



AGENDA for Feb 1st

- Our 2017 Strategy
- Push v. Maintain
- EISA: What's to Come?
- Lighting Update



ETHAN

MANTHEY

HELLO

my name is



CARRIE

COBB

Research Strategy Development

DRAFT PLANS FOR 2017

Time of Transition

- Changing research vendor
- Undergoing RTF review on lighting models
- Rethinking project structures
- “Consumption” perspective vs. “Savings” perspective
 - Where is consumption changing?
- NEEA taking on HVAC sales data collection; discussion on role for non-res lighting
- Standards uncertainty

2017 Market Research Team Priorities

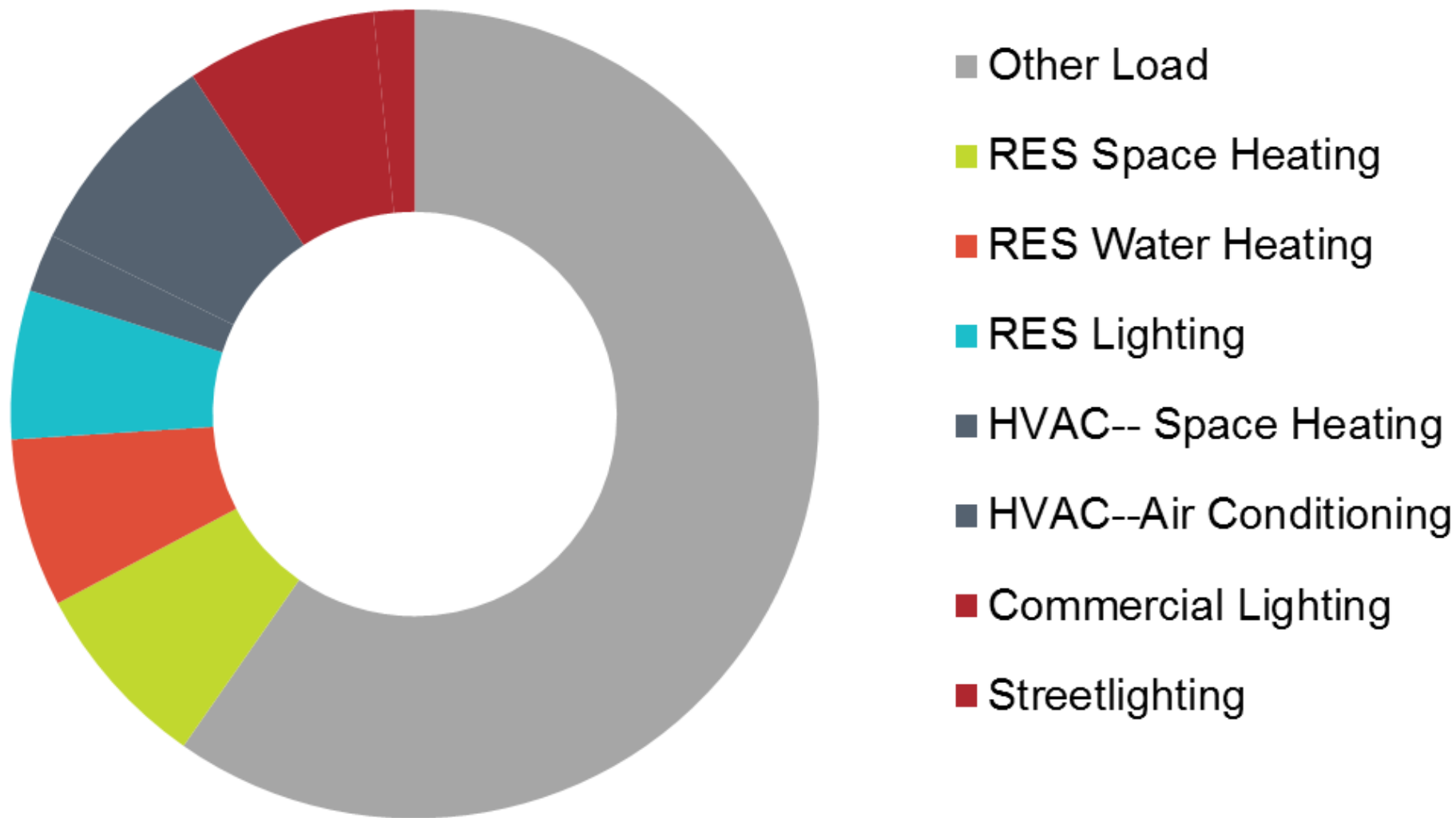
- **Onboarding new contractor**
- **Expanding into new markets with stage-gate approach**
- **Integration and data sharing with transmission planning & load forecasting**
- Continuing positive RTF relationship
- Providing information on market trends to programs
- Commercial Building Stock Assessment (CBSA)
- Providing information on consumption and market trends to region via monthly call, conferences, videos

Any thoughts on priorities?

