



Northeast Energy Efficiency Partnerships

Northeast and Mid-Atlantic Residential Lighting Strategy: 2015 Update Public Webinar

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Northeast Energy Efficiency Partnerships

December 15th, 3pm EST

About NEEP

Mission

Accelerate energy efficiency as an essential part of demand-side solutions that enable a sustainable regional energy system

Approach

Overcome barriers and transform markets via
Collaboration, Education and Enterprise

Vision

Region embraces **next generation energy efficiency** as a core strategy to meet energy needs in a carbon-constrained world

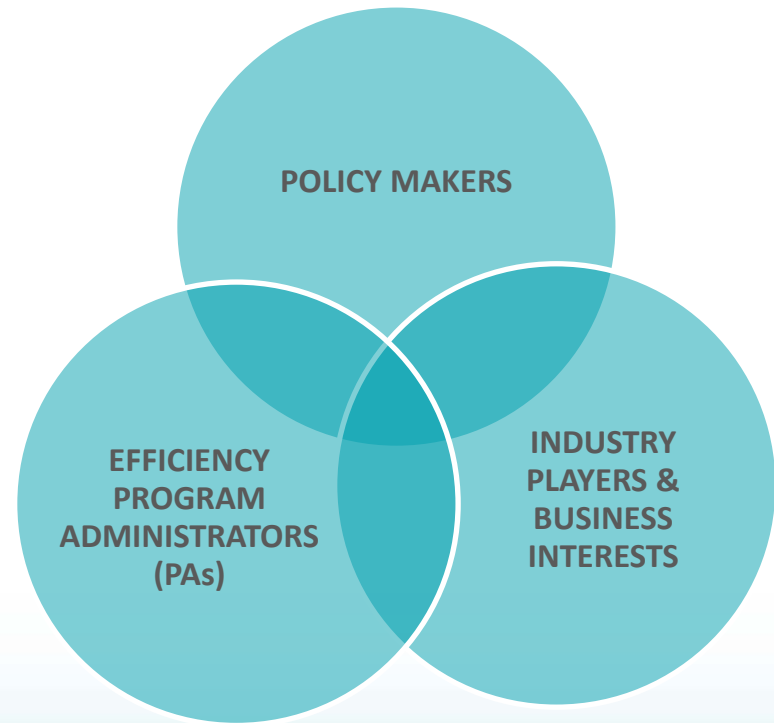


One of six regional energy efficiency organizations (REEOs) funded by the US Department of Energy (US DOE) to link regions to US DOE guidance, products and programs

