



Energy Efficiency Programs

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Focus on Energy Program

- Wisconsin's statewide energy efficiency and renewable energy program.
- Funding is set at 1.2% of investor-owned utility revenues and \$8 per customer for municipal utilities and coops
- Funds are deposited into private account
- Protected from Legislators shifting \$ to other uses
- Municipal utilities and cooperatives may choose to join Focus or run their own programs



Focus on Energy (continued)

- Three program areas: Residential (Homes), Businesses and Renewable Energy.
- Program is administered by a private company, under contract by the utilities, that hires other private companies to deliver program services.
- PSC oversees all aspects, sets annual savings goals and oversees program evaluation.



What Does Focus on Energy Do?



- Three main tools:
 - Offer unbiased information and education,
 - Provide technical assistance to customers and service providers, and
 - Offer financial incentives to customers who install energy efficient equipment

Our Mission:

Assist with installation of cost effective energy efficiency and renewable energy projects that would not occur otherwise

Why Does Wisconsin Have Energy Efficiency Programs?



- Investing in energy efficiency is cheaper than building and operating power plants
- Promotes in-state economic development
 - Wisconsin has no oil, coal or natural gas. All fuels are imported from other states or countries
 - Imported fuels (coal, nat. gas, elect.) cost about \$6 billion in 2007
 - about 2.5% of Wisconsin's economy with no economic development benefits
- Energy efficient businesses are better able to compete with businesses from other states or countries
- Homeowners in efficient homes are safer, healthier, more comfortable and are not as affected by high winter heating bills
- Protects our environment

Benefits from Focus



- Wisconsin customers save about \$239 million per year in energy costs
- Program has an overall 2.3/1 benefit/cost ratio
- Emission Reductions:
 - 1.78 million tonnes of carbon dioxide
 - 2,900 tonnes of sulfur dioxide
 - 266 pounds of mercury

Starting an Energy Efficiency Program



- Policy makers need to be clear about and prioritize what they want accomplished:
 - Resource Acquisition (RA) vs Market Transformation (MT):
 - RA: Acquire energy savings: kW? kWh? Therms?
 - MT: Improve how energy efficient goods and services are bought and sold
 - System reliability? Delay building plants or power lines?
 - Emission reductions? Environmental goals?
 - Economic development?
 - Specific customer types targeted? Underserved customers?
 - Equity of service among customers?
 - Who will pay for the programs and how?
 - As much as possible, policy makers should address “What the program should do” and not “How the program should do it.”

Starting an Energy Efficiency Program (continued)

- Identify or develop codes or standards for what is a “high efficiency” item and estimate the difference in energy use and the extra cost:
 - Codes are state or federal legal minimum allowed for energy use quality, safety
 - Standards can be created by industry associations, public interest groups, energy programs
- Some Codes and Standards used by Focus on Energy
 - Homes & buildings – Standard efficiency = Minimum building codes; High Efficiency = Energy Star Homes/Buildings Standard
 - Energy using devices:
 - Appliances, computers, TVs – Energy Star = High Efficiency
 - Electric Motors NEMA premium
 - CEE Tier 1 & Tier II - Market Standard Lighting.... or watts/sq. ft.
 - SEER for air conditioning; kW/ton for chillers
- New Codes are the best and least used tool to lock in savings once most customers are buying a high efficiency technology.



Starting an Energy Efficiency Program (continued)



- To be effective, programs need to be consistent and long-term (3-5 years):
 - Policy direction and priorities cannot change annually
 - Metrics by which program success is measured and/or rewarded
 - Long-term metrics yield more sustainable results
 - Be careful: What gets measured gets done. What gets rewarded gets overdone.
 - Contracts need to span three or more years to prevent stockpiling of projects
 - Spend money upfront developing a baseline of energy use for the groups you intend to target

Tips on Designing Energy Efficiency Programs



- Three pillars of good program design:
 - Well defined customer group that has similar problems, sources of information, behaviors and are a good source of potential energy savings
 - A group of solutions (technologies or energy management practices) that are proven to deliver cost-effective, measureable and reliable energy savings
 - Several established companies that sell these services or technologies to this customer group

