

Presented at 2011 ACEEE National Conference on Energy Efficiency as a Resource

# *The One-Stop Efficiency Shop*<sup>SM</sup> Lighting Retrofit Program

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# Agenda

- Who is CEE
- Why Lighting Efficiency
- Program Performance Summary
- Program Design Elements
- Program Analysis Statistics
- Program Evaluation Findings
- Fun Facts

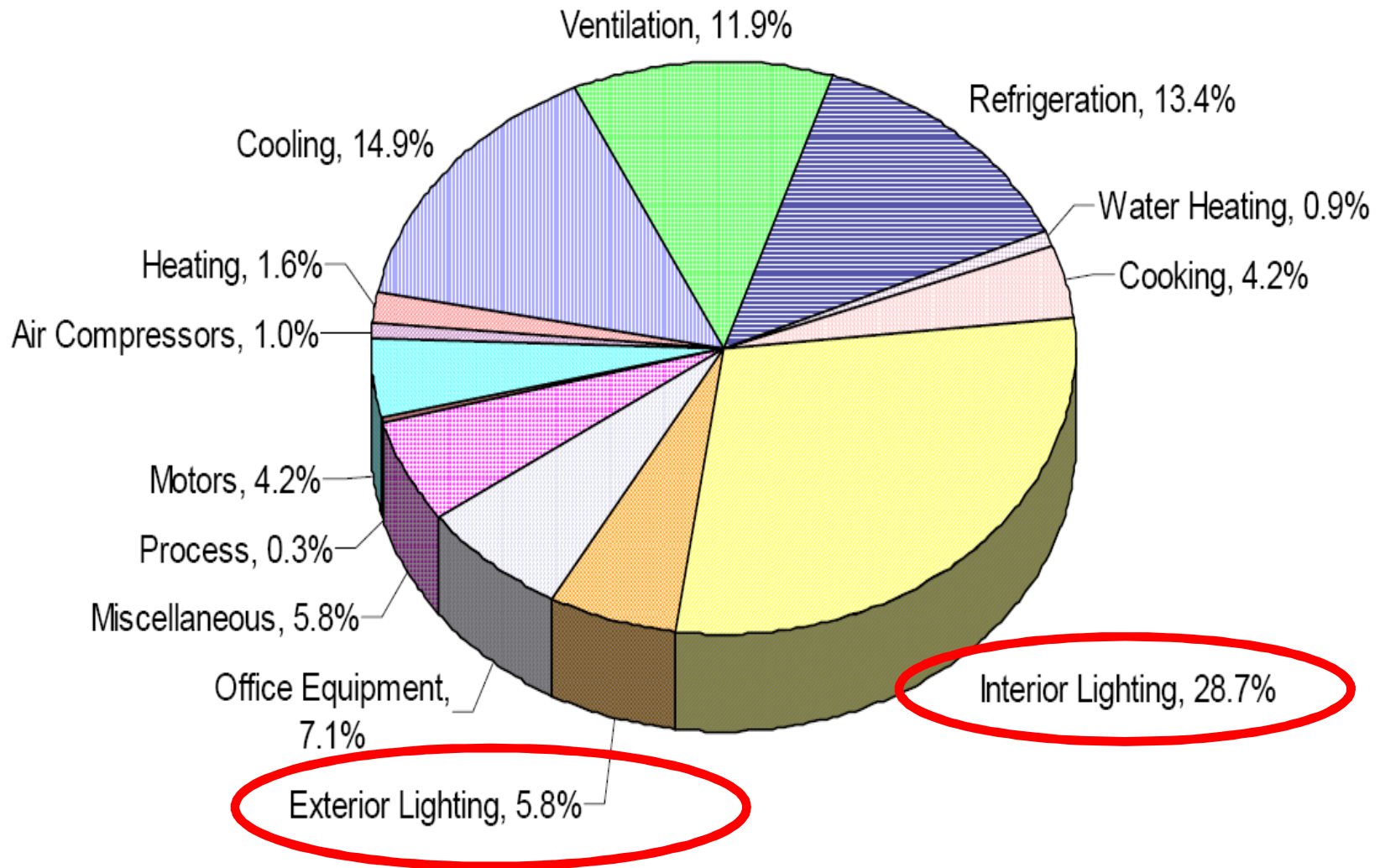


# Center for Energy and Environment

- 501(c)3 Nonprofit, Est. 1979 in Minneapolis, Minnesota
- Strong Engineering Core with Nearly 100 Staff
- CEE provides practical, innovative, energy solutions for homeowners, businesses, nonprofits, and government... because people use energy every day.
- Services Offered:
  - Energy Programs
  - Financing
  - Research
  - Public Policy
  - Innovation Exchange (**New!** [www.mncee.org](http://www.mncee.org))