Our Primary Audience

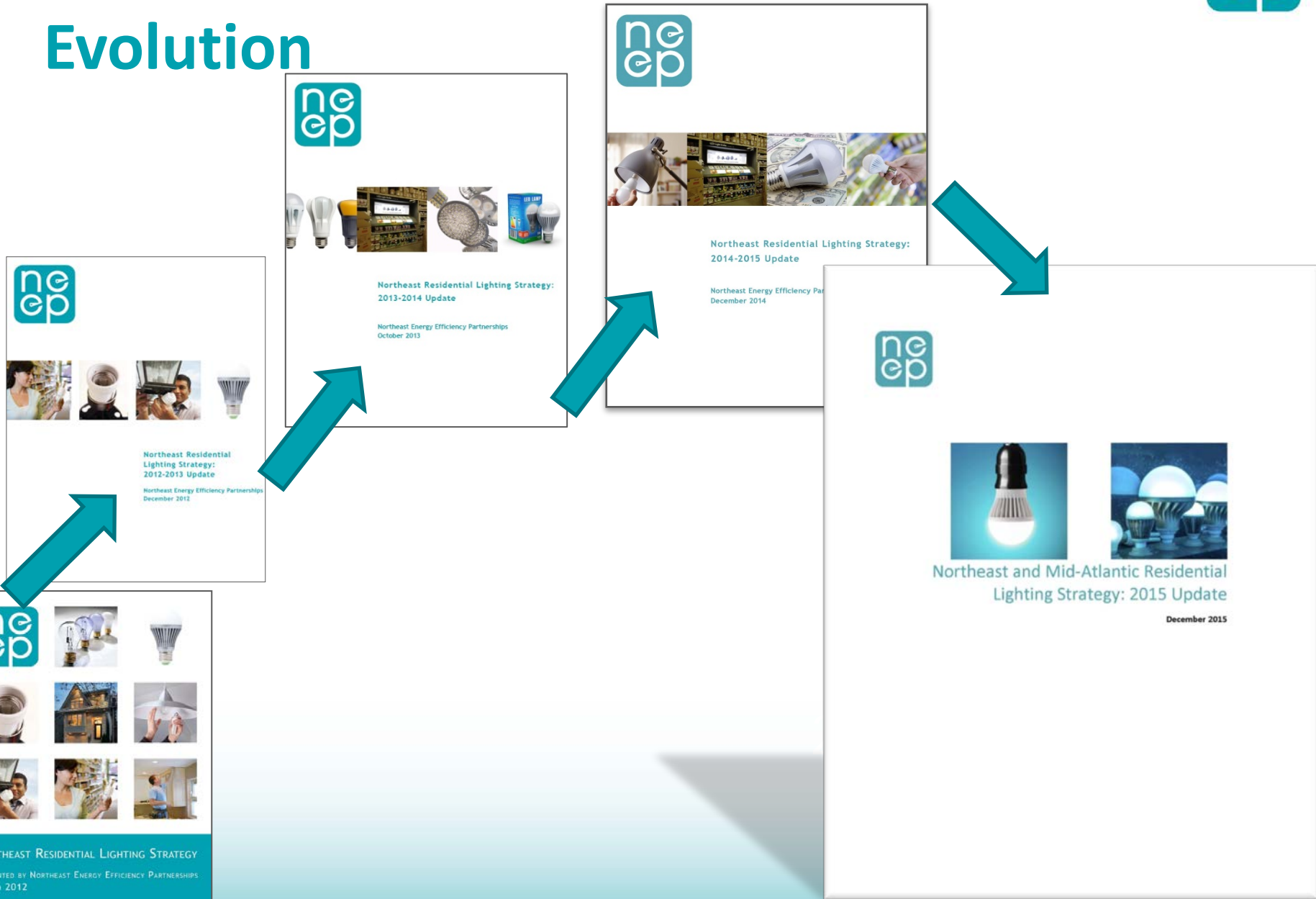
NEEP brings key stakeholders together across the region to leverage strategies and resources to overcome barriers to all cost-effective next generation energy efficiency

Key stakeholders include:
