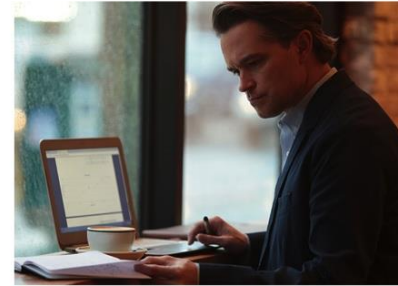


# Wattsmart Wyoming Annual Training



# Wattsmart Homes 2023 Program Overview



# Agenda

- The Outreach Team
- 2023 Changes Rebate Changes
  - HSPF2/SEER2 Crosswalks
- Assessment
- Payments
- Heat Pump Pro Network
- Q&A

# Outreach Team

TBD - Outreach Specialist – ID/UT



Chris  
Sr. Program Services Manager –  
UT, ID, WY  
801-436-4296



Jason  
Outreach Specialist –  
UT  
801-455-8763



David  
Outreach Specialist –  
UT  
510-776-8446

Stewart  
Field Assessor –  
UT, ID, WY  
385-426-1298



Rob  
Outreach Specialist  
– WY

# Dual Fuel Equipment Crosswalk



- Dual Fuel Crosswalk (Wyoming)

Building Type	Existing Standard	MI Crosswalk	Rebate
Single Family	90 AFUE/8.5HSPF/14SEER	<b>OR</b> 90 AFUE/7.5 HSPF2/13.4SEER2	\$2000/\$300
Multi Family	90 AFUE/8.5 HSPF/14 SEER	<b>OR</b> 90 AFUE/7.5 HSPF2/13.4 SEER2	\$750

- Ductless Crosswalk (Wyoming) Single Family Only

Equip	Existing (2023)Standard	MI Crosswalk	Rebate
Single-head	9.5 HSPF/16 SEER	<b>OR</b> 8.1 HSPF2/16 SEER2	\$1000/\$300
Multi-head	9.5 HSPF/16 SEER	<b>OR</b> 8.1 HSPF2/16 SEER2	\$2000/\$300
Supplemental	9.5 HSPF/16 SEER	<b>OR</b> 8.1 HSPF2/16 SEER2	\$400/\$100

# Requirements

- Existing requirement for Dual Fuel is Central Air Conditioning is required
- **Proposing** to adjust language in Wyoming Tariff
  - Allow for Evap conversions
  - Allow for no previous cooling upgrade

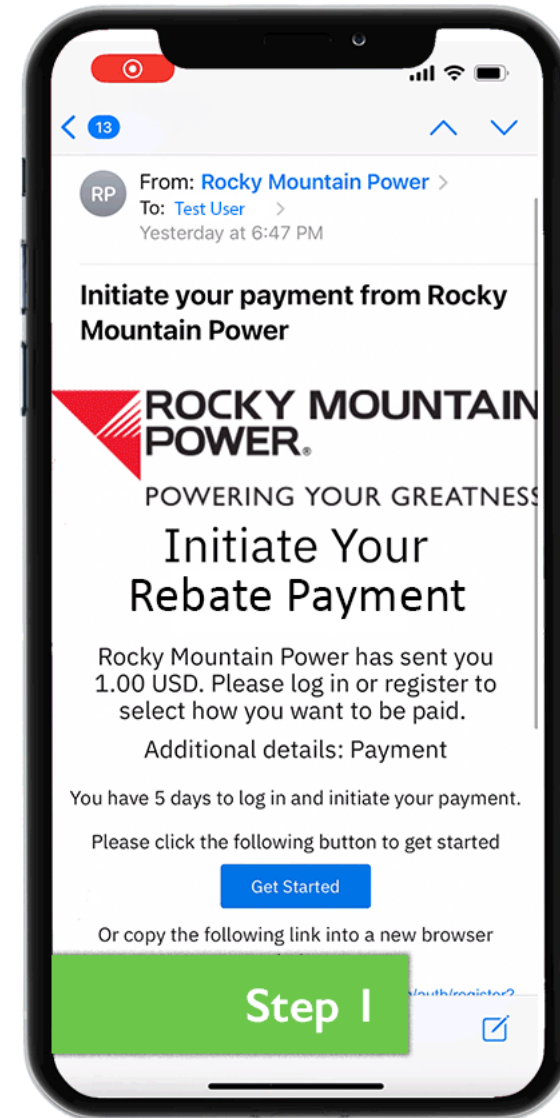
# Assessment/Lead Generation

- Residential customer audits starting in Q2
- Sharing leads with Heat Pump Pro Network
- Teeing up contractors with potential to participate in our program



# Digital Payments (ACH)

- Contractors paid via ACH
- Customers paid in 1 day
- Customers have options to be paid digitally
  - Paypal, Zelle, ACH, Pay to card or check





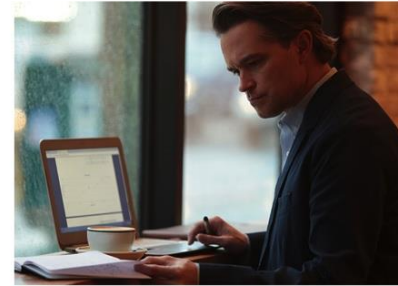
# Heat Pump Pro Network

- Priority website focus and vendor spotlight
- Hero bars spotlight/case studies
- Printed certificates
- Awards
- Lead generation
- Networking events
- Roundtables



# Website & Portal

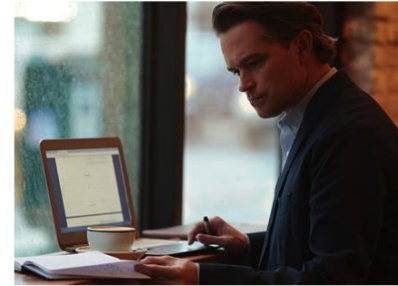
[www.wattsmarthomes.com](http://www.wattsmarthomes.com)



# Questions?

Thank you!

Please don't hesitate to reach out to one of us if you have and further needs!