# Lighting End-Use Size . . .

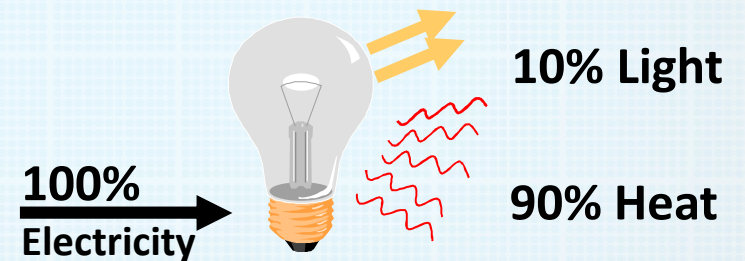
Source: "California Commercial End-Use Survey", California Energy Commission, March 2006





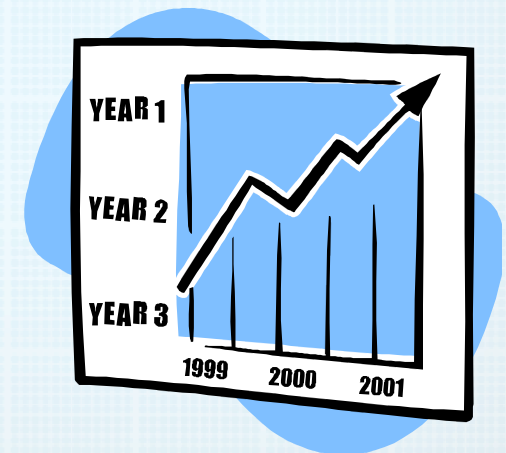
## Why Lighting Efficiency...

- **Least Expensive Retrofit**  
2-3 yr Payback (30%-50% ROI)
- **Most Scalable Market Sector**  
Lighting Opportunity in Every Building
- **Huge Savings Potential**  
40%-60% Energy Savings



## Xcel Energy's One-Stop Program Summary

- 12 years of operation: 2000-2011
- 18,500 audits
- 6,945 businesses retrofitted
- \$31,000,000 in rebates
- \$4,420 average rebate per job
- 73 MW in savings
- 275,000 MWH in savings



# Minnesota Lighting Programs

(Full-Service Program Design)

- **One-Stop:** Xcel Energy during 2000-11
  - Actual Savings: 73,000 KW, 275,000 MWh/yr
- **ALL-Lights:** Alliant IPL during 2006-11
  - Actual Savings: 695 KW, 2,300 MWh/yr
- **EZ-Lights:** Otter Tail Power during 2006-08
  - Actual Savings: 256 KW, 600 MWh/yr

# Program Design Elements

- Participants: Small Business (0-400 KW)
- Services Delivered to Participant
- Customer-Centric Service
- Free Lighting Audit
- Objective Recommendations