federal agencies; industry;
non-profit organizations;
program administrators;
electric and natural gas
utilities; state regulators; state
policymakers; state agencies

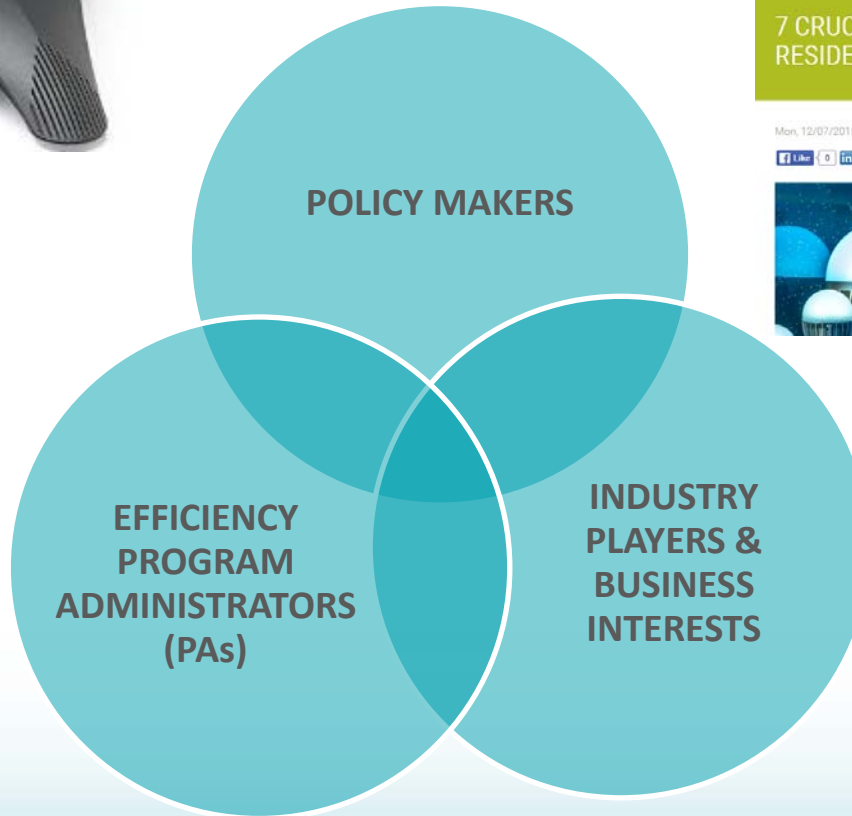
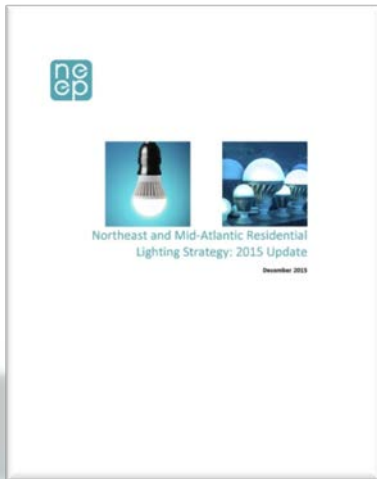