Tips on Designing Energy Efficiency Programs (continued)

- Two types of Incentives:
 - Prescriptive – fixed amount of incentive per unit (Examples - \$1 per compact fluorescent bulb or \$75/room for Guest Room Energy Management)
 - Custom – case by case amount of incentive based on energy savings produced by project. Often large commercial or industrial projects.
- Prescriptive incentives are simple to use and understand for customers and vendors. They promote market transformation while achieving energy savings.
- Custom incentives can be multi-level, based on the technology's risk to the company or other policies
- Never offer incentives to technologies that do not have a proven record of reliability and energy savings. Offer to conduct a “limited pilot incentive” so you can measure and verify savings and performance (LED bulbs in WI).

Tips on Designing Energy Efficiency Programs (continued)



- Independent Measurement and Verification:
 - Keep program delivery group honest with energy savings estimates
 - Use data collected on new technologies to help create future Program Standards
 - Help develop unbiased reports and case studies for use by program delivery group and equipment sellers

- Independent Evaluation
 - Ensure that projects claimed by delivery group to be installed actually were installed and operating
 - Work with M&V group and delivery contractors to estimate savings that can be claimed for each Prescriptive Incentive project.
 - Verify savings claimed for Custom Incentive projects
 - Estimate percentage of projects that would have happened anyway and work with program delivery group to minimize the problem

Spending Program Funds Wisely

- Assist with installation of cost effective energy efficiency and renewable energy projects that would not occur otherwise
- Cost Effective:
 - Technology delivers energy savings in measureable and reliable amounts
 - The program minimizes incentives paid to projects that would happen anyway (Free riders)



Limiting Free Riders – Easier Said Than Done

- No incentives for technologies that have become “standard practice” or fully accepted by buyers
 - Many Energy Star appliances, NEMA Premium motors in 2010
- Place limits on project economics:
 - Industrial projects: simple payback between 1.5 - 4 years
 - Incentive needs to make a meaningful contribution to overall project economics
- No incentives for projects that have begun before the program contacts the customer
 - This means having to say “No” to a customer
- No incentives for projects being done mostly for reasons other than energy savings



Final Thoughts

- Energy efficiency programs are most effective when clear, long-term policy direction is implemented by a group of entities whose motivations are aligned.
- Because of other motivations, utilities or government entities are often not best suited to do the program delivery. But they must be involved with planning and oversight.
- Unbiased program delivery staff are crucial for program integrity
- Independent M&V and Evaluation bring more integrity to program spending and results as well as buy-in from policy makers.





Thank you
Questions?

Focus Residential Programs

- **Lighting** – ENERGY STAR qualified CFLs, lamps, fixtures; LED holiday lights
- **Appliance & Plug Load** – Mostly educational; incentives on water heaters & occasionally other appliances
- **Efficient Heating and Cooling** – SEER 14+ central air, heating systems with electricity-saving fan motor, high efficiency boilers
- **Certification discounts** for new Wisconsin ENERGY STAR Homes



Focus Residential Programs

- **Evaluations and improvements** for existing homes Home Performance with ENERGY STAR incentives average 10-15% of project cost and include discount off the consultant's evaluation fee
- **Targeted Home Performance** pays 90% of project cost for income-eligible customers (60-80% of state median income)
- **Services and incentives** for both new and existing apartments and condos (including up to \$250,000 for new construction projects)



Focus Business Programs

- **Commercial, industrial, agriculture and schools and government** buildings
- **Standard “prescriptive” incentives** on lighting, motors, HVAC equipment, compressed air, steam traps, plate coolers, variable speed controllers for vacuum pumps, heat recovery tanks and ***more***
- **Incentives on custom projects** of \$125-\$200 per kW, 4-6 cents per kWh and 40-60 cents per therm (up to 30% of project's cost and max of \$250,000)



Business Program Services

- **Unbiased technical information and assistance**
 - Case studies, technical information sheets, fact sheets: available in hard copies or on the web
 - Actual customer and business ally experiences
- **Access to education and training classes statewide**
 - Commercial/Industrial Practical Energy Management
 - Operations & Maintenance Training
 - Building Operator Certification
- **Work closely with contractors and business allies**
 - They install efficient technologies for customers and ensure customers obtain Focus financial incentives