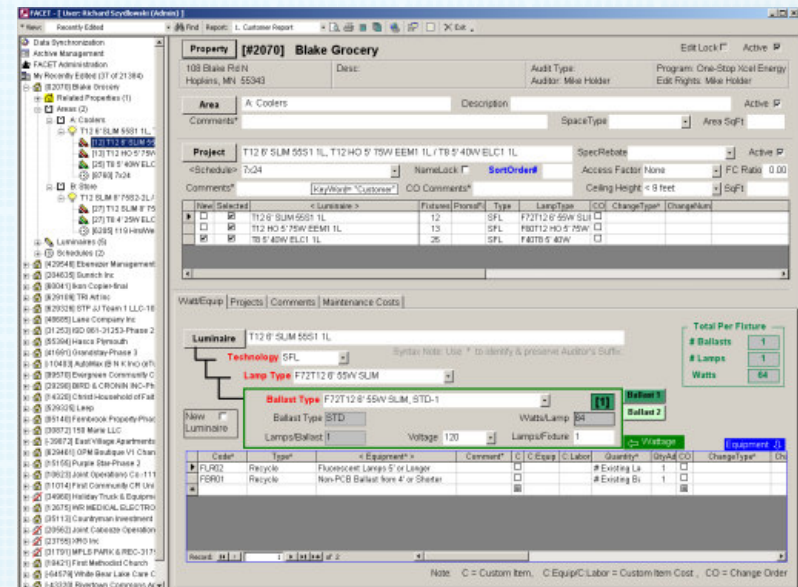


## Program Design Elements (cont.)

- Substantial Rebate (~\$500/kW or ~\$0.13/kWh)
- Low Cost Financing
- Lighting Contractor Network
- No Paperwork (Participant and Contractor)

# Key Program Delivery Elements

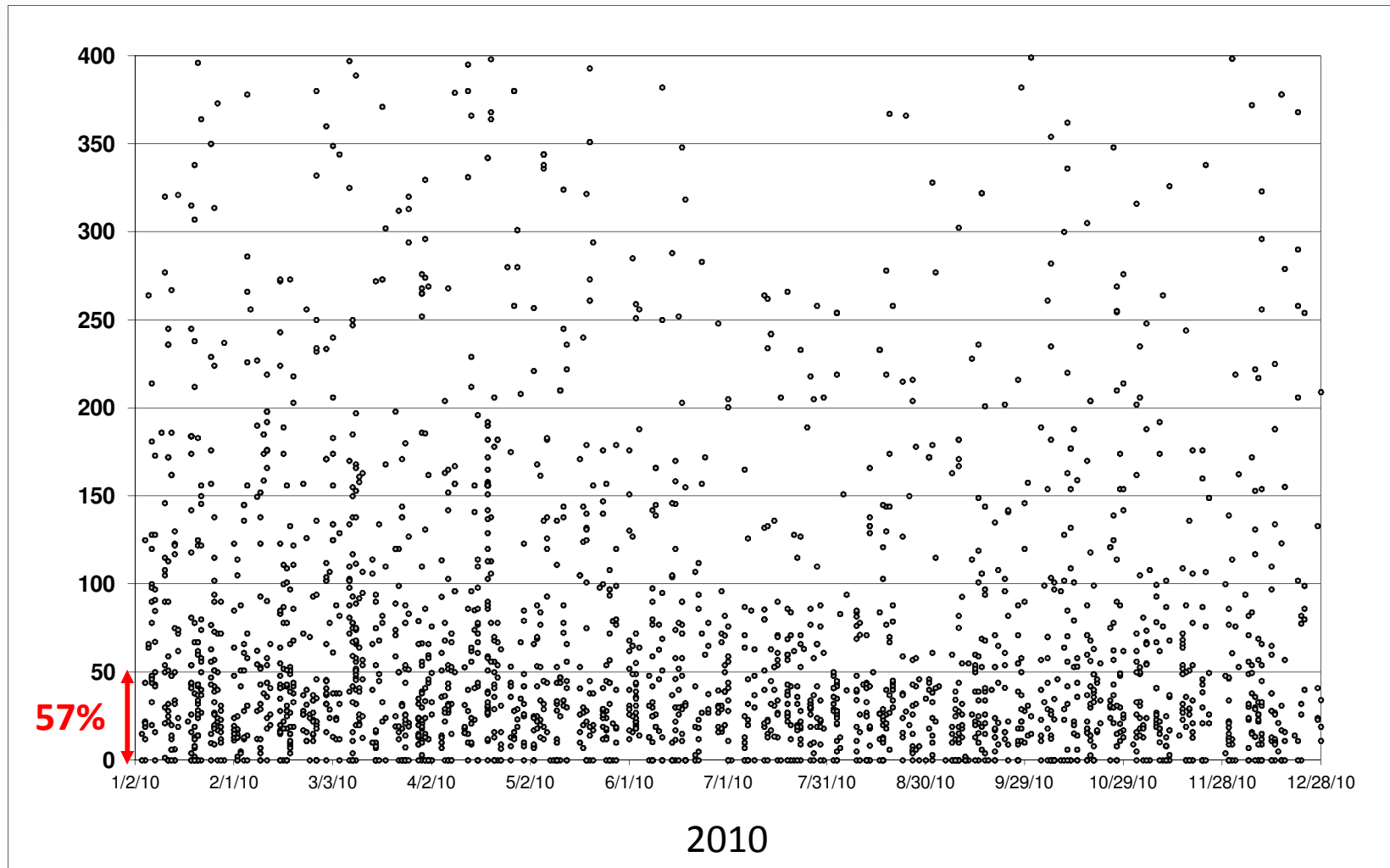
- Professional Salesforce as Field Staff
- Custom Program Management Software
  - Lighting Audits
  - Customer/Contractor Reports
  - Job Status Tracking
  - Rebate Applications
  - Program Administration and Reporting