# Wattsmart Business Program 2023: Overview and Updates



# Meet the Team – Program Admin and Non-lighting



Joe Larsen  
*Program Manager*



Barry Pomeroy  
*Outreach Manager*



Jessica Kramer  
*Program Manager*



Ronnie Zimmerman  
*HVAC Outreach Specialist*

# Meet the Team – Lighting



Alison Kilpack  
*Project Coordination*



Camille Cooper  
*Project Coordination*



Becky Berg  
*Midstream and LEDii*



Sheldon Cowlthorpe  
*Vendor Support*

New



Melissa Miranda  
*Training & Events*

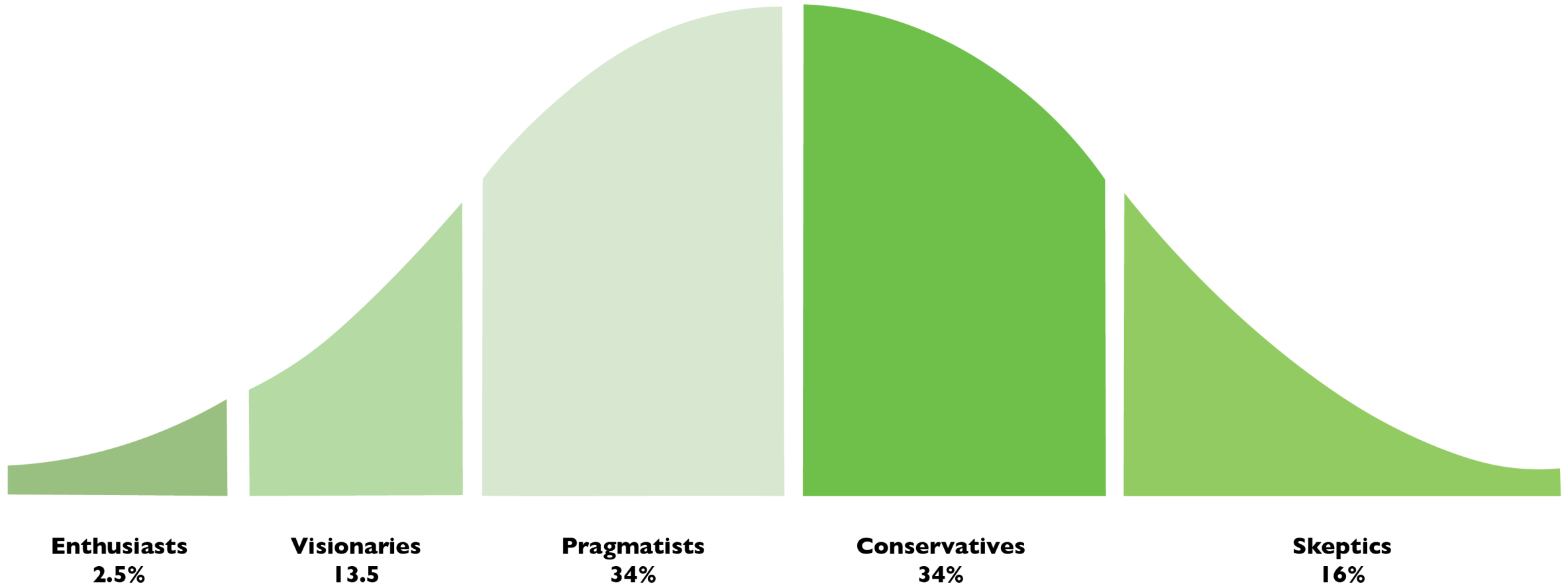


Wilmer Cabrera  
*Small Business*



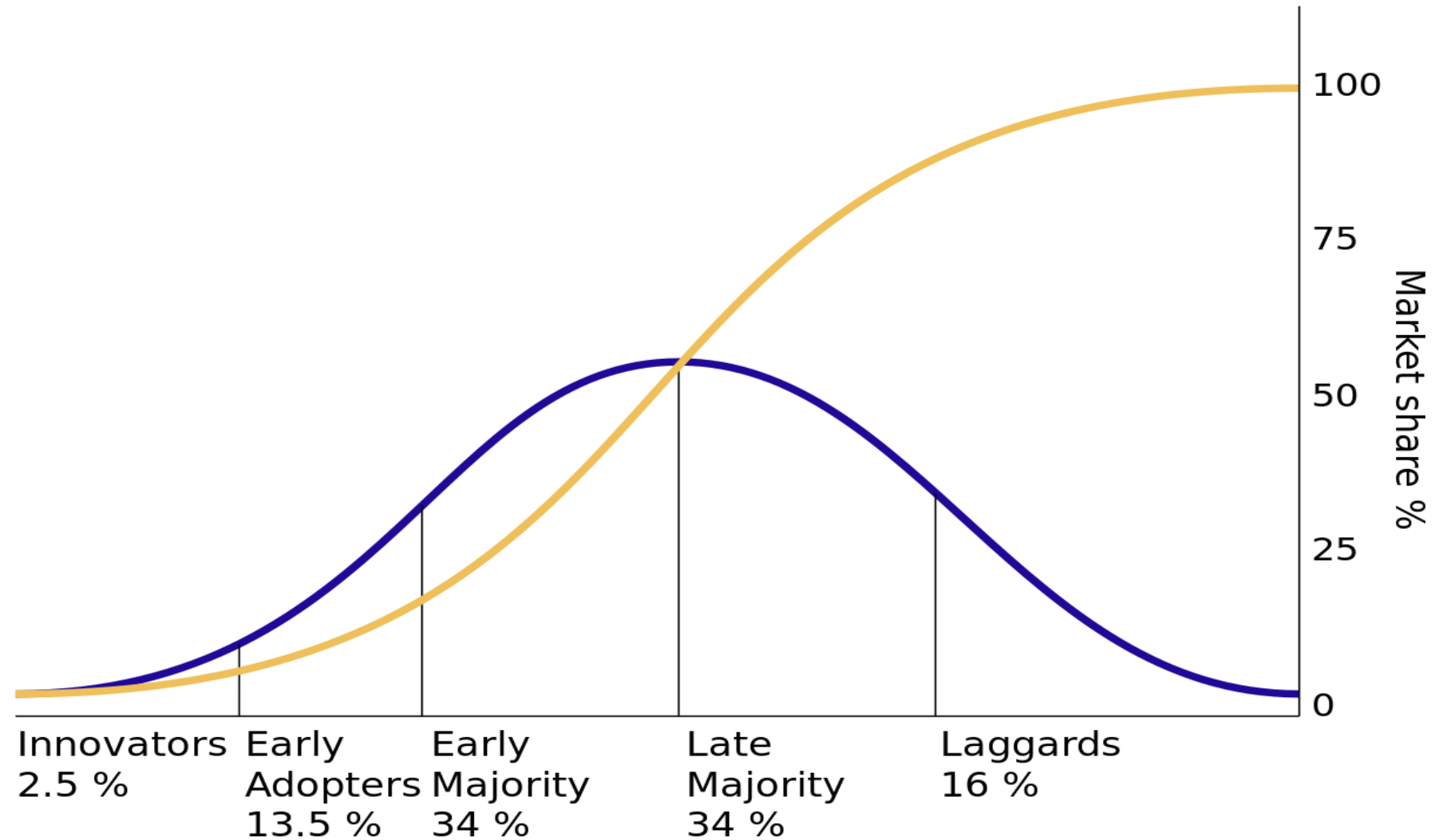
Tom Wood  
*Program Manager*

# Market Adoption Curve





# Market Adoption Curve



# Adoption of Light-Emitting Diodes in Common Lighting Applications

August 2020

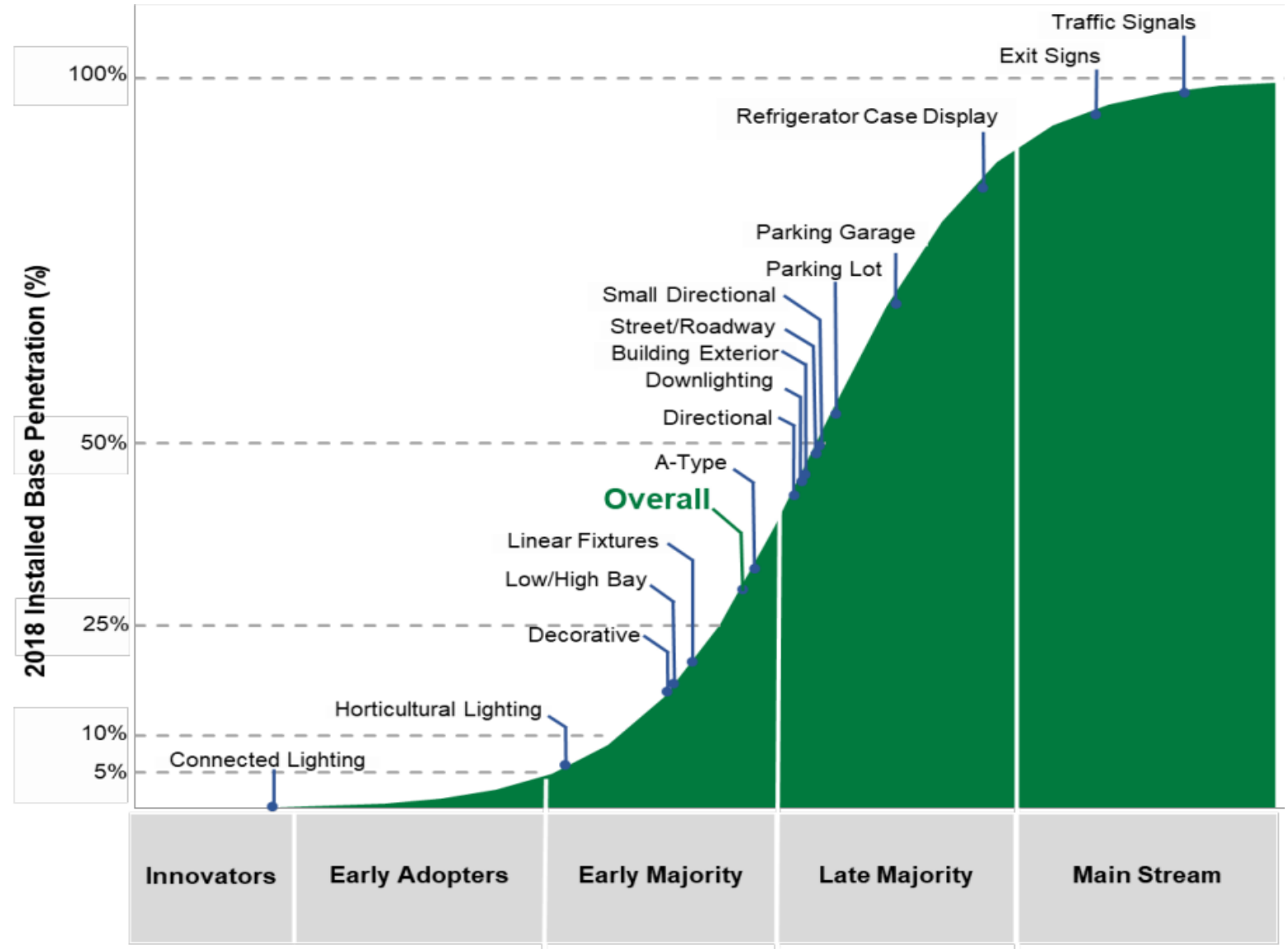
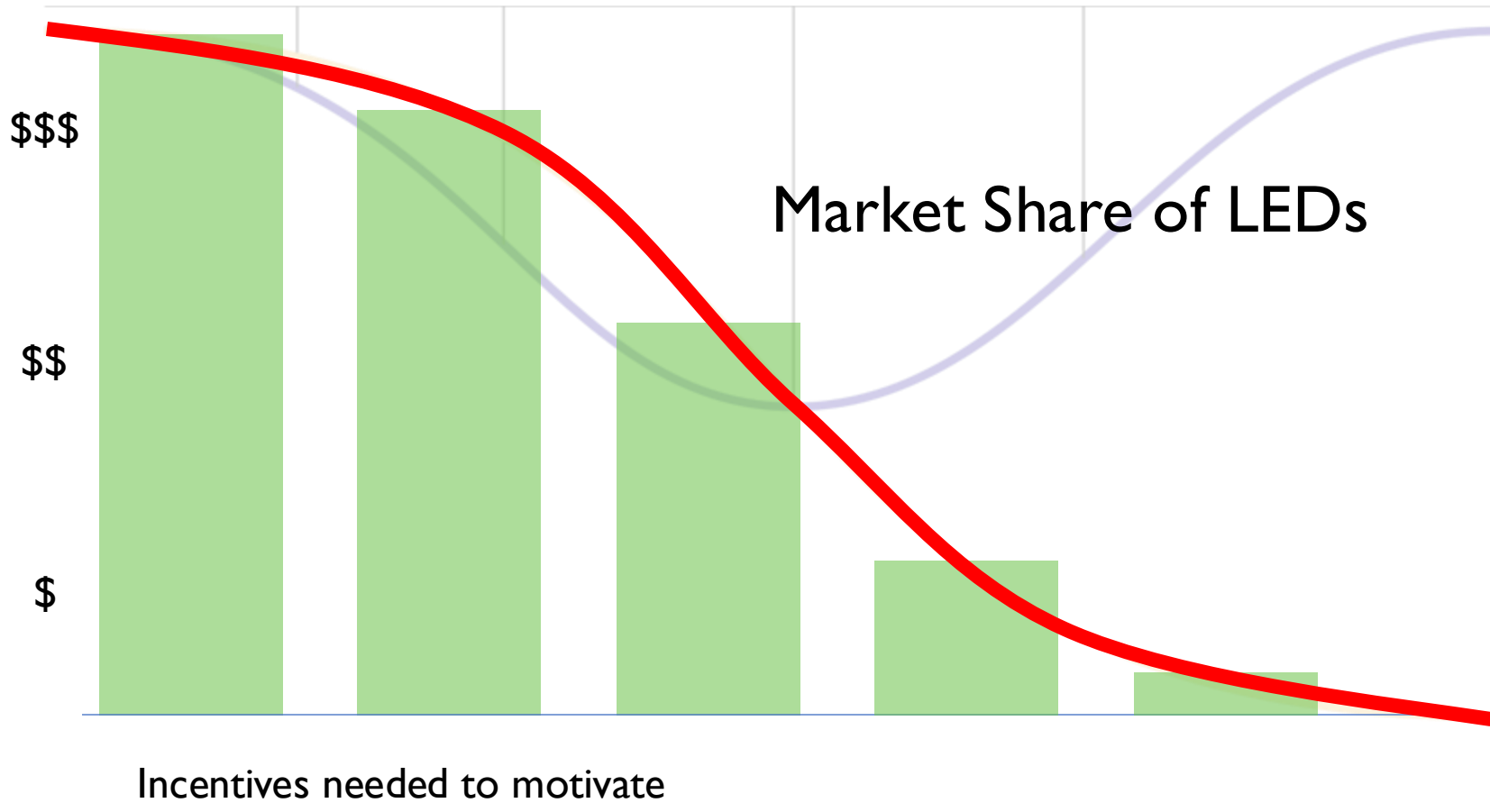
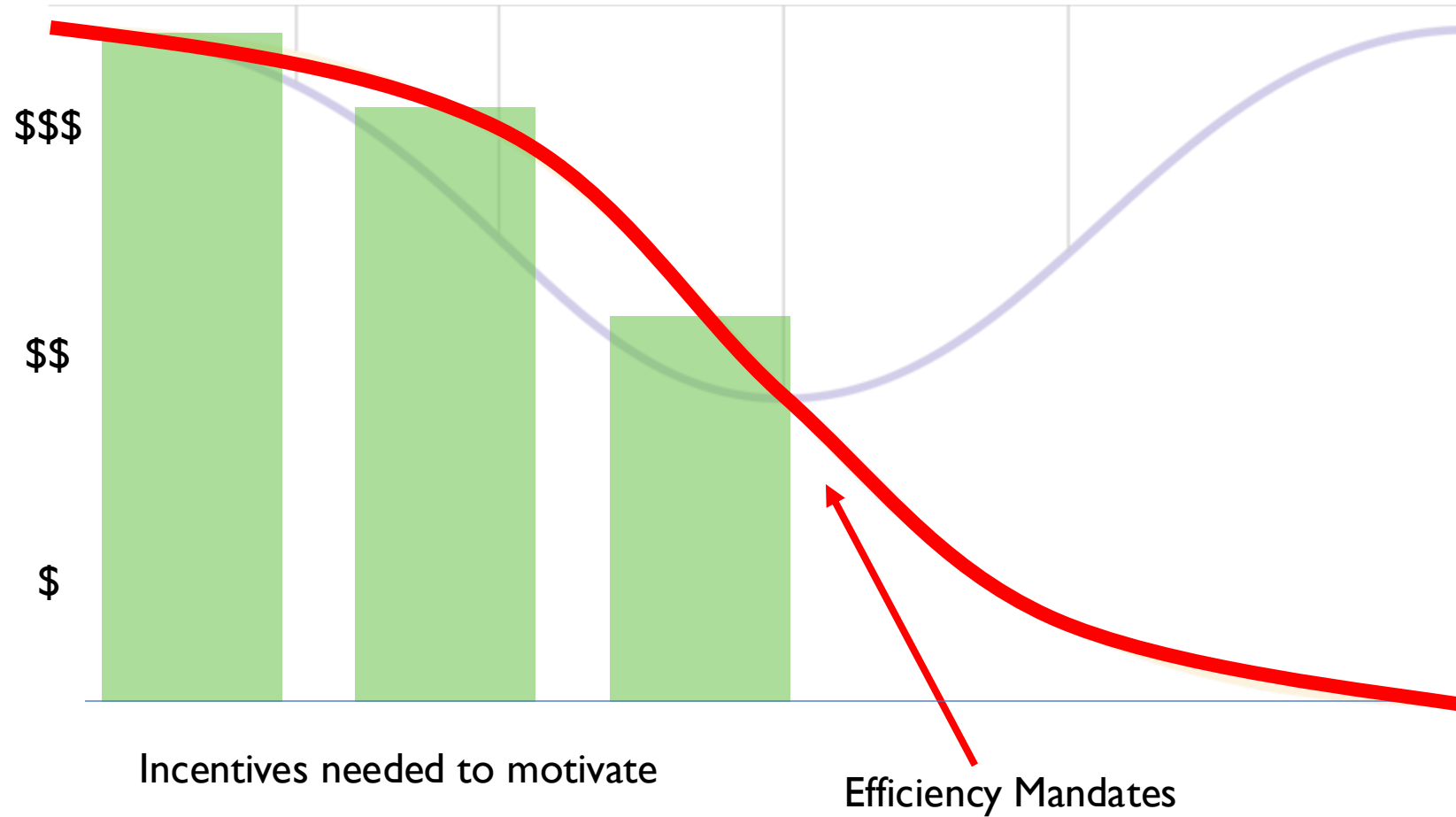


