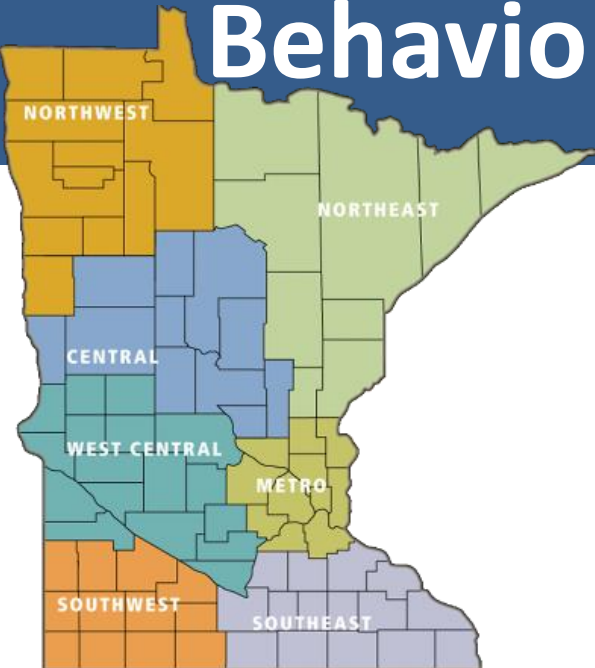


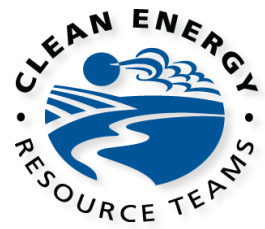


Peer Pressure for Good: Using Behavior Change to Spur Action



Alexis Troschinetz
Clean Energy Resource Teams
YES! Fall Summit
September 30th, 2015

Today's Workshop



- About CERTs
- Behavior Change Science
- Work in Teams – 5 scenarios
- Each Team Shares – 1 minute



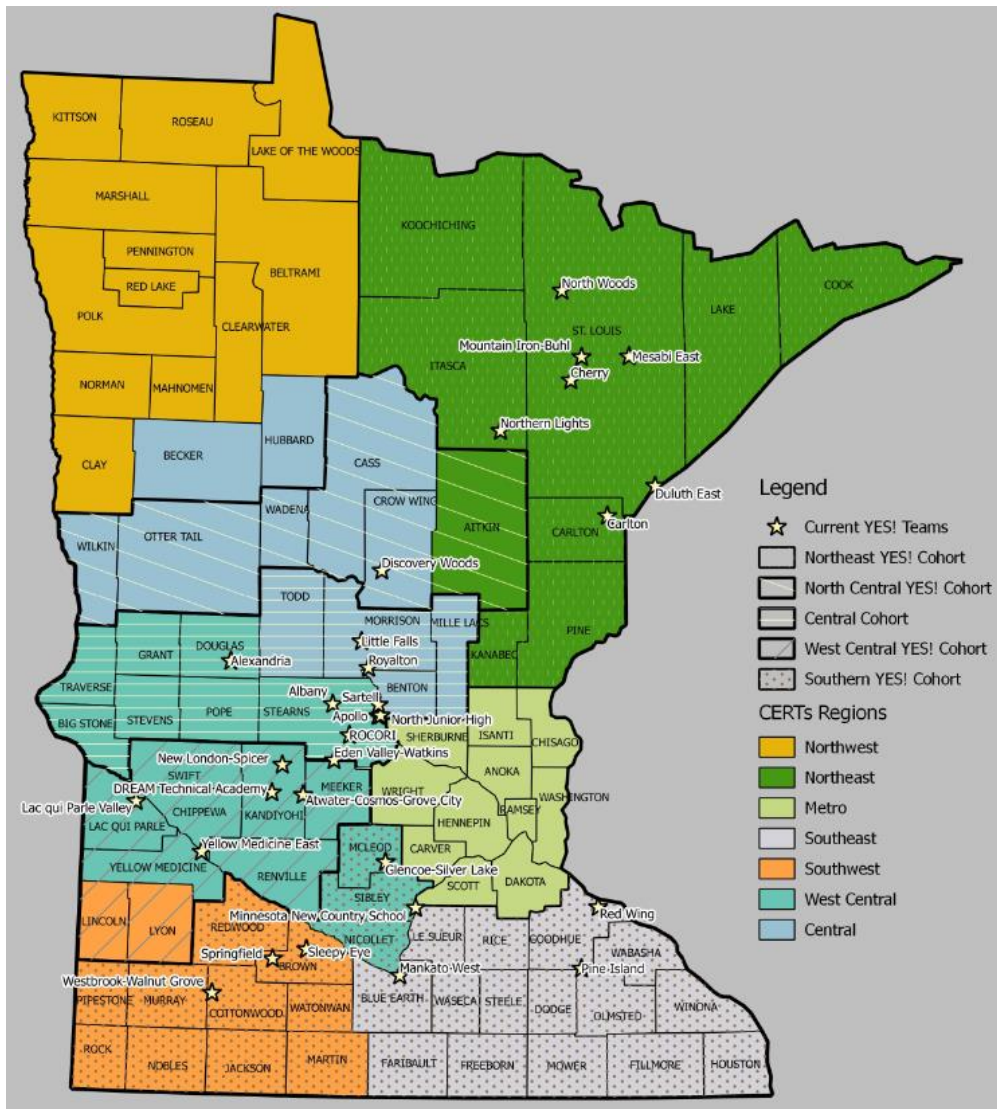
CERTs:

Minnesotans Building a Clean Energy Future



Mission: We connect individuals and their communities to the resources they need to identify and implement community-based clean energy projects







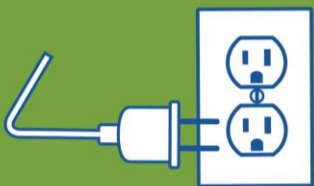
What Does CERTs Do?

LEARN



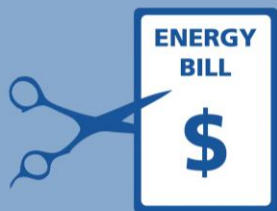
Write blog posts & case studies
Create educational guides
Manage diverse web-based tools

CONNECT



Host events, tours, and conferences
Help with community organizing
Connect people to technical resources

ACT



Provide seed grant funding and more
Deliver research-based campaigns
Spur other statewide programs



Seed a Bit of Innovation

Application
Deadline:
October 26th

Catalyzing grants for
community-based clean
energy projects in MN

Past funding: Over 223
projects have received
seed grants since 2006



CleanEnergyResourceTeams.org/RFP

Encourage CERTified Actions



Campaigns: Clear, actionable ways to save energy



\$aving
Watts
& Drops

CleanEnergyResourceTeams.org/LEDCanopy

Coming soon....

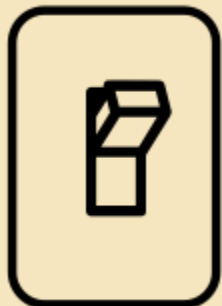
Behavior Change Science



Step 1



Audience



Behavior

Step 2



Barriers



Benefits

Step 3



Strategies

Behavior Change Science



Step 1



Audience



Behavior

Step 2



Barriers



Benefits

Step 3



Strategies

Audiences



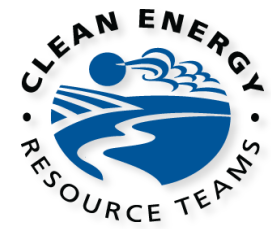
A	B	C	D	E
Middle School Students	Elementary School Students	Seniors	Farmers	Residential

Accessing Audiences




	A	B	C	D	E
Middle School Students	Elementary School Students	Seniors	Farmers	Residential	
Community Center for After School Programs	Elementary School Classrooms	Independent Senior Living Center	Farms with Tractors	Homes	

Behavior



- One-time vs. repeat
- End-state
- Non-divisible





Right Light Guide for General Use Bulbs

Today there are many lighting options available. The right bulb for you depends on how much light you need, what color light you want, and its costs and features.