Criteria for future studies

- The market is a large driver of regional energy consumption
- The market is undergoing changes that impact its total market consumption

2015 Regional Load (aMW)



Non-residential lighting

- Data gaps in outdoor lighting (OLSA)
- Tying model to CBSA

Residential HVAC

- Build on current base of ASHP box
- End-goal: **Comprehensive** end-use model using all fuels
- Holistic: entire heating and cooling system, many measures (connected thermostats, installation)

Stage-gate New Markets

- Market Summary
- Draft Method, Market Actor Identification and Data Availability
- Model Module Scoping and Data Collection
- Model Development
- Data Collection

Small, incremental project steps

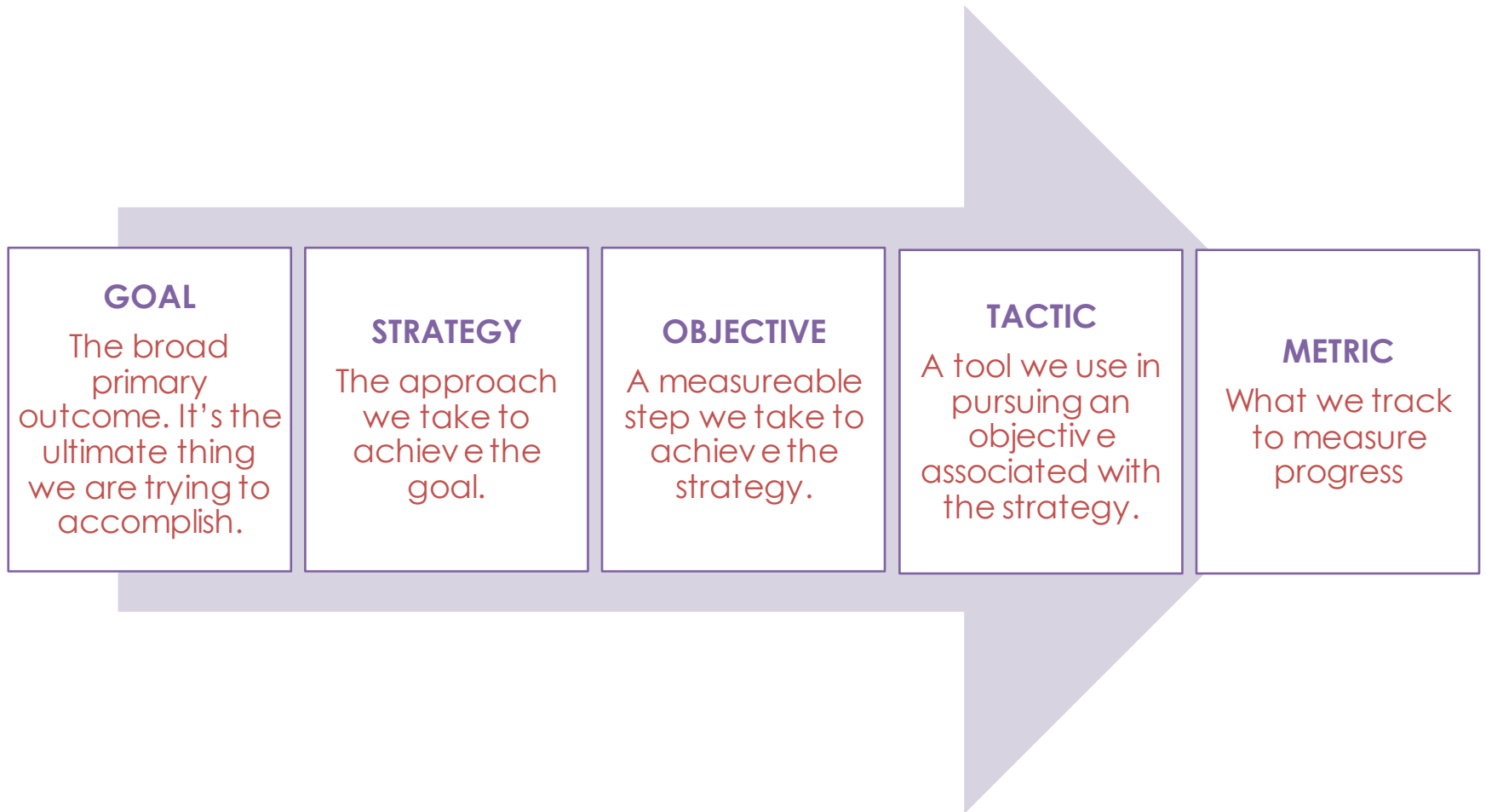
- Small steps allow team to end or change a project
- Goal: better understanding of energy consumption for the end-use and how this is changing

