; 68 percent on specifiers; 61 percent on end users/consumers; 56 percent on facility managers (another form of specifier); and 39 percent on OEMs.
- m. Fifty-nine percent of manufacturers said they were aware of state, federal and local incentive programs for energy-efficient products/technologies, but 32 percent said they were not aware of these programs.

Interviews

Phone interviews were conducted with 24 individuals including property managers, building owners and developers, lighting designers, energy efficiency organizations, campus greening staff, and electrical contractors and writers. The majority of the interviewees represented the electrical manufacturing and distributing industry. Many of the interview candidates were suggested by NAED Education & Research Foundation staff, and the remainder of the interviewees came from our extensive network of green building contacts. On average, the telephone interviews lasted approximately 40 minutes.

We are grateful to everyone who volunteered his or her time for these interviews. Rick Keleman, the Manager of Hussar Electric Supply in Tucson, Arizona, was good enough to give us a tour of his facility. He also took the time to answer many questions we had about the day-to-day business of electrical distribution.

Information Sources

Survey respondents identified a number of important information resources that are listed below. Some of them are obviously generic but will be familiar to industry participants; others are newer, more specialized resources and may not be as well-known.

Government Agencies

[Department of Energy](#)

[Environmental Protection Agency](#)

[Energy Information Administration](#)

[General Services Administration](#)

[ENERGY STAR](#)

Trade Associations

[American Wind Energy Association](#)

[Building Owners and Managers Association \(BOMA\) International](#)

[National Association of Electrical Distributors \(NAED\)](#)

[NAED's Education & Research Foundation](#)

[National Electrical Manufacturers Association \(NEMA\)](#)

[Illuminating Engineering Society \(IES\)](#)

[International Facility Managers Association \(IFMA\)](#)

[Lighting Controls Association](#)

[National Association of Wholesalers \(NAW\)](#)

[Solar Energy Industries Association \(SEIA\)](#)

[U.S. Green Building Council \(USGBC\)](#)

Trade Magazines

[TED Magazine](#)

[TED Magazine Green Room eNewsletter](#)

[TEDMAG products & services guide](#)

[Electrical Contractor](#)

[Illuminate](#)

[EC&M](#)

[Consulting-Specifying Engineer](#)

[Architectural SSL](#)

[Architectural Products](#)

Other sources:

- Internal (your own company's experts, particularly in larger organizations, and sales people in all sizes of companies)
- Consultants
- Utilities, especially investor-owned utilities serving a manufacturer's or distributor's trade area
- Conferences and trade shows (for green building, the best show is the U.S. Green Building Council's annual "Greenbuild" show, held in November each year)
- Distribution partners (for manufacturers)
- OEM partners (for manufacturers)

State Incentives

Details on the following incentives (with the exception of Renewable Portfolio Standards) are provided on the [Database of State Incentives for Renewables & Efficiency website](#).

State	Corporate	Property	Personal	Sales	Renewable Portfolio Standards ¹
Arizona	Non-Residential Solar & Wind Tax Credit (Corporate)	Property Tax Assessment for Renewable Energy Property Solar Energy Property Tax Exemption	Income Tax Subtraction for Energy-efficient Residences Non-Residential Solar & Wind Tax Credit (Personal) Residential Solar and Wind Energy Systems Tax Credit	Solar and Wind Equipment Sales Tax Exemption	Administered by the Arizona Corporation Commission
California		Property Tax Exemption for Solar Systems	Tax Deduction for Interest on Loans for Energy Efficiency		Administered by the California Energy Commission
Colorado		Renewable Energy Property Tax Assessment Local Option - Property Tax Exemption for Renewable Energy Systems		Local Option - Sales Tax Exemption for Renewable Energy Systems Boulder - Solar Sales and Use Tax Rebate	Administered by the Colorado Public Utilities Commission
Connecticut		Property Tax Exemption for Renewable Energy Systems		Sales and Use Tax Exemption for Energy-Efficient Products Sales and Use Tax Exemption for Solar and Geothermal Systems	Administered by the Department of Public Utility Control
District of Columbia					Administered by the D.C. Public Service Commission
Delaware					Administered by the Delaware Energy Office
Florida	Renewable Energy Production Tax Credit Renewable Energy Technologies Investment Tax Credit	Renewable Energy Property Tax Exemption		Renewable Energy Equipment Sales Tax Exemption	
Georgia	Clean Energy Tax Credit (Corporate)		Clean Energy Tax Credit (Personal)	Four-Day Sales Tax Exemption for Energy-Efficient Products	
Hawaii	Solar and Wind Energy Credit		Solar and Wind Energy Credit (Personal)		Administered by the Hawaii Strategic Industries Division
Idaho		Property Tax Exemption for Wind and Geothermal Energy Producers		Renewable Energy Equipment Sales Tax Refund	