## Key Program Delivery Elements (cont.)

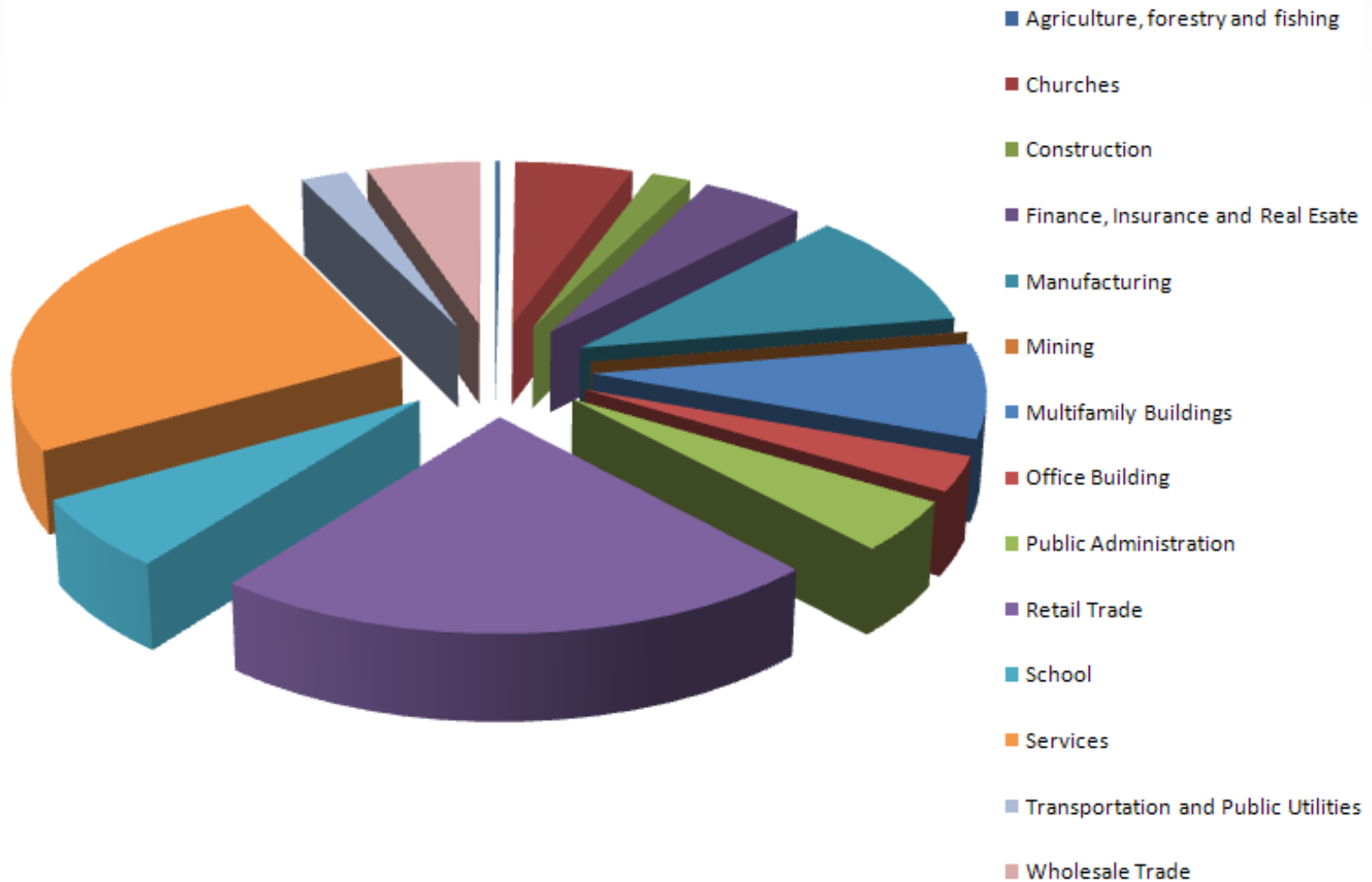
- Contractor Training (Lighting Technology and Process)
- Random Inspections (Quality Control)
- Coordinate with Managed Accounts