New Markets

- Commercial HVAC
- Residential Water Heating
- Data Centers

Any new markets you'd like to
see us explore?

Next steps





BONNIE

WATSON

Efficiency as a power resource: Push vs. Maintain

Bonneville
POWER ADMINISTRATION



February 1, 2017

Two Methods



PUSH



MAINTAIN

PUSH:
Creating
energy
efficiency
where it
wasn't there
before

PUSH

MAINTAIN:
Helping the
market
remain as
efficient as it
has been

MAINTAIN

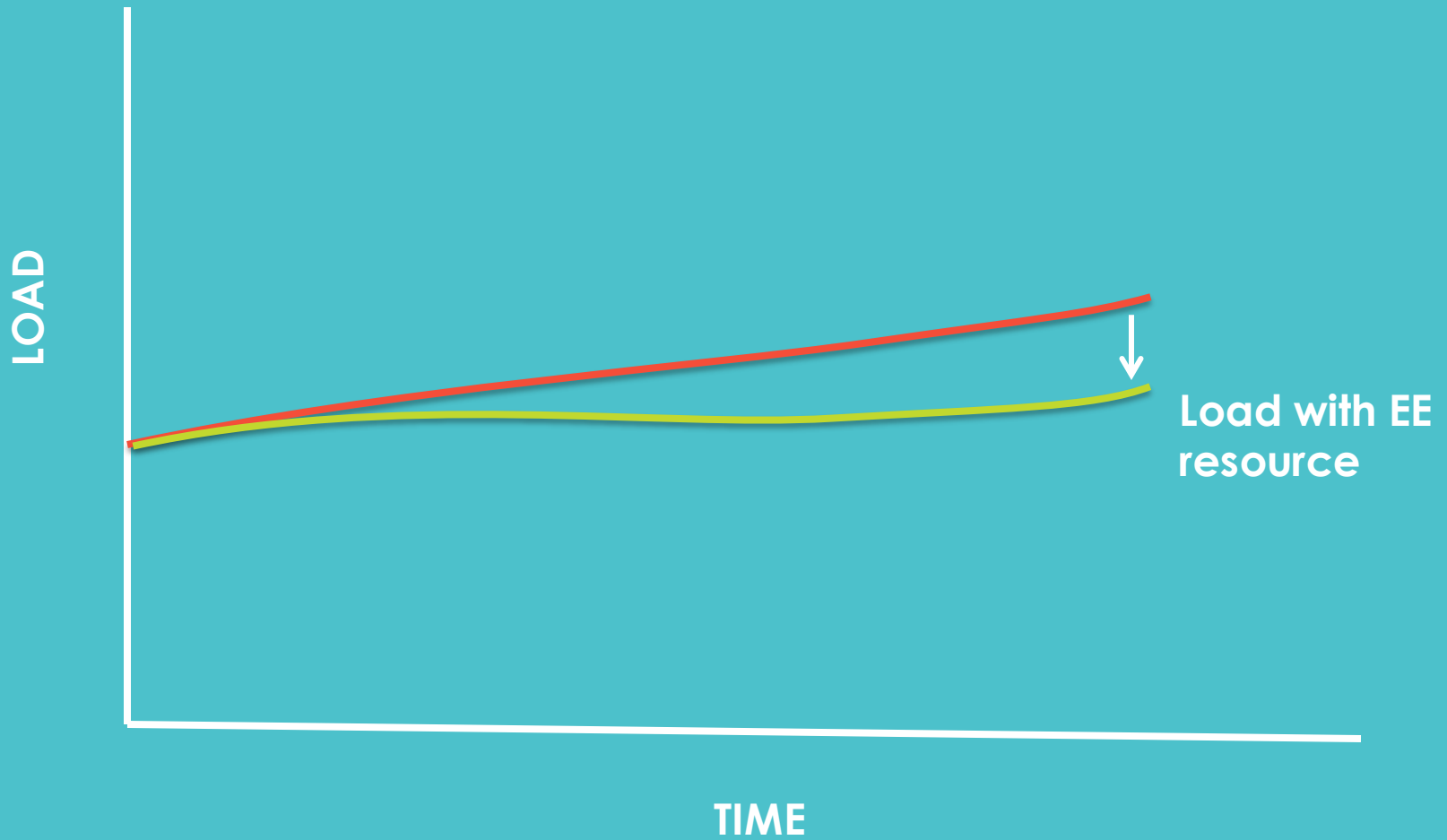


What's the goal?