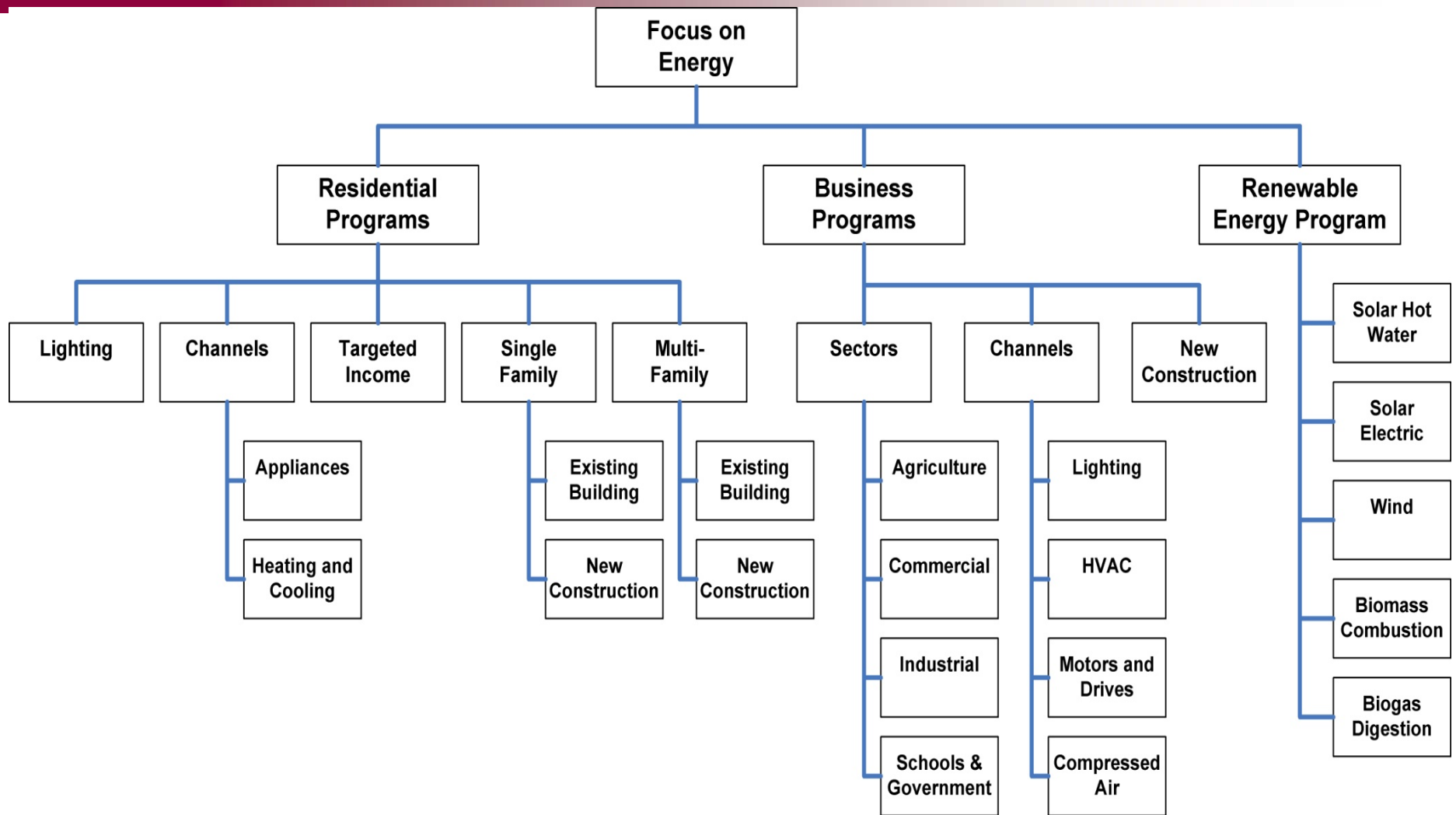


Renewable Energy Services



- **Information and advice** via telephone, fact sheets, community outreach, and web site
- **Site assessments** to determine feasibility of installation
- **Financial incentives** and grants
- **Installation assistance** & referrals