Chart Courtesy of DOE

# Market Adoption Curve

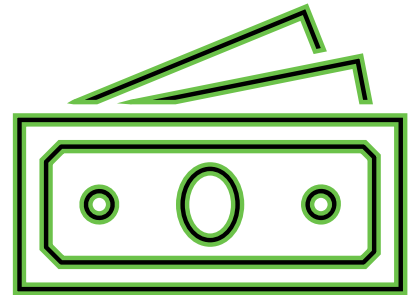


# Market Adoption Curve

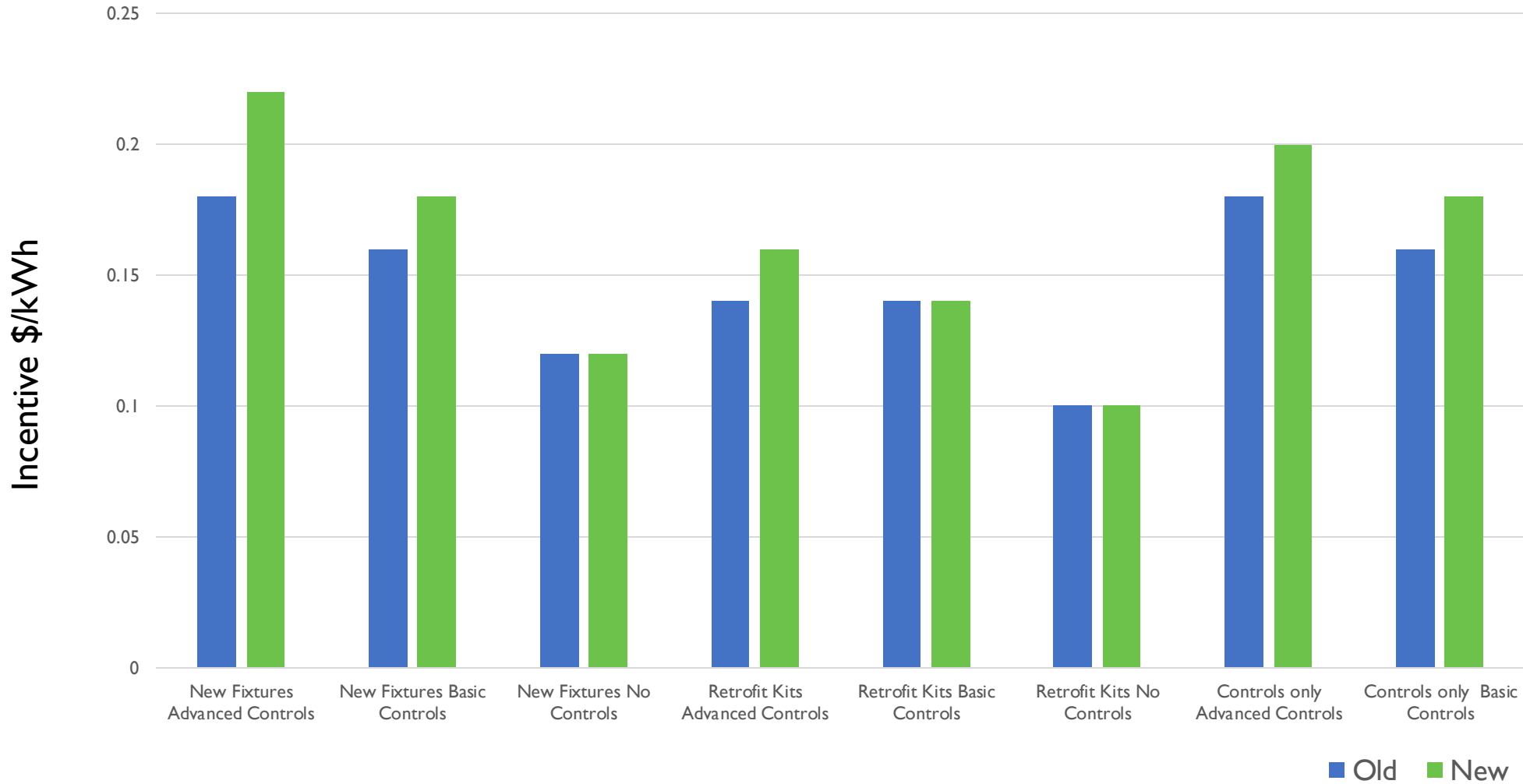


# Changes from External Forces – All States

- DLC 5.1 – Jan 1, 2023
  - Increased Efficiencies
  - Dimming Requirement
    - Some categories affected more than others
- EISA – Tied to Program Changes
  - Federal Efficiency Increases
    - A-19
    - PARs
    - BRs
    - Recessed Downlights
    - Decorative Lamps
- Incremental Cost
  - When efficient technologies cost less than incumbent