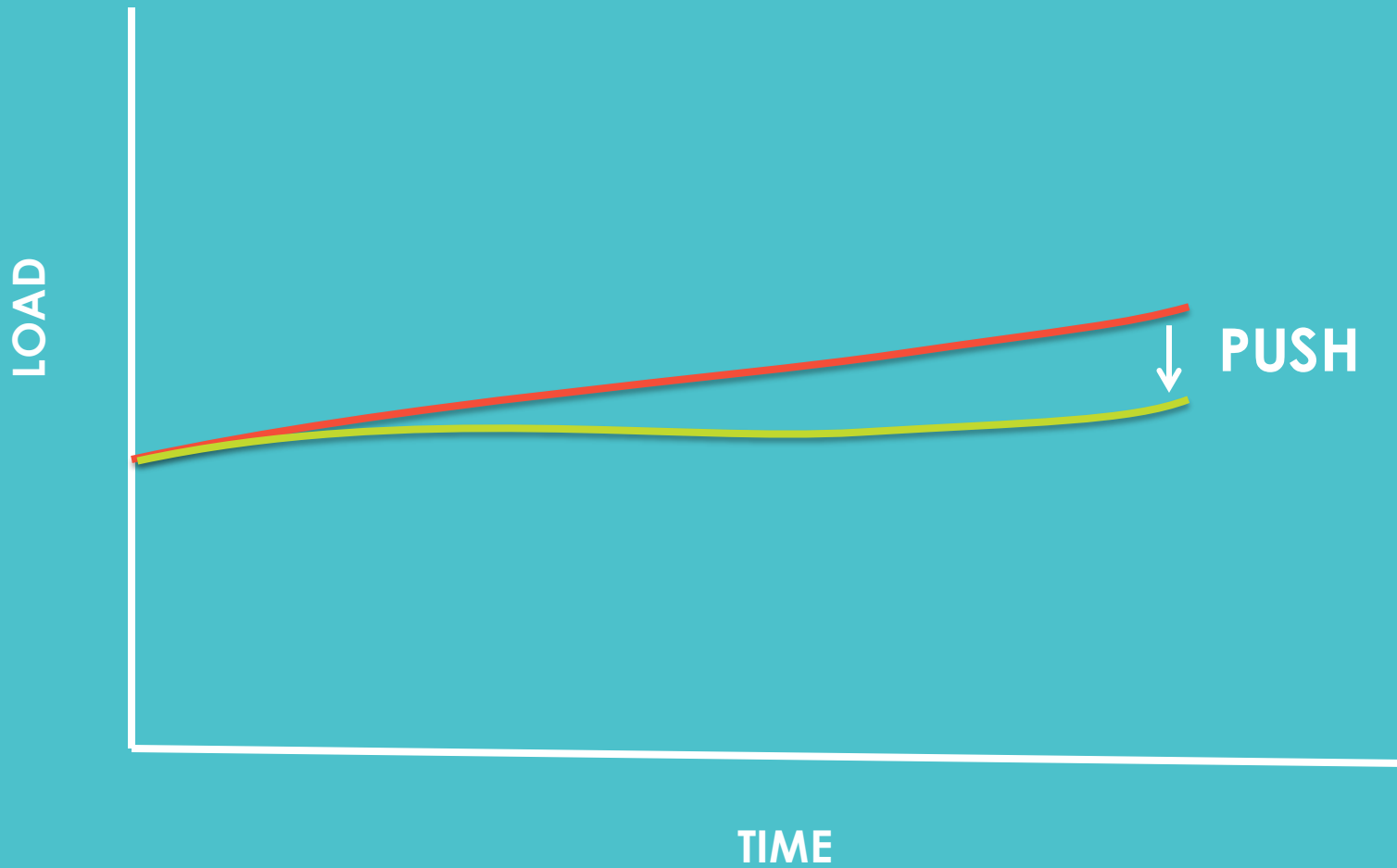


**Why is this
important?**

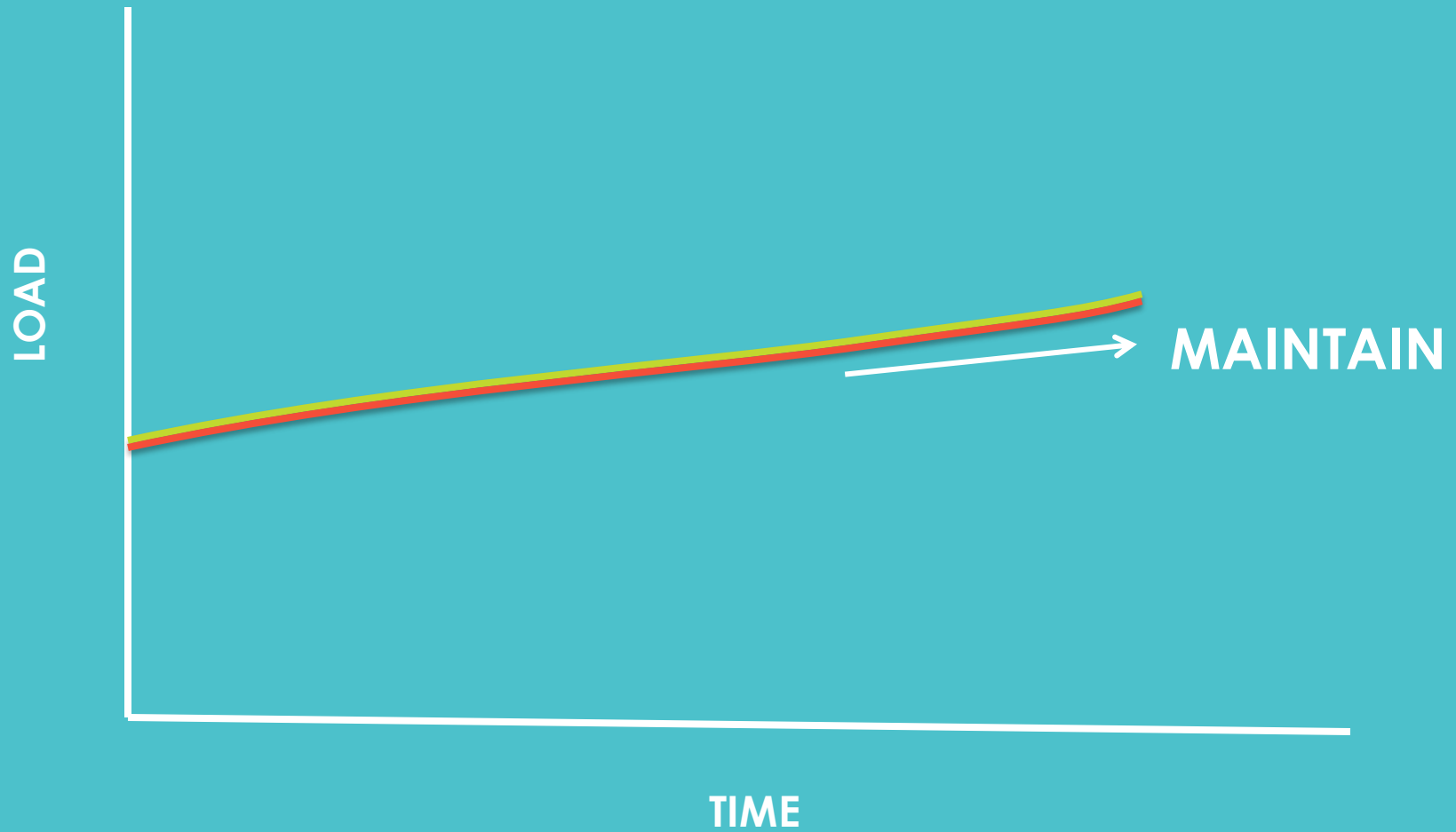
Regional Load Forecast



Translation: Push



Maintain



Sprinklers in Agriculture