STEP 1 Decide How Much Light You Need

Focus on Brightness. Different amounts of light are needed for different uses. Instead of thinking about light bulbs based solely on the amount of energy they use, focus on their brightness level.

Lumen is the measurement of brightness. Higher lumen bulbs produce brighter light.

Watt (W) is the measure of power consumption. Lower wattage bulbs can lower your electric bills.

If you like your bulb's current brightness, choose a CFL or LED with similar lumens to reduce your energy use. You may also consider a bulb that is less bright to save more.

Brightness	Incandescent	CFL	LED
450 lumens	40W	9-13W	4-8W
800 lumens	60W	13-16W	8-13W
1100 lumens	75W	17-23W	11-15W
1600 lumens	100W	23-28W	16-20W

← Least Efficient → Most Efficient →

STEP 2 Decide What Color Light You Want

Choose Light Appearance. You'll be pleased with your new bulb by choosing a light appearance that you like. All of these colors are available for LEDs and CFLs and at most brightness levels.

Different Colors, Same Brightness

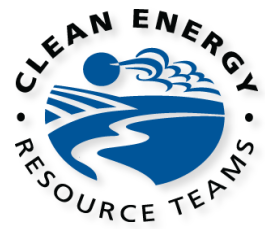
Light Appearance	Color Temperature
Soft White, Warm White	2700K
Bright White, Cool White	3000K
Natural, Daylight	3500K
Cool, Sunlight	4100K
	5000K
	6500K

Energy Star

Energy Cost 22 bulbs in 20 years: \$270 total cost

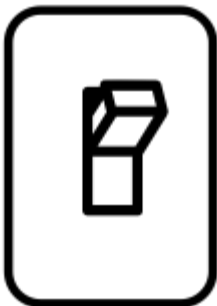
Facts Per Bulb: 800 lumens, Energy Cost \$1.14, 11kWh, 22.8 years, 9.5 watts

Behavior



	A	B	C	D	E
Middle School Students	Elementary School Students	Seniors	Farmers	Residential	
Community Center for After School Programs	Elementary School Classrooms	Independent Senior Living Center	Farms with Tractors	Homes	
Shut off the lights	Use blinds to reduce building energy use	Use energy efficient light bulbs	Use tractor block heater timers	Reduce desktop computer vampire load	

Behavior & Audience



D

Farmers

Farms with Tractors

Use tractor block heater
timers

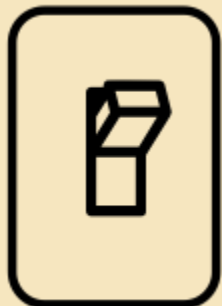
Behavior Change Science



Step 1



Audience



Behavior

Step 2



Barriers



Benefits

Step 3

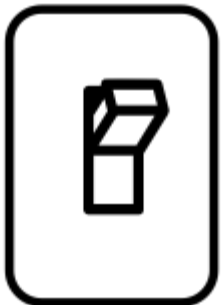


Strategies

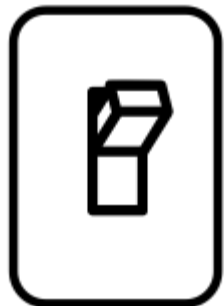
Barriers & Benefits



C
Seniors
Independent Senior Living Center
Use energy efficient light bulbs



Barriers & Benefits

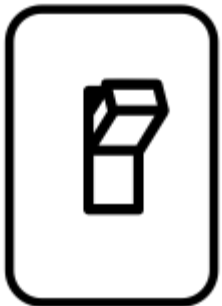


C
Seniors
Independent Senior Living Center
Use energy efficient light bulbs



High upfront cost	Reduced electric bill with a fixed income
Inability to change the bulb	Increase brightness for less energy
Selecting the right color, brightness	Reduced A/C use with cooler bulbs

Barriers & Benefits



C
Seniors
Independent Senior Living Center
Use energy efficient light bulbs



High upfront cost	Reduced electric bill with a fixed income
Inability to change the bulb	Increase brightness for less energy
Selecting the right color, brightness	Reduced A/C use with cooler bulbs