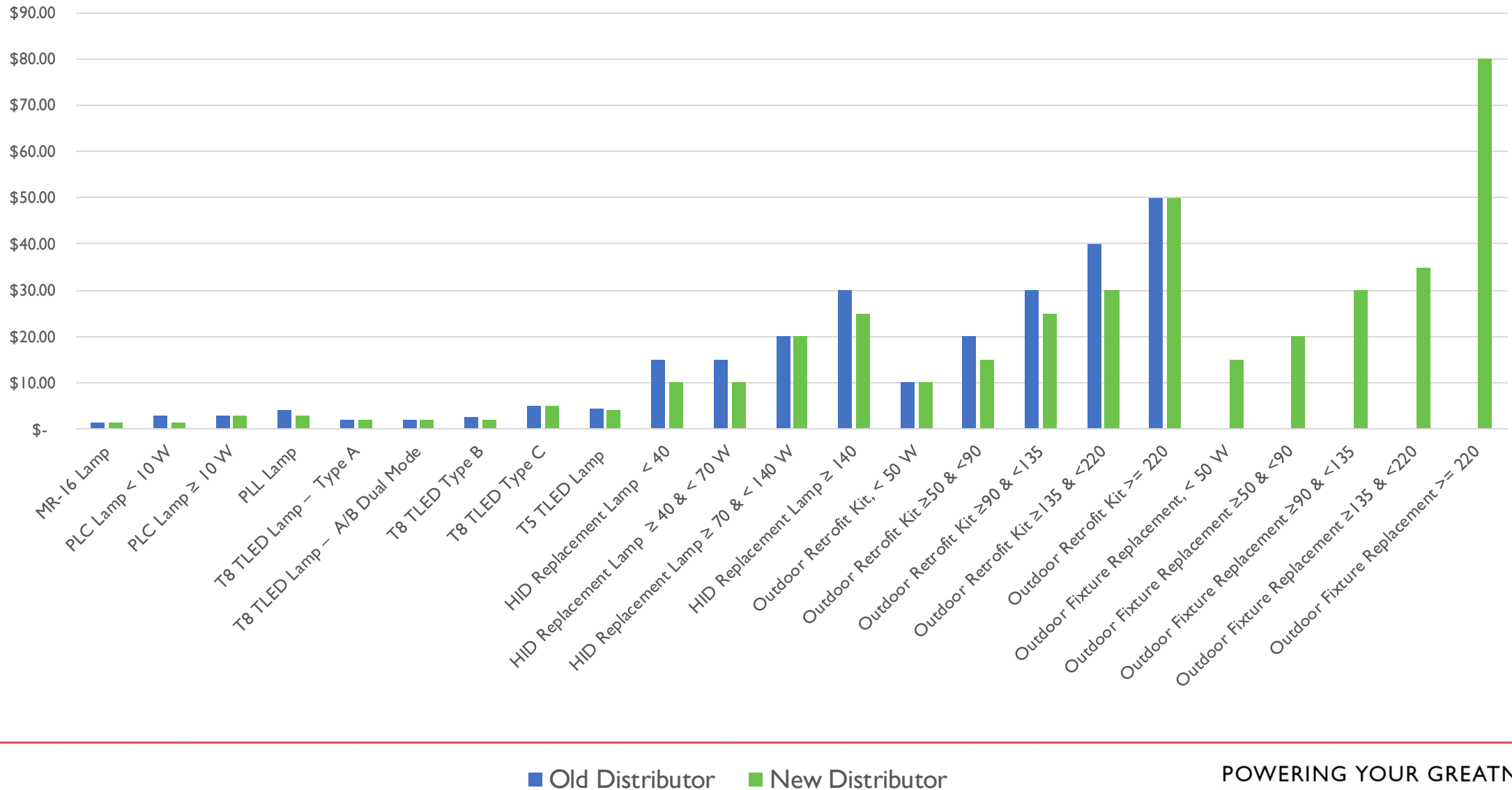


# Wyoming Interior Prescriptive Retrofit



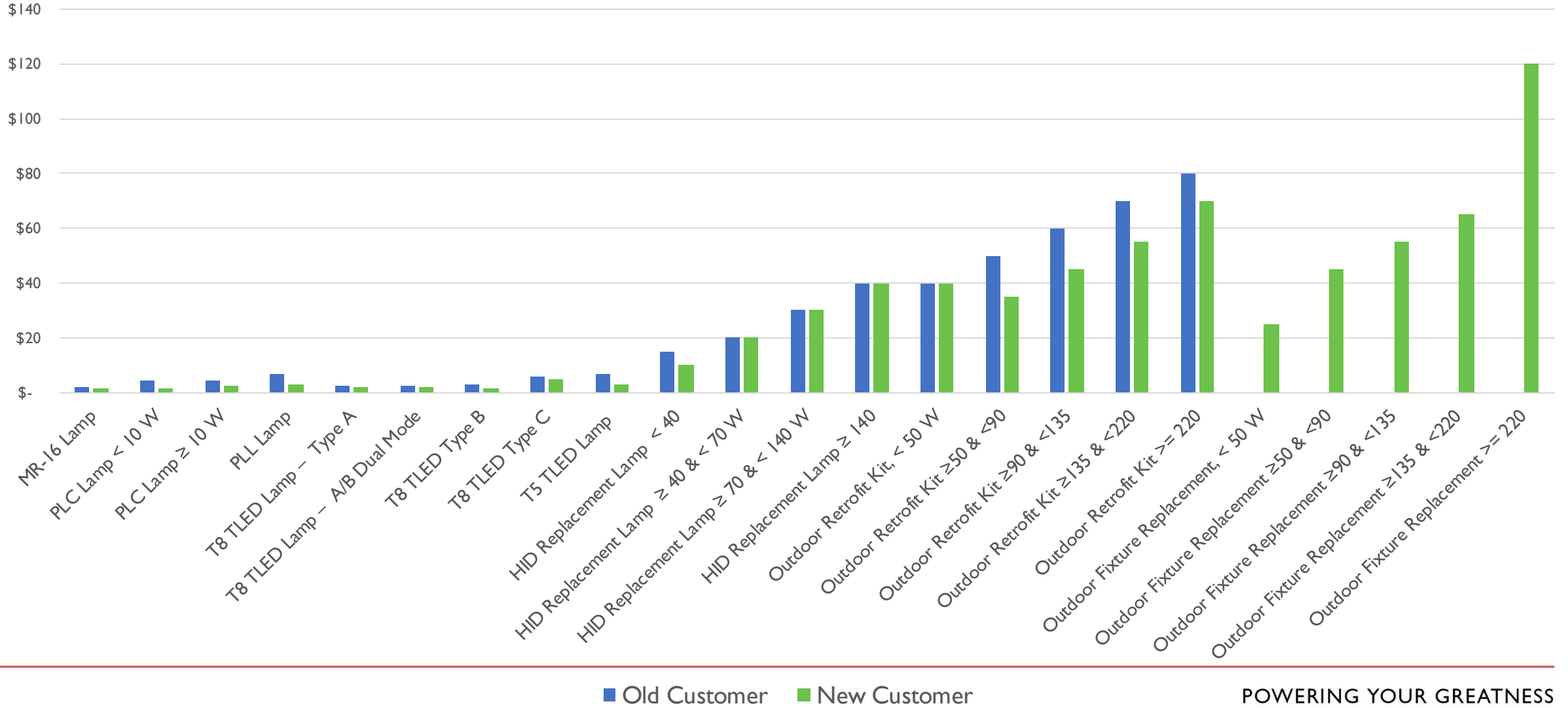
**Increase  
Incentives**

# Distributor Incentive Changes



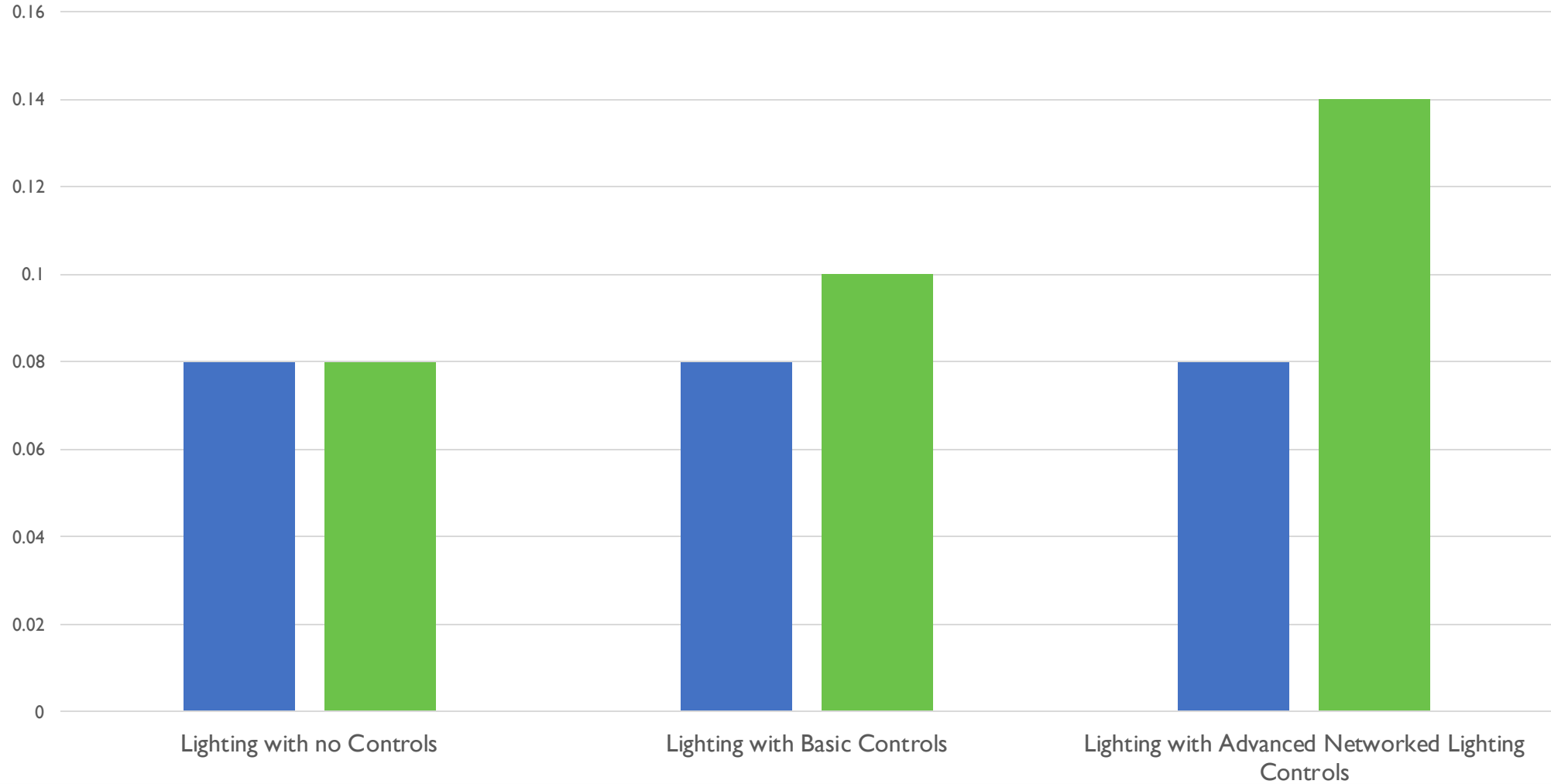


# Customer Incentive Changes



# Wyoming NCMR

## Tiered Incentive Rates Based on Controls



■ Old Incentive ■ New Incentive

# Quick Overview of New Controls Terms

- Basic Controls (Consolidated in the tool)
  - Occupancy
  - Daylight
  - Combo Daylight/Occupancy
- Networked Lighting Controls (NLC)
- Advanced Networked Lighting Controls (ANLC)