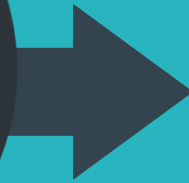


Spectrum of Efficiency

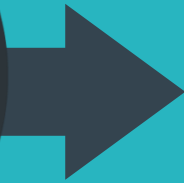
LEAST EFFICIENT



Impact on Top



Mid-Elevation Spray



Low-Elevation Spray

MOST EFFICIENT



Current Practice

LEAST EFFICIENT



Impact on Top

MOST EFFICIENT

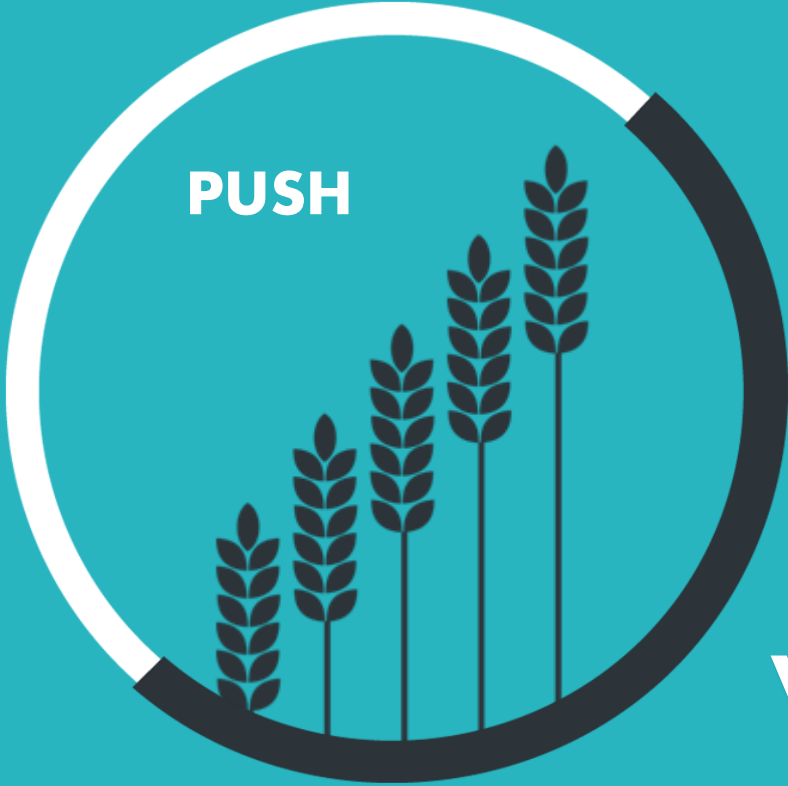


Mid-Elevation Spray



Low-Elevation Spray





VS.