# Participant Size by Demand (0-400KW)

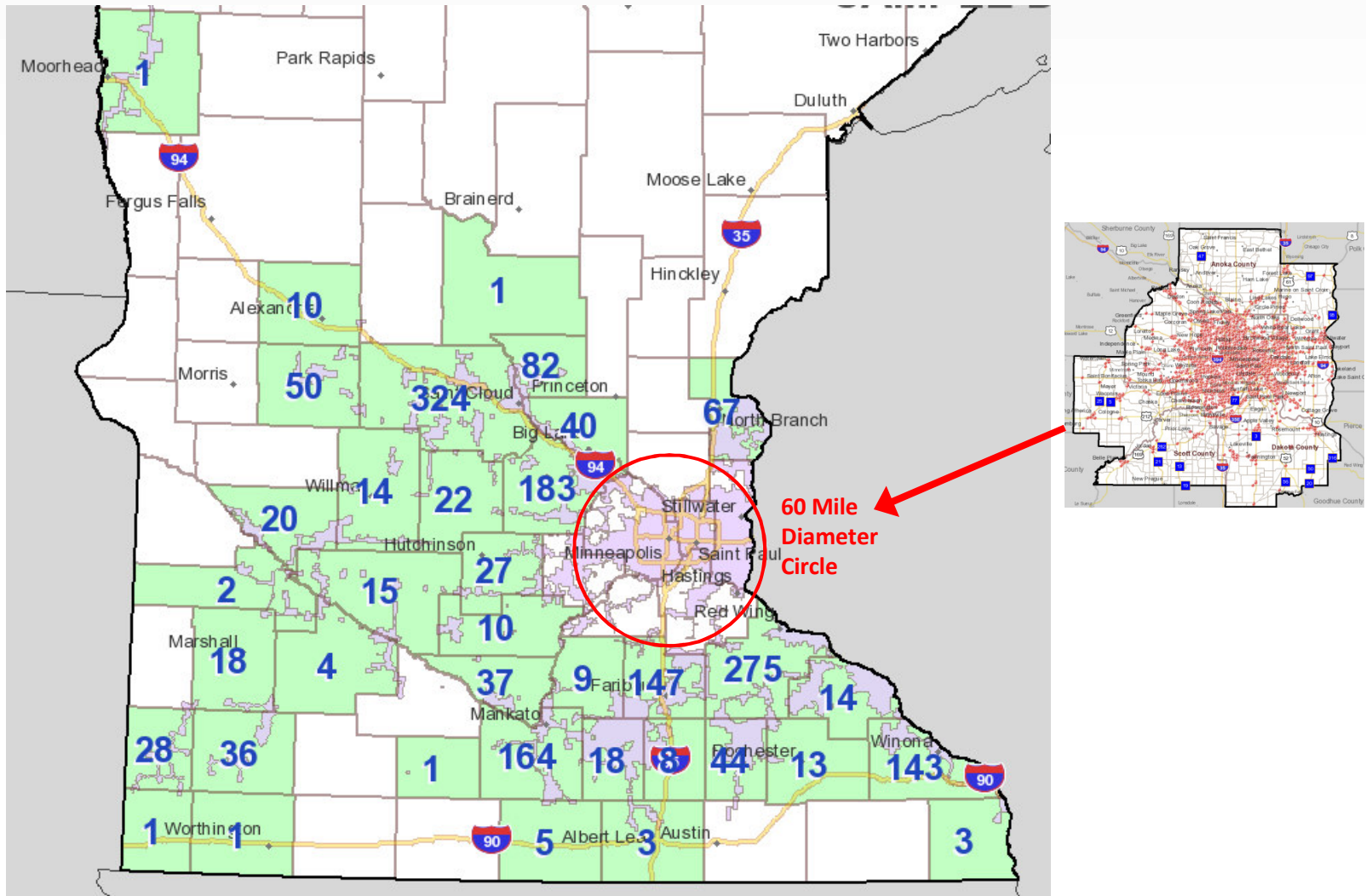