Residential Lighting Strategy (RLS) Evolution

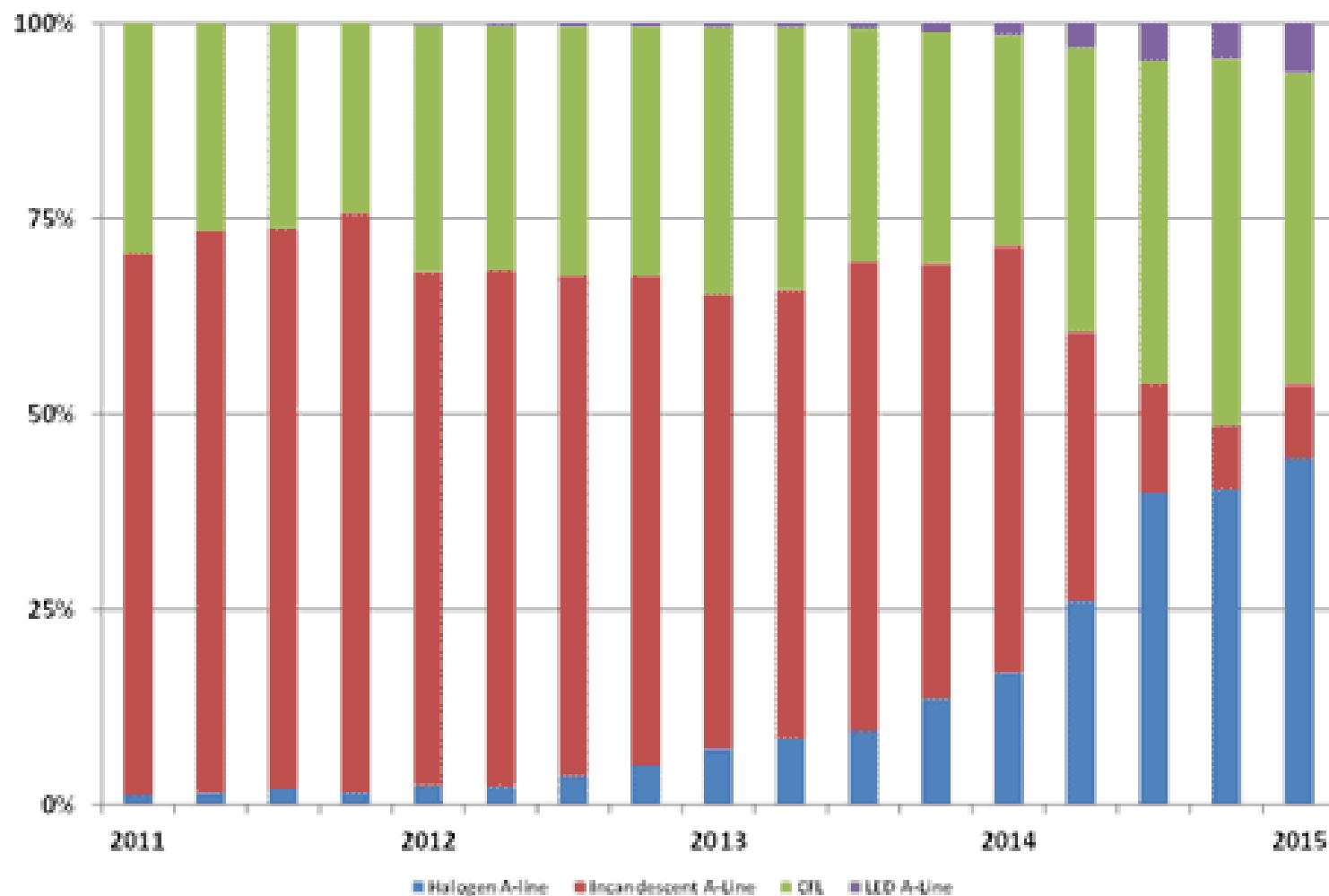


Energy Efficiency Online Dating?



GoToWebinar
by **CITRIX**

Market Penetration (in %)



Online Profile: Smart Bulbs

<i>Name:</i>	Smart “Connected” Lighting
<i>Stats:</i>	Very young, LED, color tunable
<i>Occupation:</i>	I provide awesome light while being connected to the internet to allow you to control me
<i>Interests & features:</i>	I am dimmable and remote controllable. You can schedule me, and I allow for geofencing and mood setting...
<i>Benefits:</i>	I will get you hooked on the smart home! I may (or may not) save energy...but at least I’m an LED!
<i>Long term prospects:</i>	I will be ENERGY STAR certified to V 2.0 and my prices are coming down! Think of me fondly as you’re designing your home energy management systems programs...



Online Profile: Halogen

<i>Name:</i>	"Energy Efficient" Halogen (Incandescent)
<i>Stats:</i>	B ~2010, cousin to the incandescent, 2700K
<i>Occupation:</i>	I like to say I'm energy efficient, but for the most part I'm the most energy consuming lightbulb on the market!
<i>Interests & features:</i>	I am dimmable and low-cost (but don't call me cheap!)
<i>Benefits:</i>	I look and feel a lot like my popular older cousin (do you know him? Incandecent?)
<i>Long term prospects:</i>	I'm not going for that whole ENERGY STAR thing...worried about being phased out in 2020 with EISA, but right now enjoying my growing market share



Online Profile: ENERGY STAR Luminaires

Name: I have a lot of those...fixtures, luminaires, desk lamp, table lamp, downlight retrofit....

Stats: LED or CFL (I provide options!)

Occupation: Now with V 2.0 finalized in June, I allow customers and programs to have more efficient fixtures.

Interests & features: Depending on what you're looking for, I can now be smart and allow for bulb-in-a-box (to increase my PA appeal...)

Benefits: Energy savings, baby!

Long term prospects: With my potential for connection and integration with home energy management systems, plus easier to promote through programs, nothing can hold me back!

Online Profile: CFL

Name: Just call me CFL

Stats: b. 1976

Occupation: Bread and butter measure for efficiency programs (or at least, I was...)

Interests & features: Provide efficient light. Be involved in love-hate relationships

Benefits: Lowest-cost efficient option (or at least, I was...) My mom thinks I'm popular!

Long term prospects: I was in ENERGY STAR, but I didn't pass the test for Lamps 2.0. My specialty lamps are already really unpopular. I get the feeling retailers are giving me the slow fade...



Online Profile: Lower-Lifetime LED

Name: Lower-lifetime (aka “ish” aka “basic” aka “value”) LED

Stats: Born in May

Occupation: If you ask me, I provide good light with a good lifetime at a great price! (though not currently 3rd-party verified on my claims)

Interests & features: I don’t really like to dim and my beam angle might be a little different that what you’re used to, but I like to live for 10-20,000 hours—YOLO!

Benefits: You can’t resist my low cost and LED nature!

Long term prospects: Shout out to EPA! ENERGY STAR Lamps 2.0 will allow me to apply (at 15,000 hours)...I might make it into programs after all!



Online Profile: Linear tubes

Name: Linear tube (or linear fluorescent or TLED)

Stats: I've been around.