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# Policy Changes Wyoming– Networked Interior

- *Networked Controls (NLC)*
  - DLC Listed
  - Continuously Dimming
  - Use an App to control fixtures
  - Show savings



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# Policy Changes Wyoming– Networked Interior

- Networked Controls (*NLC*)
  - DLC Listed
  - Continuously Dimming
  - Use an App to control fixtures
  - Show savings
- Advanced Networked Controls (*ANLC*)
  - Same as Networked controls PLUS
  - Every fixture is tied to a sensor
  - Individually addressable or smaller zones
    - Generally <600 SF or <500W



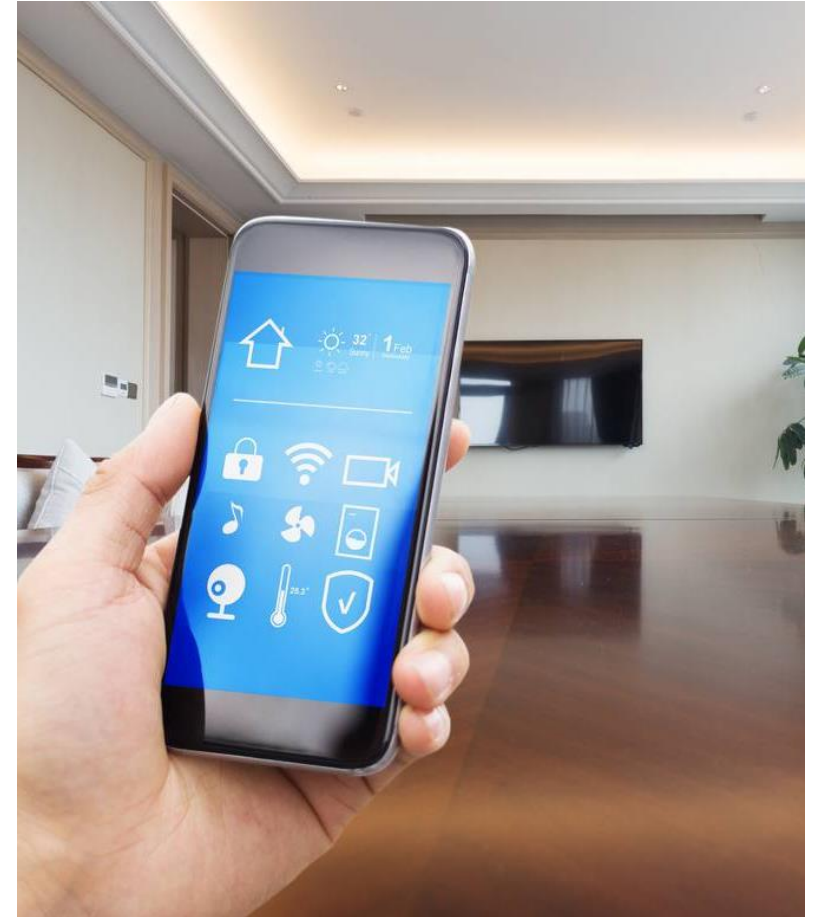
# Policy Changes Wyoming – Controls Exterior

- Basic Exterior Dimming
  - Must Dim (not on/off)
  - Control can be occupancy or schedule based
  - Use prescriptive or custom savings calcs
  - Networking NOT required



# Policy Changes Wyoming– Controls Exterior

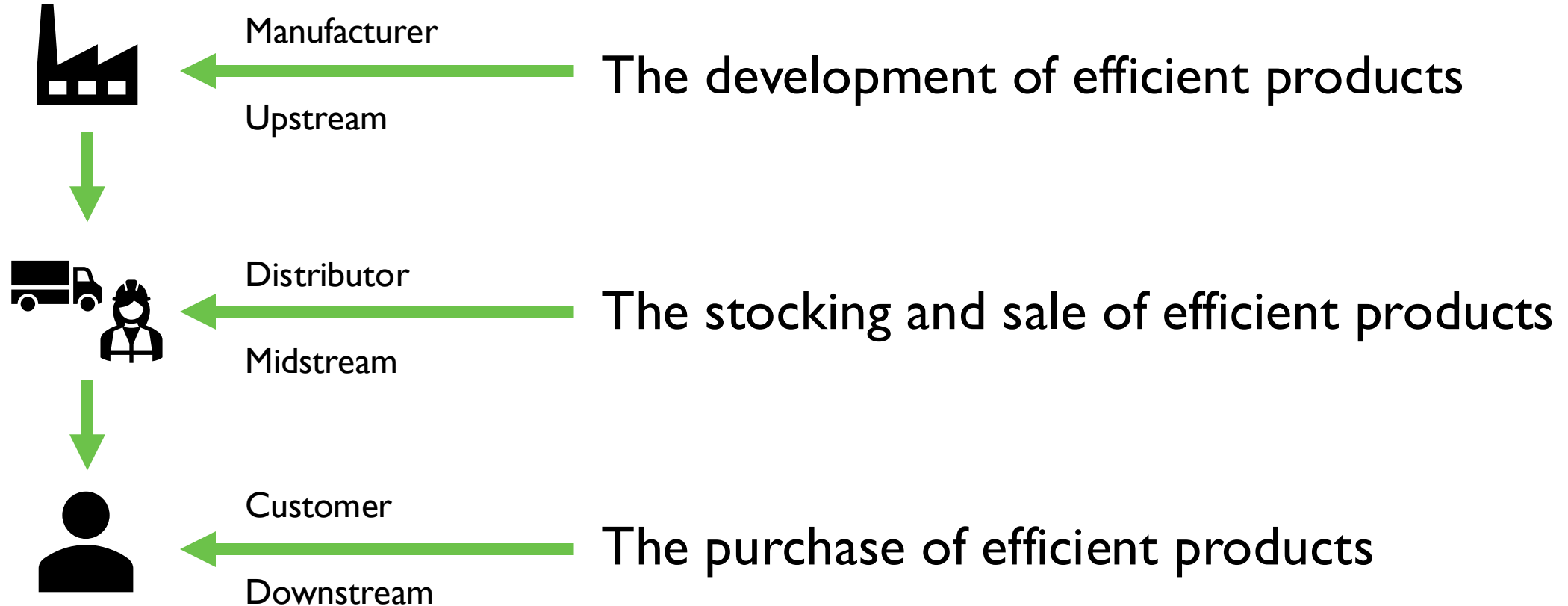
- Basic Exterior Dimming
  - Must Dim (not on/off)
  - Control can be occupancy or schedule based
  - Use prescriptive or custom savings calcs
  - Networking NOT required
- Advanced Networked Dimming
  - DLC Listed
  - Continuously Dimming
  - Use an App to control fixtures
  - Use prescriptive or custom savings calcs





# Full Stream Incentives to motivate...

Product Flow



# Indirect Benefits of Midstream

- Higher availability of qualifying equipment
- Reduced cost through accelerated market adoption
- Broader market impact to all, regardless of location on adoption curve
- Potential incentive passthrough through discounts or promos



# How to apply for Midstream

- Be a distributor
- Collect Lighting Sales Data
  - Spreadsheet
- No Customer Application
- Submit to  
[DistMidstreamRMP@evergreen-efficiency.com](mailto:DistMidstreamRMP@evergreen-efficiency.com)

- Spreadsheet Values
  1. Distributor Number
  2. Invoice Date
  3. Invoice Number
  4. Customer Address/Bill To Zip
  5. Purchaser Address/Ship-To ZIP
  6. Quantity
  7. Equipment ID
  8. Model Description

# How to apply for Downstream

- *LED Instant Incentive*
  - Approved LEDii distributors
    - Separate list from midstream
  - Customer incentive given at time of purchase
  - Distributor gets reimbursed
- *Post Purchase Application*
  - No pre-approval
  - No tool
  - Itemized invoice
  - Form with quantities by category
- *Lighting Tool*
  - Pre-approval for Medium/Large
  - Fill in measure just like the good old days
  - Follow normal retrofit process
  - *Note: savings will be discounted due to midstream*

Maintenance Type Purchases

Prescriptive Measures Only  
(Smaller Quantities)






Bigger Projects, Mixed Projects,  
Controls Involved, etc.