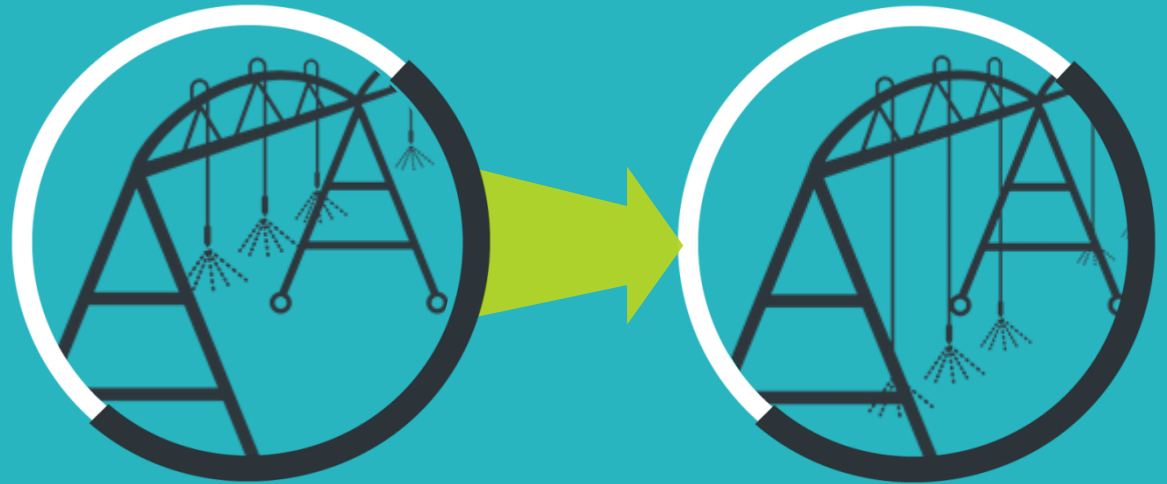
Push

LEAST EFFICIENT



Impact on Top

MOST EFFICIENT



Low-Elevation Spray

Mid-Elevation Spray



Push

LEAST EFFICIENT



Impact on Top

Mid-Elevation Spray

MOST EFFICIENT



Low-Elevation Spray



Maintain

LEAST EFFICIENT



Impact on Top



Mid-Elevation Spray

MOST EFFICIENT



Low-Elevation Spray



Maintain

LEAST EFFICIENT



Impact on Top



Mid-Elevation Spray

MOST EFFICIENT

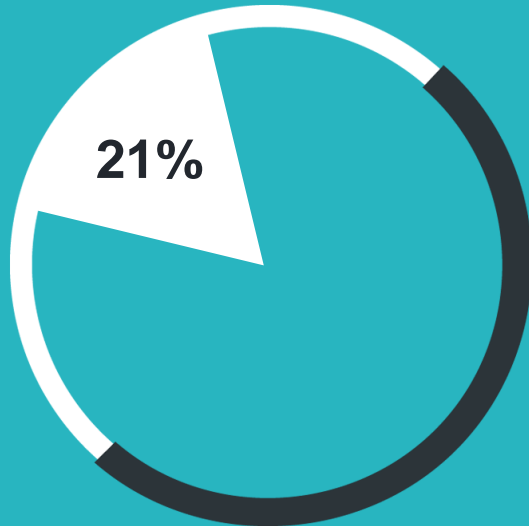


Low-Elevation Spray



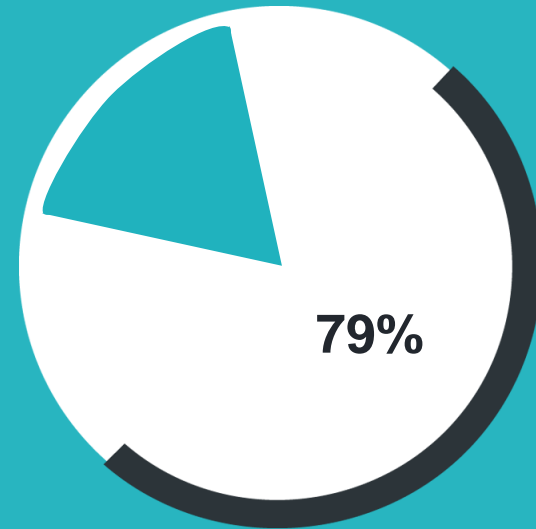
BPA Program

PUSH



VS.

MAINTAIN



Discussion





CARRIE

COBB

Current status

EISA 2020

Final Rule Released

- Expands scope to most reflector lamps
- Maintains 45 lumens per watt

Path to the Federal Register

- Congressional Review Act (CRA)
- Executive orders and new legislation reducing regulations

Future standards analysis

- End of 2017, BPA will look at regulation changes and if any will impact energy consumption under Seventh Plan