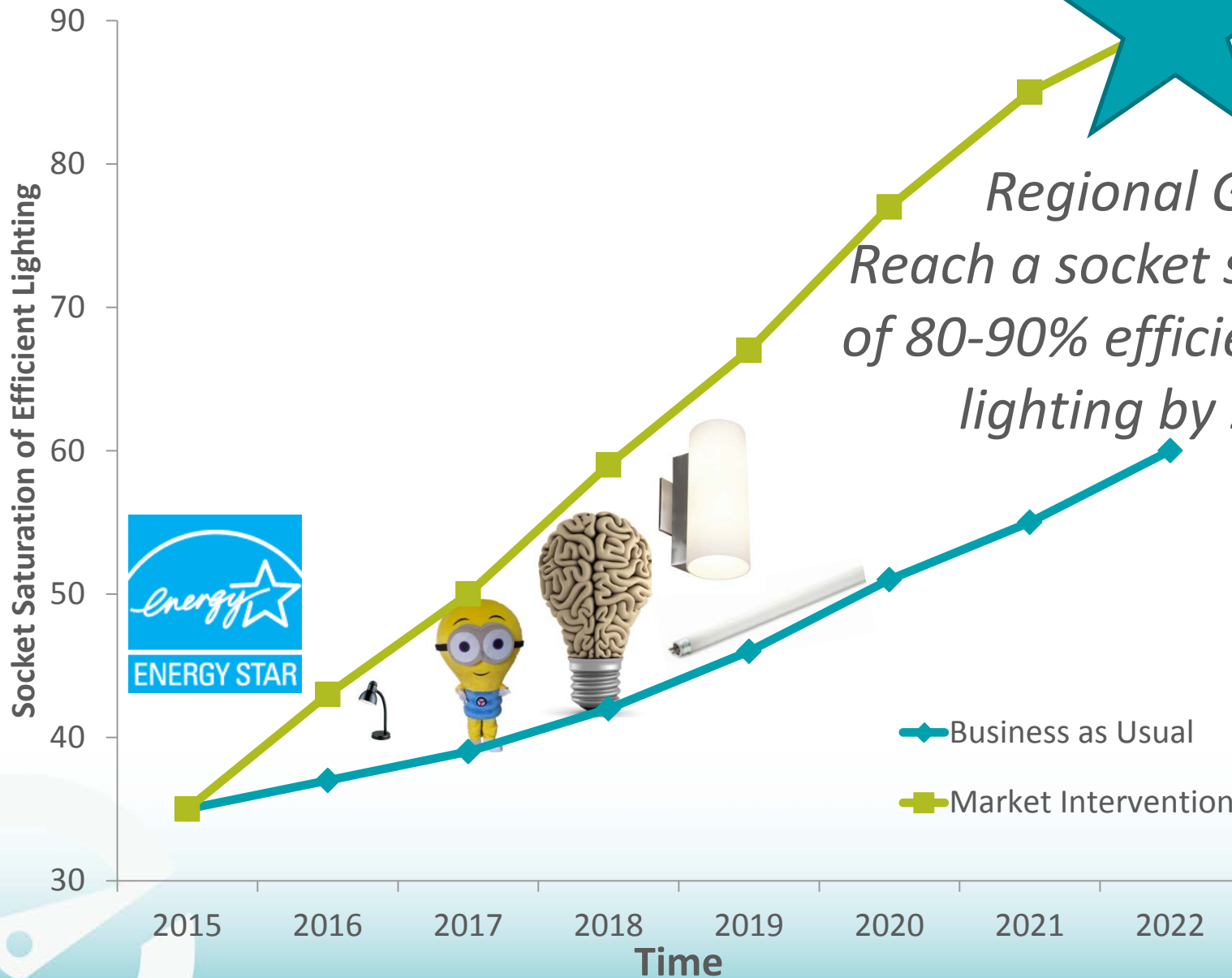
Occupation: I light up your garages and under kitchen cabinets! Am I a T12? T8? T5? TLED? I'm 10% of sockets, that's what I am!

Interests & features: I'm really into commercial applications. I'm not into residential programs right now, but I'm willing to try

Benefits: I have a long life. At my worse, I am pretty efficient. At my best, I'm very efficient!

Long term prospects: I might help you tackle that last 10% of socket saturation. Talk to your commercial counterparts—they can give you some tips on my relationship style...