State	Corporate	Property	Personal	Sales	Renewable Portfolio Standards ¹
Illinois		Commercial Wind Energy Property Valuation Special Assessment for Solar Energy Systems			Administered by the Illinois Department of Commerce
Indiana		Renewable Energy Property Tax Exemption			
Iowa	Renewable Energy Production Tax Credits (Corporate)	Energy Replacement Generation Tax Exemption Local Option - Special Assessment of Wind Energy Devices Property Tax Exemption for Renewable Energy Systems	Renewable Energy Production Tax Credit (Personal)	Wind and Solar Energy Equipment Exemption	Administered by the Iowa Utilities Board
Kansas		Renewable Energy Property Tax Exemption			
Kentucky	Energy Efficiency Tax Credits (Corporate) Renewable Energy Tax Credit (Corporate) Tax Credit for Renewable Energy Facilities		Energy Efficiency Tax Credits (Personal) Renewable Energy Tax Credit (Personal)	Sales Tax Exemption for Large-Scale Renewable Energy Projects Sales Tax Exemption for Manufacturing Facilities	
Louisiana	Tax Credit for Solar and Wind Energy Systems on Residential Property (Corporate)	Solar Energy System Exemption	Tax Credit for Solar and Wind Energy Systems on Residential Property (Personal)		
Maine					Administered by the Maine Public Utilities Commission

State	Corporate	Property	Personal	Sales	Renewable Portfolio Standards ¹
Maryland	Clean Energy Production Tax Credit (Corporate) Corporate Income Tax Credit for Green Buildings	Anne Arundel County - Solar Energy Equipment Property Tax Credit Harford County - Property Tax Credit for Solar and Geothermal Devices Howard County - Residential Property Tax Credit Local Option - Property Tax Exemption for High Performance Buildings Local Option - Renewable Energy Property Tax Credit Property Tax Exemption for Residential Solar Energy Systems Special Property Assessment for Solar Heating & Cooling Systems	Clean Energy Production Tax Credit (Personal) Personal Income Tax Credit for Green Buildings		Administered by the Maryland Public Service Commission
Massachusetts	Excise Tax Deduction for Solar or Wind-Powered Systems Excise Tax Exemption for Solar or Wind Powered Systems	Renewable Energy Property Tax Exemption	(Personal) Residential Renewable Energy Income Tax Credit	Renewable Energy Equipment Sales Tax Exemption	Administered by the Massachusetts Division of Energy Resources
Michigan		Alternative Energy Personal Property Tax Exemption			
Minnesota		Wind and Solar-Electric (PV) Systems Exemption		Solar Sales Tax Exemption Wind Sales Tax Exemption	Administered by the Minnesota Department of Commerce
Missouri					Administered by the Missouri Public Service Commission
Montana	Deduction For Energy-Conserving Investment Alternative Energy Investment Tax Credit (Corporate)	Renewable Energy Systems Exemption	Alternative Energy Investment Tax Credit (Personal) Energy Conservation Installation Credit Residential Alternative Energy System Tax Credit		Administered by the Montana Public Service Commission