High

High

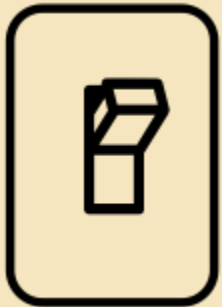
Behavior Change Science



Step 1



Audience



Behavior

Step 2



Barriers



Benefits

Step 3



Strategies

Key Strategies Table



Barriers ↑ High Low	Incentives Competitions	Convenience Commitments
	Social Modeling Social Norms	Education Feedback Prompts
	Low → High	

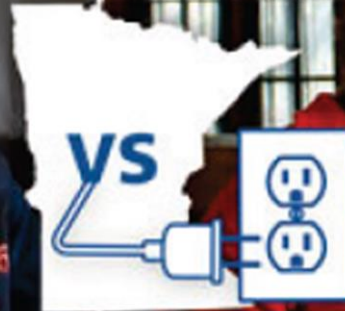
Benefits

FAMILY ENERGY

FACE-OFF



MILL POND MINIMIZERS



PRAIRIE PENNY PINCHERS

Competition

Family Energy Face-Off



Goal Setting

SCORE: 198,585

Members: 201

Actions: 5,238



NEW LONDON, MN



MILL POND MINIMIZERS

Family Energy Face-Off



Social Diffusion

SCORE: 198,585

Members: 201

Actions: 5,238

Mill Pond Minimizers : Team Members

Member	Actions	City	State
Abby F.	37	Minneapolis	MN
Aleta K.	20	Lanesboro	MN
Alexis T.	41	Minneapolis	MN
Allison K.	18	Minneapolis	MN
Amanda R.	42	Pennock	MN
Amy B.	23	Annandale	MN
Angela H.	33	Nisswa	MN
Anitra L.	51	Spicer	MN
Arthur N.	21	New Alondon	MN
Ashley W.	12	Willmar	MN
Audrey A.	45	Montevideo	MN
Barbara P.	29	Porter	MN
Beth F.	23	Willmar	MN
Beverly T.	37	Spicer	MN
Bob B.	15	Willmar	MN
Bob B.	15	Willmar	MN
Bob R.	29	Bird Island	MN
Brent M.	20	Lanesboro	MN



NEW LONDON, MN



MILL POND MINIMIZERS

Team's top five actions:

1. 5 pts – Turn off lights at home when no one is in the room
2. 10 pts – Turn off the water when you brush your teeth
3. 15 pts – Use a reusable water bottle with tap water instead of purchased bottled water for a week
4. 10 pts – Turn TV off when no one is watching for a week
5. 5 pts – Use re-usable shopping bags at the store

Make A Splash



Benefit from great prices on money-saving upgrades

Through August 2013 you can take advantage of discount prices on efficient upgrades to your pre-rinse spray valves and faucet aerators.

Join others to save thousands of gallons of water and associated energy, which means more money in your pocket.



With a payback of 1-2 months, this is one of the smartest upgrades you'll ever make.

Social Norming

“ I saw a big difference in the water amount that was used with my old spray valve and realized that I don't need a lot of water. I need good water pressure. The new spray valve has great pressure and gets the job done!

Oscar Reyes, Las Mojarras Restaurant

Spray Valves

~~\$68.00~~ \$28.00 each

Pre-rinsing can account for half the water costs in a kitchen.

Get the same pressure and performance while using 60% less water and saving \$410 a year on water and energy costs.



ANNUAL SAVINGS



Same as 1.5 months winter home heating

ENERGY



31,000 gallons

WATER



\$410/yr

MONEY

Assumptions - Base flow: 3.0 gallons per minute (industry average), Program model: 1.28 gallons per minute; 300 days used/year, 1 hour use/day; Cost references: City of Minneapolis and CenterPoint Energy. Actual savings depend on usage.

Faucet Aerators

~~\$2.00~~ \$0.50 each

Busy hand washing stations require a lot of hot water.