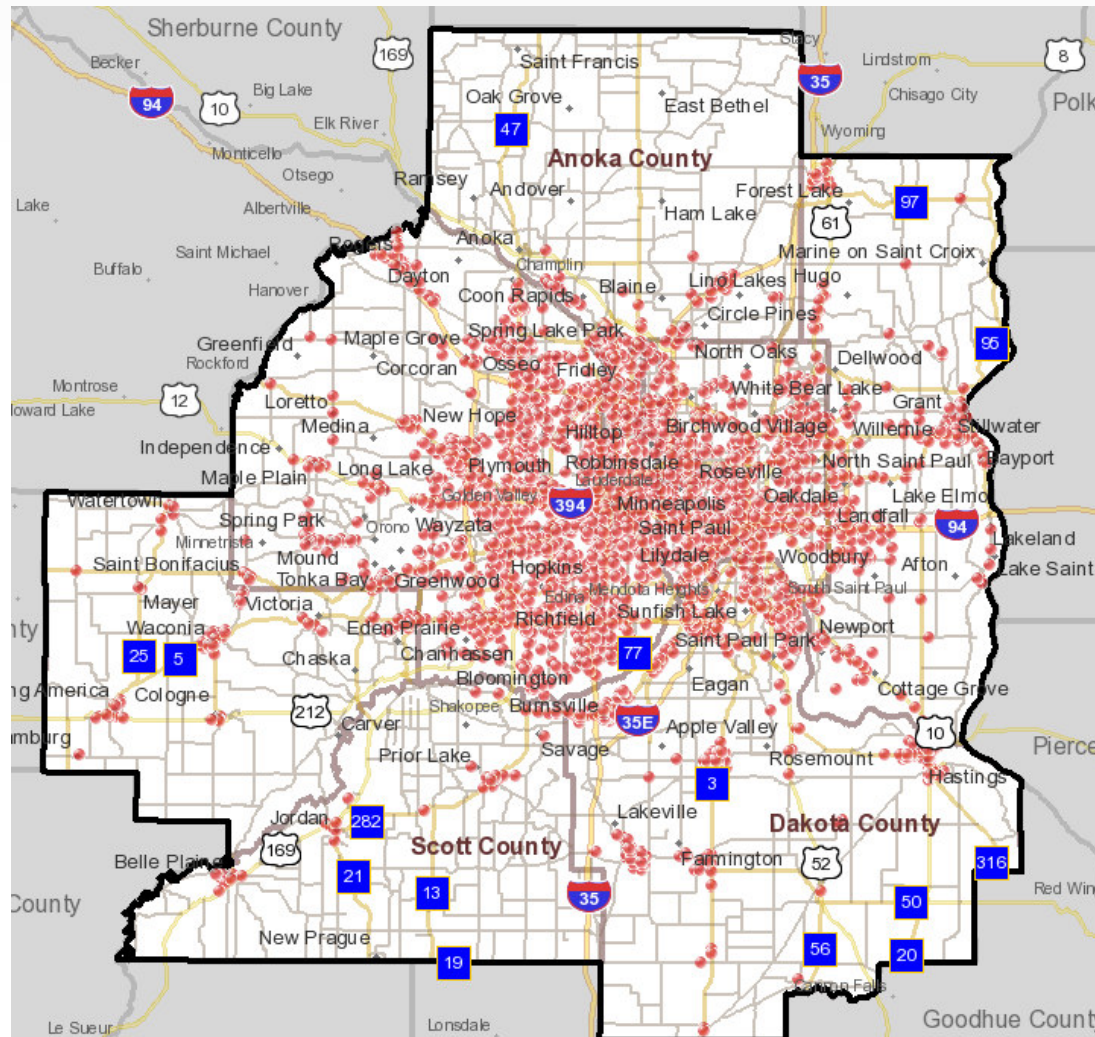
# Participant Business Classification (2000-2010)