*Regional Goal:
Reach a socket saturation
of 80-90% efficient quality
lighting by 2022.*

2015 Planned Program Activity

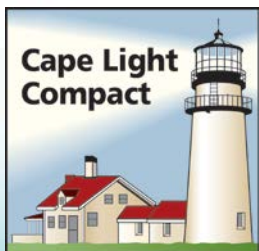


DC
SUSTAINABLE ENER
UTILITY



EVERSOURCE

State	Total # of bulbs	Bulbs/ Household	% LED (all)	% Specialty (all)
CT	2,816,928	2.0	50%	30%
DC	356,000	1.4	34%	10%
<i>MA (Year to Date-Oct)</i>	<i>4,823,454</i>	<i>2.4</i>	<i>49%</i>	<i>28%</i>
NH	301,922	0.4	59%	9%
NY (PSEG LI)	2,469,070	2.5	41%	40%
RI	1,301,272	3.1	27%	28%
VT	978,782	3.2	48%	29%



Efficiency Vermont

nationalgrid

Also in the Report

- Federal and state standards, policies, and voluntary programs
- Recent regional evaluations and research
- Analysis of remaining potential for energy savings
- Key Market Barriers
 - Customer confusion, perception
 - Price of efficient models
 - Program barriers: evaluation assumptions*, delta watt savings assumptions**, regulatory pushback based on EISA
- Market Opportunities to Leverage
 - LEDs are exciting and desired
 - Smart Lighting
 - Luminaire's spec Bulb-in-a-Box
 - Linear fluorescent
- Strategies to transform the market...

#1: Continued PA Support for Residential Lighting



- PA should support cost-effective efficient residential lighting products
 - Programs should promote only ENERGY STAR certified products that will meet consumer expectations
 - Programs should to support only LEDs in specialty applications



#2: PAs Transition Portfolios in Short & Medium term



- Next 1-3 years: programs shift to all-LED
- EISA Phase 2 in 2020, impacts General Service Lighting (not specialty)



- Programs lay foundation for shift away from omnidirectional and towards specialty products
- Specifically, some of the assumptions and savings calculation inputs for specialty LEDs are currently quite sparse

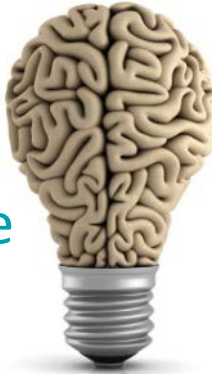
#3: PAs Target LEDs in Hard-to-Reach

Markets

- In the next 2 years, programs should prioritize work with Hard-to-Reach retailers to sell LEDs
 - ensure a smooth transition to an all-LED program in coming years

#4: PAs Consider Smart Lighting

- PAs consider promotion of ENERGY STAR smart lighting products
 - especially when coupled with other HEMS/smart home initiatives



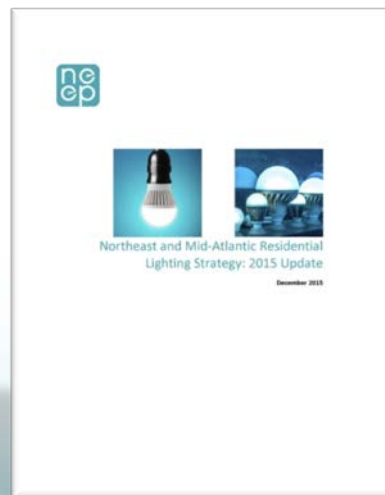
#5: PAs explore residential linear products

- Represents ~10% of sockets
- Savings potential not yet documented
- Opportunities to discuss with commercial lighting program managers



