

#### Including CFLs in the Next Generation of Residential Conservation Programs in Minnesota

**ACEEE Energy Efficiency as a Resource** 

September 29th, 2009

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### Who we are...





#### State Energy Office

- Conservation
   Improvement Program
- Information regarding conservation and renewables
- Renewable Programs
- Energy Efficiency Programs
- U.S. DOE Funding
  - Weatherization Program
  - Stimulus

# **OES Utility CIP Program**



- Utility CIP Plans, Status Reports & Modifications for 130 Municipal Utilities, 44 Distribution Cooperatives, 11 Investor Owned Natural Gas & Electric Utilities
- Review Energy Savings Assumptions and Measurement & Verification Activities
- \$206 million in total spending for 2006 & 2007, which resulted in
  - 875 million kWh and 4 billion cubic feet of gas saved
  - 1,008,836 tons of incremental CO2 savings

### **Energy Conservation Policy Goal**



#### ...achieve annual energy savings equal to 1.5 percent of annual retail energy sales of electricity and natural gas directly through:

- energy conservation improvement programs; and
- rate design

#### and indirectly through:

- energy codes and appliance standards;
- programs designed to transform the market or change consumer behavior;
- and other efforts to promote energy efficiency and energy conservation.

#### 1 percent is the minimum

- 0.5 percent can be energy savings that result from efficiency improvements to utility infrastructure and systems;

#### What does this mean?



Electric CIP Energy Savings by Year



### **CFL Program Success**



- Primary component of many utilities residential lighting programs
  - As high as 89% of utility residential segment achievements
- CFL savings average 79 kWh per bulb
  - Reduced operating hours for larger numbers of bulbs per household
- New programs are packaging bulb offerings with other efficiency measures
  - Home Efficiency, ENERGY STAR Homes

## **Change a Light, Change the World**



- Reducing the price of bulbs to \$0.99/bulb
  - Rebates cannot exceed purchase price
- Work with participating retailers
- Holding special bulb sales events
- Leveraging national marketing
  - Partnerships with manufacturers and retailers
- These specs have carried over to other utility CFL programs

## **Cooperative Programs**

#### • \$2 per bulb rebate

- More than 25 require pre-approval
- Coupon includes information on selecting the right bulb
- Recycling options

CFL rebate coupon!		
<ul> <li>exceed actual purchase price of</li> <li>Rebate available for residential</li> <li>Rebate will be issued as a credi</li> <li>Fill out the coupon below. Bulbs</li> <li>Indicate number of bulbs purchabulbs require pre-approval and for pre-approval.</li> <li>Submit coupon, original sales refo days of purchase date.</li> <li>Mail to: Dakota Electric Associa</li> </ul>	it on your electric bill. Allow 6-8 weeks for processing. s must be installed at address provided on coupon. ased (must match receipt). Purchases of 25 or more are subject to on-site inspection. Call 651-463-6243 eceipt and ENERGY STAR label from package within	
Name		
Address		
City	Zip	
Account Number		
e brighter ideo	Number of bulbs:	

## **Special Events**





To receiv Mail-In R 1. Purchase up ENERGY ST qualified bu 2. Cut out the

Call 800.677.8423 for eligibility inf

to find out more about how you can save energy Your electric utility must be listed below in order Not exertine using music be inside below in order to quality for Mail-in Rebutes: Albin Public Utilities, Bainerd Public Utilities, By Public Utilities, Gibert Public Utilities, Grand Rapids Public Utility, Minnesola Power, Mountain Ion

Public Utility Pietr Public Utility Two Harborn Power and Ligh Minnesota Power and sponsoring utilities, in partner ship with energy star, offers consumers and business es energy efficient solutions that save money and help the environment.

Minnesota Power and participating utilities, by providing robate incentives, do not warrantee the

equipment and are not responsible for any persona injury or damage caused by this equipment.

MNR 2023-0109 CO 2009 Focus on Fourier

Offer expires 12.31.09. Receive \$2 by mail for each energy star qualified bulb purchased. Valid for customers of participating electric utilities only. Customers of some municipal and cooperative utilities may not be eligible. See salesperson, list inside coupon, or call 800.677.8423 for details.