# New Measure – Block Heater Controls



- Diesel Engines (especially old ones) don't start in the cold
- Users usually plug in all night
- Smart Controllers reduce run hours
- Measure ambient temperature
- \$125 Incentive
- Post Purchase

# HVAC Equipment Incentive Updates

HVAC Equipment and Controls Incentives				
Equipment Type	Size Category		Currently Offered Incentive	Offered Incentive Effective March 15, 2023
 <b>Unitary Commercial Air Conditioners, Air-Cooled</b>	$\geq 65,000$ Btu/hr and $\leq 760,000$ Btu/hr	CEE Tier 1	\$62/ton	\$0/ton
		CEE Tier 2	\$75/ton	
 <b>Unitary Commercial Heat Pumps, Air-Cooled</b>	< 65,000 Btu/hr (three phase)		\$75/ton	\$0/ton
	$\geq 240,000$ Btu/hr		\$62/ton	
<b>Advanced Rooftop Unit Control (Retrofit)</b>	< 5 ton		\$0	\$500 
<b>Advanced Rooftop Unit Control (New RTU)</b>	< 5 ton		\$0	\$400 
<b>Advanced Rooftop Unit Control (DCV Only)</b>	< 5 ton		\$0	\$300 

# Benefits of Being a Vendor

- Sales Advantage – Through the use of Incentives
- Status – Utility Vetted
- Support – Events like this so you are in the know





# Other Vendor Benefits

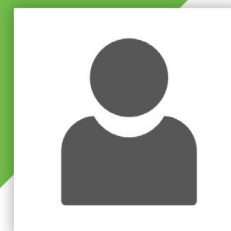

- Wattsmart Business Vendor Network
- Listed on the website
- Basic Marketing Opportunities
- Access to information
  - Trade Ally Connect
  - Wattsmart Learning Center
  - Lighting Tool



# You want to be Premium!

- Priority Website listing
- Premium Marketing Benefits
  - Co-Branding
  - Wattsmart Badges
- Participate in feedback sessions
- Customer Lists
  - Potential Vendor Incentives


**WATTSMART**  
PREMIUM BUSINESS VENDOR



**Slim Demo**  
Energy Saving Vendor

Evergreen Consulting Group  
slim.demo@evergreen-efficiency.com  
999-555-5555

**WATTSMART** | **ROCKY MOUNTAIN POWER.**  
POWERING YOUR GREATNESS



For more information visit:  
[rockymountainpower.net](http://rockymountainpower.net)

**WATTSMART** | **ROCKY MOUNTAIN POWER.**  
POWERING YOUR GREATNESS



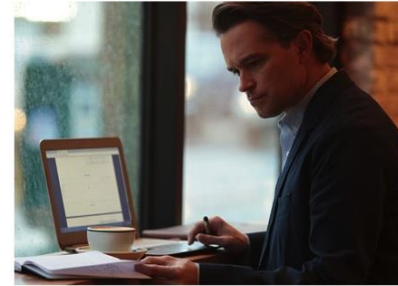
Questions?



# It's all about the Bennies

Discussing Non-Energy Benefits with your customers

*By Wilmer Cabrera*



# Why NEBs?

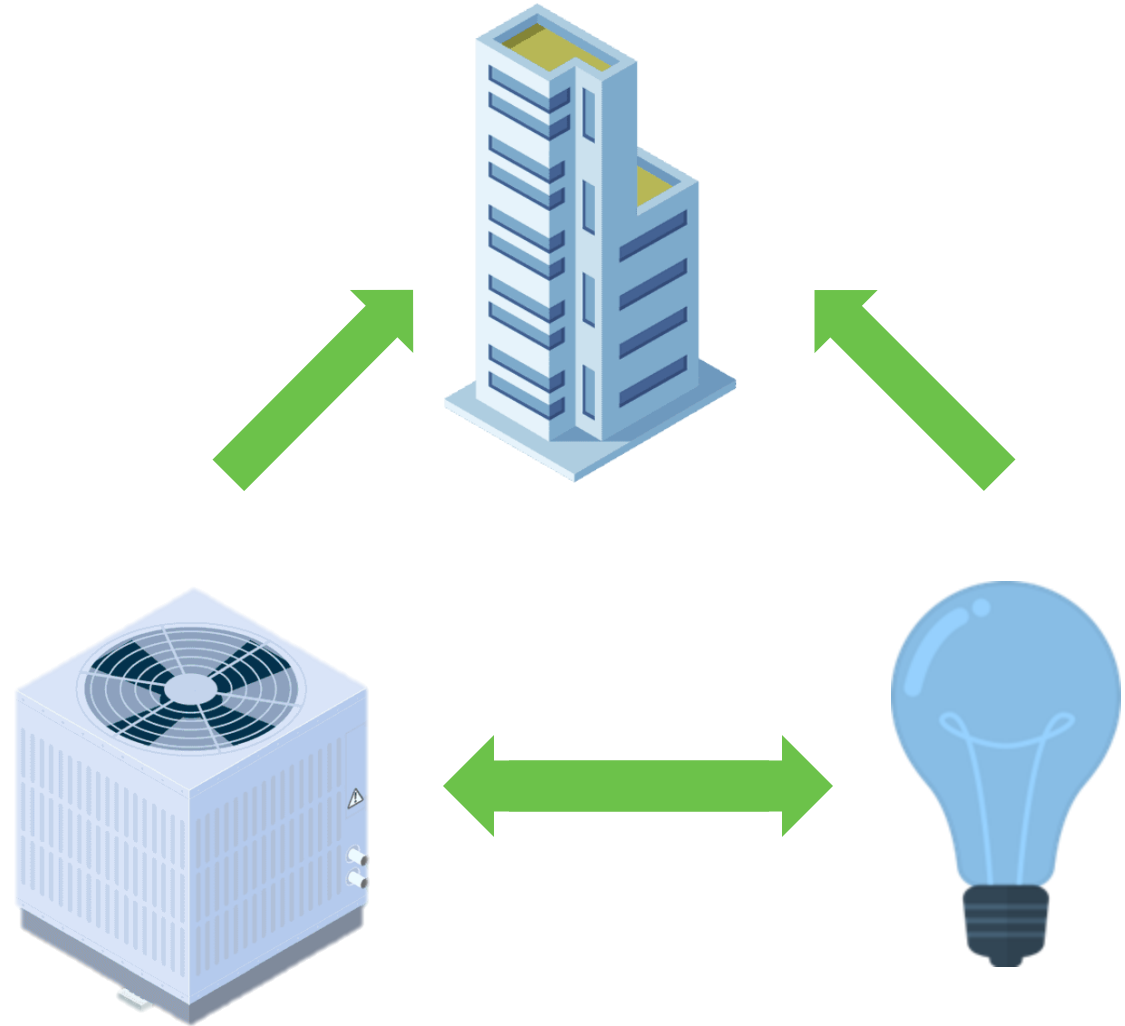
*NEBs = Non-Energy Benefits*

- Why talk about NEBs with your customers?
  - Adds value to projects
  - Helps establish your presence as a knowledgeable resource
  - Increase cost effectiveness beyond energy savings



# Non-Energy Benefits

- Reduced Costs
- Occupant Satisfaction
- Data Analytics
- Sustainability
- Aesthetics



# Reduced Costs

## *Simple Payback (ROI)*

- The amount of time it will take to recoup your investment (*Project costs*)
- Most projects will have a payback of 2.5 years
- Payback doesn't stop there... (*TCO*)

## *Maintenance Costs*

- Cost to maintain system
- Expanded life of fixtures with controls
- Ask customer: “What is your yearly/monthly maintenance costs?”