#6: Regional Collaboration on Research

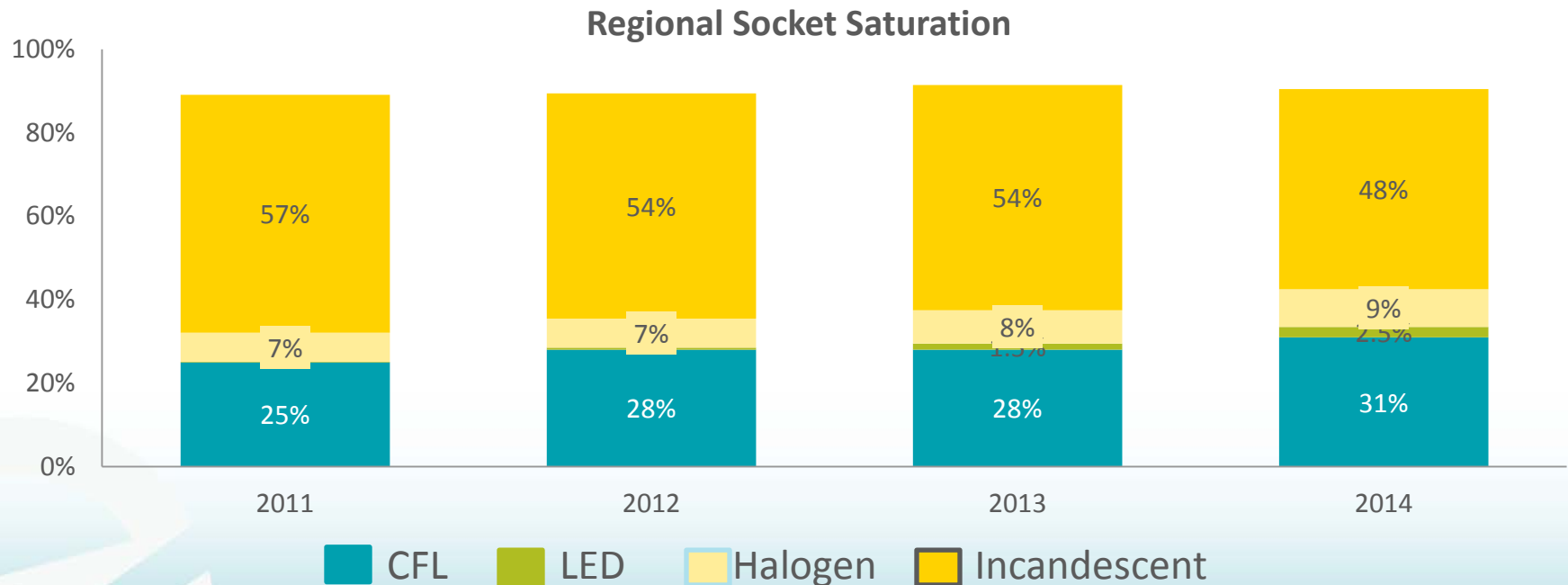
- Regional collaboration on key research projects.
Research on consumer perspectives for performance metrics like lifetime, CRI, omnidirectionality, etc.
 - Market characterization of residential linear market, evaluate savings opportunity
 - Further research on smart lighting potential savings



#7: Regional coordination on data collection and sharing



- Region should continue to collect and share data to inform regional progress and program evolution
 - Data sharing
 - Align on methodology



#8: Regional discussions on savings calculation inputs



- State-to-state differences in savings calculation inputs should be evaluated to ensure appropriate attribution
- Analyze assumptions behind inputs, including assessing whether CFLs belong in the baseline of LED products.
- Other considerations:
 - Including baseline assumptions, delta watt, NTG, HOU, measure life, etc.
- NEEP's forthcoming Residential Lighting Deeper Dive will start this conversation—needs to continue



Residential Lighting Deeper Dive Brief December, 2015

Introduction

Residential lighting represents a very significant portion of energy savings in the Northeast and Mid-Atlantic region; in 2015 NEEP has focused on residential lighting research and market analysis in several ways to support

Call to action

- Manufacturers: support new ENERGY STAR Lamps 2.0 Specification
- Get involved with NEEP's ongoing Residential Lighting Work
- Contact Claire Miziolek, cmiziolek@neep.org



Conclusion

- Thank you to all LAC members, reviewers, data providers, analysis providers!
- NEEP will continue to monitor progress in residential lighting market
- Read the report! Executive Summary, full report, this slideshow, recorded webinar:
 - <http://www.neep.org/northeast-and-mid-atlantic-residential-lighting-strategy-2015-update>
- Any Questions?





THANK YOU!

This is an ongoing initiative and we welcome your participation. To get involved, contact:

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Read the full Report, available from

<http://www.neep.org/northeast-and-mid-atlantic-residential-lighting-strategy-2015-2016-update>