...lighting market is moving fast

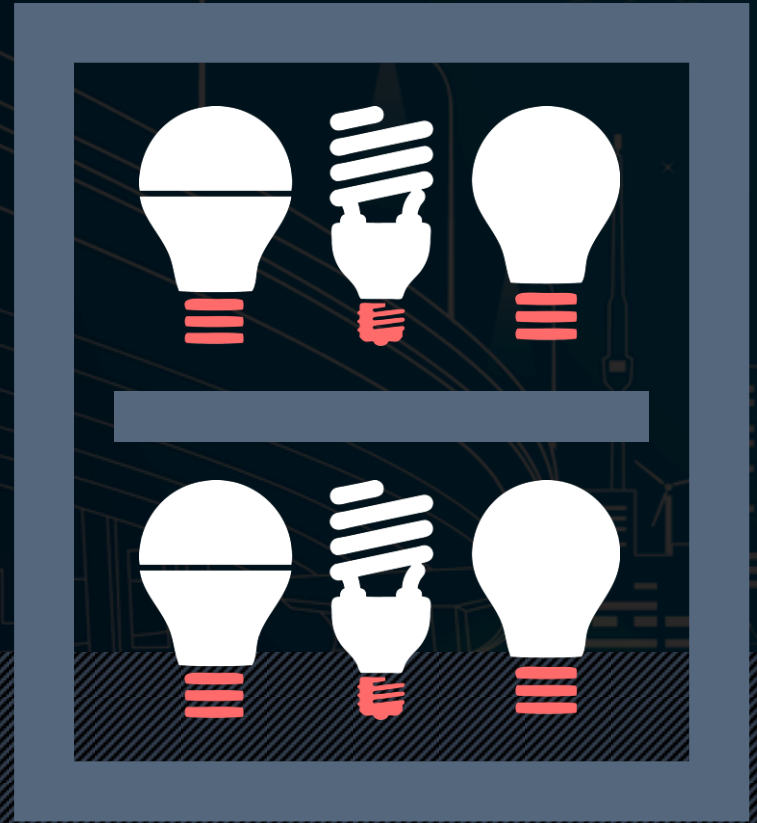
- 2016 Q3 NEMA national market estimate
 - 32% LED
 - 44% Halogen
- LEDs sold remain in sockets while halogens turn over



JESSICA

AIONA

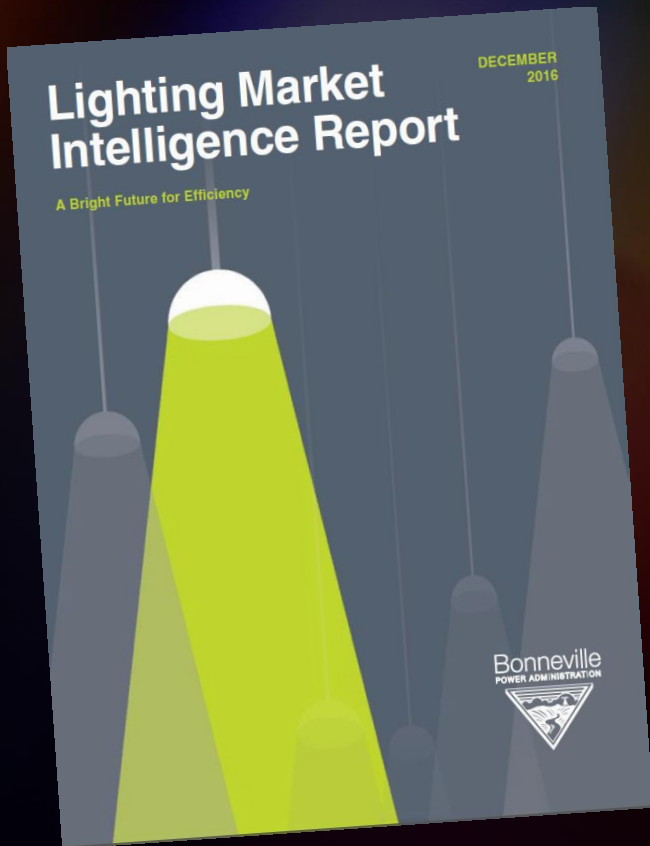
Lighting Studies: Updates



Market Intelligence Report

Learn about:

- Changes in the supply chain
- New all-LED “good, better, best” product lines
- Complexities in outdoor lighting ownership
- EISA 2020’s scope
- Declining linear fluorescent sales
- Remaining opportunities for efficiency



Available in print and online
in February!



**GET THE
FACTS ON
RESIDENTIAL
LIGHTING**

37%

**DECREASE IN
CONSUMPTION**

302

**aMW IN
MARKET SAVINGS**

26%

**LED MARKET
SHARE IN 2015**

The Residential Consumption Model will be on the
RTF's and BPA's websites in late February

What's Next?

Non-residential lighting momentum savings model will be submitted to the RTF

Residential lighting brownbags





See you next month!

- Next meeting: **March 1st**