Focus Program Structure



Profile of Wisconsin's Electric Utilities

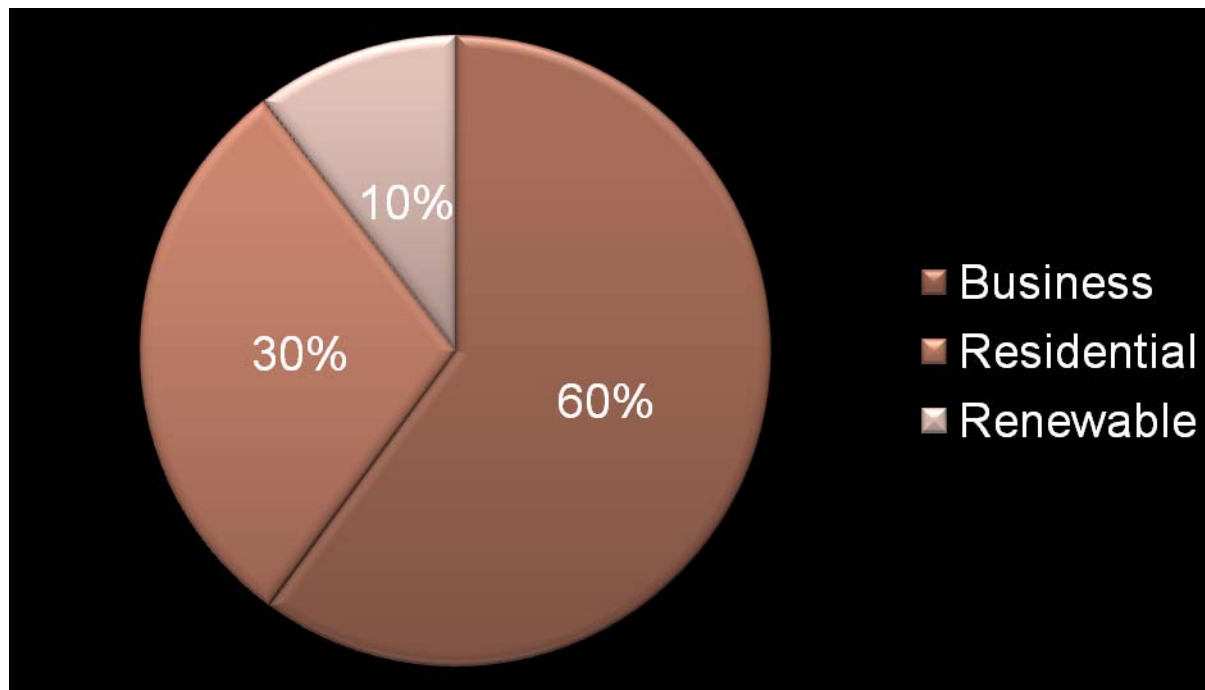
Type of Electric Utility	Utilities in Wisconsin	Sales MWh	Utilities in Focus on Energy	Sales MWh
Investor-Owned	12	59,584,724	12	59,584,724
Municipal-Owned	82	8,078,999	77	7,849,771
Cooperative	24	3,637,577	10	1,367,987
	118	71,301,300	99	68,802,482

Customer Profile of Focus on Energy

Type of Customer	Number of Customers	Revenues (\$000)	MWh
Residential	2,415,055	2,244,024	20,673,071
Commercial	322,185	2,018,488	23,150,558
Industry	6,166	1,539,826	24,978,853
Total	2,743,406	5,802,338	68,802,482

2009 Focus on Energy Budget

Business - \$45,624,000
Residential - \$22,391,950
Renewable - \$ 7,912,950



Energy Savings From Focus

Focus on Energy Savings Distribution by Sector July 1, 2001 – December 31, 2008

	Business	Residential	Renewable	TOTAL
kWh	1,093,233,207	582,079,215	54,678,154	1,729,990,576
kW	218,766	73,937	9,022	301,725
Therms	68,836,785	12,774,784	5,511,172	87,122,741