Get hands clean while saving over 75% on water, sewer, and energy costs with these faucet aerators—and installation could not be easier!



ANNUAL SAVINGS



Same as 1.5 weeks winter home heating

ENERGY



9,200 gallons

WATER



\$110/yr

MONEY

Assumptions - Base flow: 2.0 gallons per minute; 300 days used/year, 1 hour use/day; Cost references: City of Minneapolis and CenterPoint Energy. Actual savings depend on usage.

Incentive

Education

Gobbling Up Savings



Authority



Right Light Guide



CLEAN ENERGY RESOURCE TEAMS

Right Light Guide for General Use Bulbs

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Lumen is the measurement of brightness. Higher lumen bulbs produce brighter light.

Watt (W) is the measure of power consumption. Lower wattage bulbs can lower your electric bills.

If you like your bulb's current brightness, choose a CFL or LED with similar lumens to reduce your energy use. You may also consider a bulb that is less bright to save more.

Note: Lumen output listed on packages may vary. Light bulbs listing anywhere from 800 to 860 lumens are similarly bright, for instance.

Brightness	Incandescent	CFL	LED
450 lumens	40W	9-13W	4-8W
800 lumens	60W	13-16W	8-13W
1100 lumens	75W	17-23W	11-15W
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Least Efficient ← → Most Efficient

STEP 2 Decide What Color Light You Want

Choose Light Appearance. You'll be pleased with your new bulb by choosing a light appearance that you like. All of these colors are available for LEDs and CFLs and at most brightness levels.

Note: Choose warm or soft white (2700-3000 K) to match the color of incandescent bulbs.

Different Colors, Same Brightness

Soft White, Warm White (Living Room, Bedroom) | Bright White, Cool White (Kitchen, Bathroom, Dining Room) | Natural, Daylight (Office, Laundry, Workshop, Garage)

Light Appearance: Warm Color (2700K, 3000K) | Cool Color (4100K, 5000K, 6500K)

Pros (+) and Cons (-)

- Saves 85% of energy use over incandescent
- Lasts 25 times longer than incandescent
- Great for dimmed, recessed, or enclosed fixtures
- Performs well in cold temperatures
- Higher bulb cost

Energy Cost \$270 total cost

Facts Per Bulb

- 800 lumens
- Energy Cost \$1.14
- 22.8 years
- 9.5 watts

ENERGY STAR

Resources

Learn about lighting rebates and lighting.MnCERTs.org to learn more locations.

Education

Communication

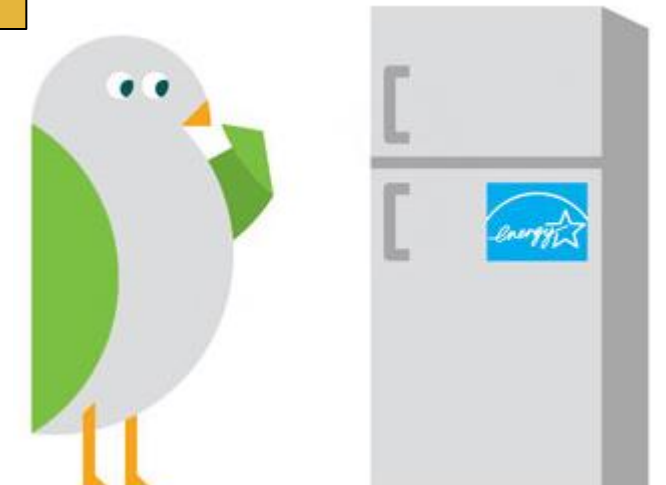
Scarcity

Incandescent bulb phase-out

GreenNYC



Social Modeling



Source: GreeNYC

GreenNYC



Prompt

Source: GreenNYC

Roles



Timekeeper

make sure the group stays on track & will be ready to present

Includer

make sure everyone's voice is heard & follow the worksheet for the group

Recorder

complete the worksheet for the group

Speaker

complete the worksheet for the group

Future Contact



Alexis Troschinetz, Behavior Change & Metrics Coordinator
atroschi@umn.edu | 612-626-0455

www.mncerts.org