To receive your Mail-In Rebate:	My electric utility company is
1. Purchase up to 12 ENERGY STAR® qualified bulbs.	Customer name Street address
2. Cut out the UPC code(s) from each bulb box and attach it to this completed form along with a copy of the cash register receipt with the purchase price(s) circled.	City/Town, State, Zip Phone E-mail Check the box that best represents where this/these bulb(s) will be used:
Mail to: MN ENERGY STAR Lighting C/O EFI Fulfillment Center 40 Washington St., Suite 2000 Westborough, MA 01581-1013	Single family home (1-3 units) Apt/Condo building (4+ units) Business/Commercial
Importent information: The other will be commoned approximation (exected willies only), for a limited time, Calatiment of some mutatipue and compositive attiles may not be eighted. So BL: Other space will be applies land, and may not be combined with any protein will be other oppinss 17/12/2000, time 12 builts per statu- tion. Information by mutation will be applied and attiles some the right is withdown or during difficus some the right is withdown or during difficult and the composition of the source of Bacalian on the common perturban person. Statuted bacalian of the source operations person in the Macalian of the source operations person of the matching and the source operations person between bacalian of the source operations person in the progene. Markin Intelligence operation for program.	Name of store where purchased         City, State         Please fill in the quantity, manufacturer, and model of the bulb(s) purchased:         Qty       Manufacturer         Model
register roccipit with the purchase price(s) circuids. Mail its MN EVERCY SIA Lighting (C) EFI Hulliment Center 40 Washington Sr., Sute 2000 Westborough, Mo USE1-1013 Importent Information: The dire wild to common of participant genetic utilities of the link time of the set of the set bit offer to positive signale size, and not set offer the outer of some metry and endpotential signale size of the the other positive signale size, and not set offer the outer of some metry and endpotential signale size of the the other positive signale size of the the size of the outer of the outer of the size of the outer of the outer of the size of the outer of the outer of the size of the outer of the outer of the bits of the outer of the outer of the bits are sized to the outer of the outer of the size of the outer of the outer of the outer of the outer outer of the outer outer of the outer of the outer of the outer outer outer outer outer outer outer outer outer of the outer outer ou	Single family home (1-3 units)     Apt/ Condo building (4+ units)     Business/Commercial      Name of store where purchased City, State Please fill in the quantity, manufacturer, and model of the bulb(s) purchased:

Total number of bulbs purchased: \_\_x \$2 = Total Rebate Limit 12 bulbs. You must include UPC code(s) and a copy of receipt to receive Rebate





**A Brighter UMD** 







#### **Online CFL Purchases**





Standard Twist | T9 | Specialty | Reflector Flood | Pear / A-Line | LED | Globe | Floor Torchere

#### **Standard Twist**

Picture

Item # / Description

Replaces Savings Price

Add to

# **CFL Program Challenges**



 Limiting the efficiency definition for consumers

- Critical for moving them beyond CFL

- Verifying installation rates
- Continued efforts on education
- Bulb recycling Minnesota Law
- Greater inclusion in other segments

## **CFLs will remain a key strategy in MN**



- CFLs are synonymous with energy efficiency
- Customers may still be reluctant to adopt the technology based on previous experiences
- New program approaches
  - Direct install programs, Home Efficiency, School Programs, Educational efforts

## **Behavioral Programs**



- Home Energy Reports
  - Provide an educational vehicle for CFLs



#### Home Energy Report Pilots





- Early pilot results indicate a positive response
- Further experience will determine how to best co-market with other programs

# **LED Lighting**



- Seen as the next big thing by consumers
  - New technologies
  - Holiday light program success
  - Consumer education is necessary
  - Standards





# **Plug Load Study**



- Goal: identify strategies that states and utilities can implement to save plug-load electricity
- On site inventory of plug loads
- 18 68 devices per Household
  - Average: 40 devices
- Interest & desire, willingness?



# **Plug Load Study**



- Focus is on television and computer centers
- Refrigerator
  - per-home savings:
    - savings range: 30 1,500 kWh/yr
    - mean: 500 kWh/yr (6.3 CFL<sub>equivalent</sub>)
- Non-refrigerator
  - per-home savings:
    - *range:* 0 914 kWh/yr
    - mean: 408 kWh/yr (5.3 CFL<sub>equivalent</sub>)





# **Thank You!**

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#### www.energy.mn.gov