State	Corporate	Property	Personal	Sales	Renewable Portfolio Standards ¹
Nebraska				Sales and Use Tax Exemption for Community Wind Projects	
Nevada		Property Tax Abatement for Green Buildings Renewable Energy Producers Property Tax Abatement Renewable Energy Systems Property Tax Exemption		Solar Generation PV Rebate Program	Administered by the Public Utilities Commission of Nevada
New Hampshire		Local Option Property Tax Exemption for Renewable Energy			Administered by the New Hampshire Office of Energy and Planning
New Jersey				Solar and Wind Energy Systems Exemption	Administered by the New Jersey Board of Public Utilities
New Mexico	Renewable Energy Production Tax Credit (Corporate) Solar Thermal Electric Tax Credit Sustainable Building Tax Credit (Corporate)		Renewable Energy Production Tax Credit (Personal) Solar Market Development Tax Credit Sustainable Building Tax Credit (Personal)	Solar Energy Gross Receipts Tax Deduction	Administered by the New Mexico Public Regulation Commission
New York	Green Building Tax Credit Program (Corporate)	Energy Conservation Improvements Property Exemption Solar, Wind & Biomass Energy Systems Exemption	Green Building Tax Credit Program (Personal) Solar and Fuel Cell Tax Credit	Solar Sales Tax Exemption	Administered by the New York Public Service Commission
North Carolina	Renewable Energy Tax Credit (Corporate)		Renewable Energy Tax Credit (Personal)		Administered by the North Carolina Utilities Commission
North Dakota	Renewable Energy Tax Credit (Corporate)		Renewable Energy Tax Credit (Personal)		
Ohio		Cincinnati - Property Tax Abatement for Green Buildings			
Oklahoma	Zero-Emission Facilities Production Tax Credit		Energy-efficient Residential Construction Tax Credit		
Oregon	Business Energy Tax Credit	Renewable Energy Systems Exemption	Residential Energy Tax Credit		Administered by the Oregon Energy Office
Pennsylvania		Wind-Energy System Exemption			Administered by the Pennsylvania Public Utility Commission

State	Corporate	Property	Personal	Sales	Renewable Portfolio Standards ¹
Rhode Island		Wind-Energy System Exemption			Administered by the Rhode Island Public Utilities Commission
South Carolina	Solar Energy Tax Credit (Corporate)		Solar Energy Tax Credit (Personal)	Sales Tax Cap on Energy-efficient Manufactured Homes	
South Dakota		Small Commercial Wind Energy Property Tax Assessment Large Commercial Wind Exemption and Alternative Taxes Renewable Energy Systems Exemption			
Texas	Solar and Wind Energy Device Franchise Tax Deduction	Renewable Energy Systems Property Tax Exemption		Memorial Day Weekend Sales Tax Holiday for Energy-efficient Products	Administered by the Public Utility Commission of Texas
Utah	Renewable Energy Systems Tax Credit (Corporate)		Renewable Energy Systems Tax Credit (Personal)	Renewable Energy Sales Tax Exemption	Administered by the Utah Department of Environmental Quality
Vermont	Corporate Tax Credit for Solar	Local Option for Property Tax Exemption		Sales Tax Exemption	Administered by the Vermont Department of Public Service
Virginia					Administered by the Virginia Department of Mines, Minerals, and Energy
Washington				Sales and Use Tax Exemption	Administered by the Washington Secretary of State
West Virginia	Tax Exemption for Wind Energy Generation	Special Assessment for Wind Energy Systems		Sales Tax Exemption for Energy-Efficient Products	
Wisconsin		Solar and Wind Energy Equipment Exemption			Administered by the Public Service Commission of Wisconsin
Wyoming				Renewable Energy Sales Tax Exemption	
U.S. Territories: Puerto Rico		Property Tax Exemption for Solar Equipment	Tax Deduction for Solar and Wind Energy Systems	Excise Tax Exemption for Farmers	

Endnotes

¹ http://apps1.eere.energy.gov/states/maps/renewable_portfolio_states.cfm#chart accessed September 19, 2008