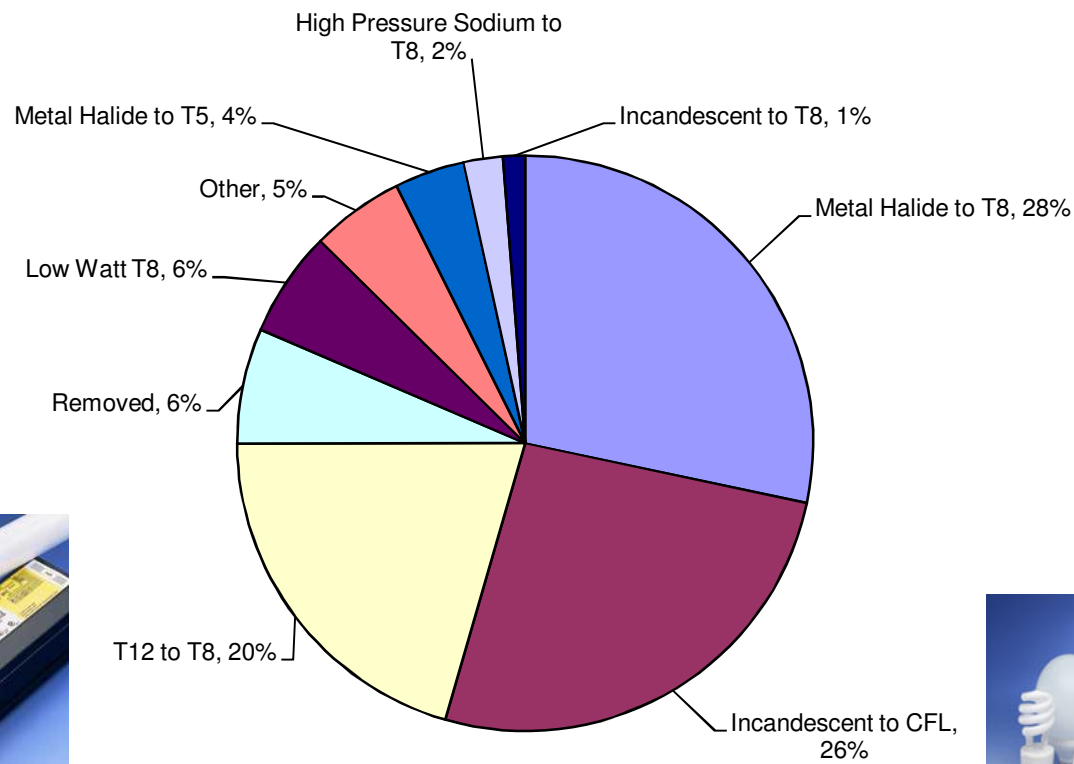
# Participation in Greater Minnesota (2000-2010)



# Participation in Minneapolis / St. Paul 7-County Metro Area (2000-2010)

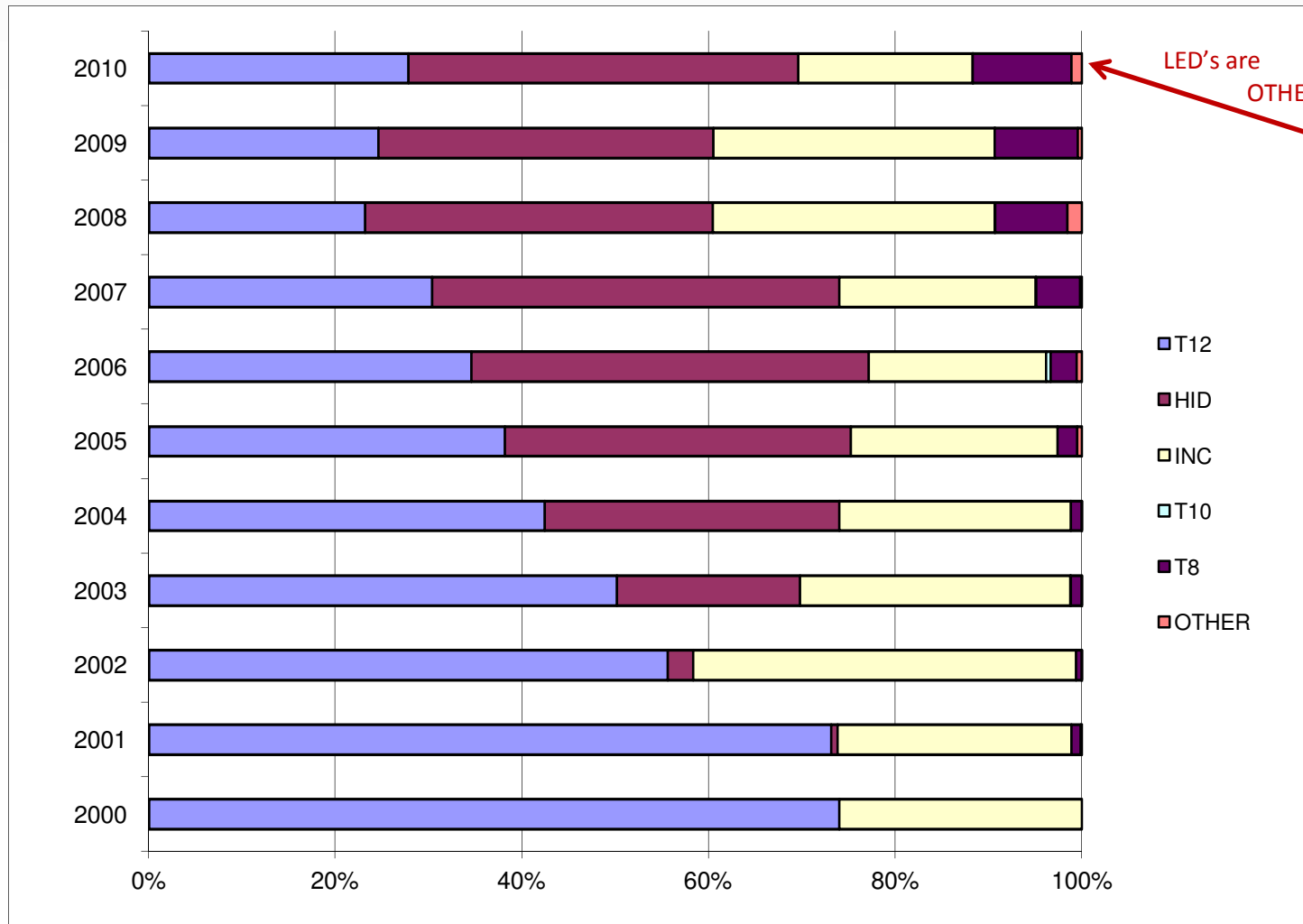


# Lighting Retrofit Recommendations (2010)





# Lighting Technologies Replaced (2000-2010)



# Customer Satisfaction Survey



Overall Satisfaction with One-Stop



Overall Satisfaction with Contractor's Work



Overall Satisfaction with Auditor's Customer Service



Likelihood of Recommending Program to Another Business Owner



## Program Evaluation Findings (2010)



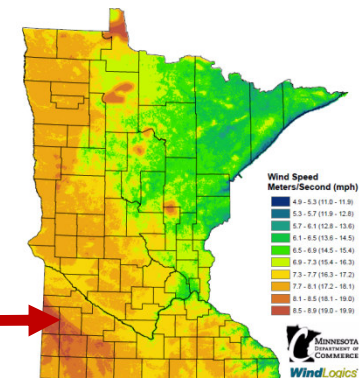
- **Lowest Program Delivery Cost**
  - As measured in \$/KWh, compared to 7 peer **full-service** programs
- **Full-Service is Essential**
  - For getting participation in the small business market
- **Lighting Contractor Network is Essential**
  - Recruit and train contractors to participate in One-Stop
- **Satisfaction with Lighting Quality at 93%**
  - High persistence of savings (i.e., Very few replaced new energy efficient lighting due to dissatisfaction with lighting or equipment failure)

## Fun Fact 1



= 5,000 MWh/yr

1.5 MW Turbine  
Located in  
Buffalo Ridge Area



Lighting Retrofits in 2000-2011 = 55 Wind Turbines





## Fun Fact 2

600 KW Array  
2,613 Panels

Minneapolis  
Convention Center  
Largest PV in Region



Lighting Retrofits in 2000-2011 = **370 PV Arrays**

## Fun Fact 3



Xcel Energy's CIP Programs  
Total As Of 2010

Saved 2,290 MW

Avoided Building **Nine**  
250 MW Gas Power Plants

New Savings of \$3.5B  
for Ratepayers

**Lighting Retrofits in 2000-2010 = Saved \$115M**

## Fun Fact 4



# Green Jobs

**One-Stop Sustains Equivalent of 76 Full Time Contractors**

# Questions?