# Occupant Satisfaction: Health, Safety & Comfort

- Reduce chances of work-related incidents/errors
- Personalized comfort
- Indoor air quality
- Fatigue reduction
- Increase in productivity
- Lower occupant complaints
- Ask customer:  
“What is the feedback you're receiving from tenants/customers?”



# Real-time Data Analytics

- BMS (Building Management System) gives real-time information to help maintain the health of the equipment.
  - Helps maintain proper maintenance
  - Remote diagnostic alerts
- Gather data like:
  - Traffic occupancy
  - Usage
  - Demand response
  - Reduce HVAC energy using lighting sensors



# Sustainability

- Some Companies have a sustainability goals
- BCORP Companies
- LEED Certification
- ESG (*Environmental, Social, and Governance*) Score
- GRESB (*for Real Estate holdings*)



4526 Trees Planted



37 Cars Removed  
from the Road



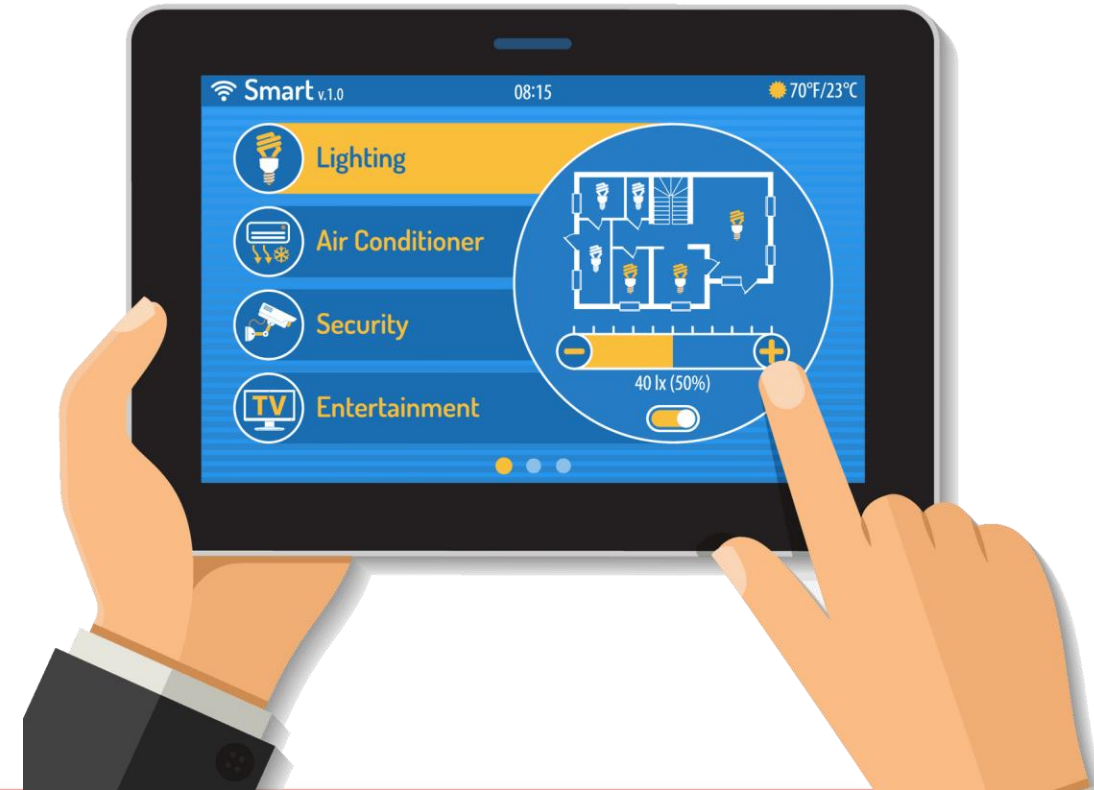
22 Single Family Homes  
Powered for One Year



66.1 Tons of Waste  
Removed from Land

# Aesthetics

- Adds value to property **AND** business
- Color tuning (color selectable)
  - Helps business match all lighting and create custom ambiance (mood)
- New fixture vs Relamp
  - New fixture ensure we're replacing outdated technology that could be a hazard and has a sleek design to enhance the look and feel of a place







**Reduced Maintenance**

**Increased Safety & Security**

**Better Environment for inhabitants**



**Increased Productivity**

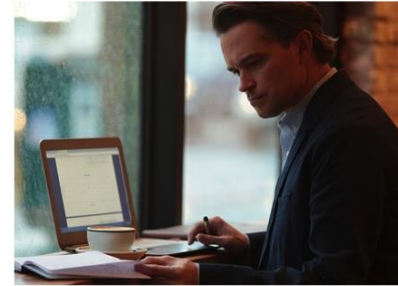


**Help meet corporate sustainability goals**



# Dummies Guide to Non-Lighting

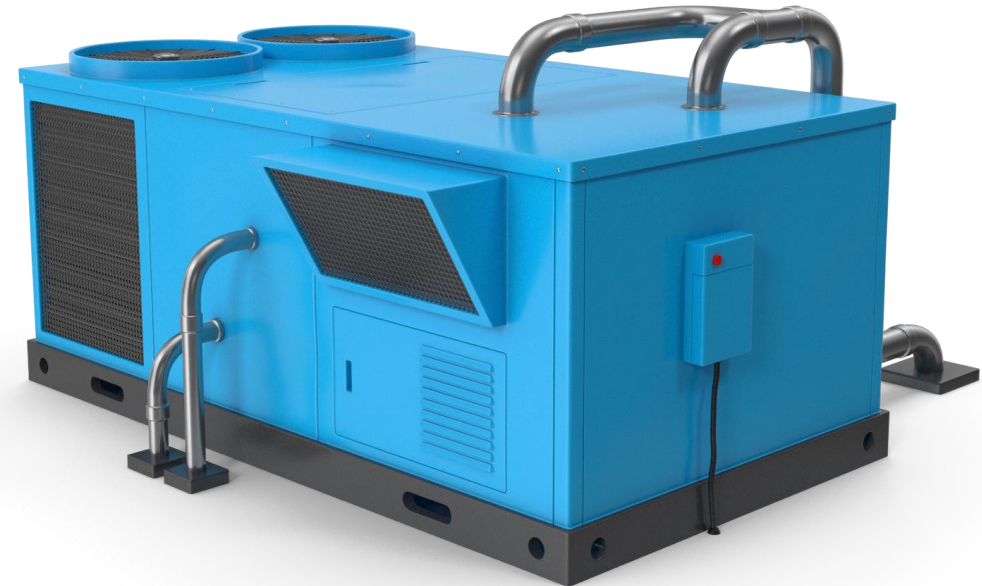
*A guide to non-lighting incentive offers  
by Tom Wood*



# Candidates to Identify:

## *Motors and Drives*

- Variable-Frequency Drive (VFD)
  - *Aka. Variable Speed Drive (VSD)*
- Electronically Commutated Motors (ECMs)





# Benefits of Adding a VFD

- **74% of U.S. electricity is used by commercial buildings**

(source: US DOE, 2008 Building Energy Data Book)

- Estimated 50% of electricity used to move air and water
- **How does a VFD save electricity?**
  - Varies motor speed
  - Motor maintenance savings – soft start

% Speed	Frequency (Hertz)	% Savings
100%	60	0%
<b>90%</b>	<b>54</b>	<b>27%</b>
80%	48	49%
<b>70%</b>	<b>42</b>	<b>66%</b>
<b>60%</b>	<b>36</b>	<b>78%</b>
50%	30	88%
40%	24	94%
30%	18	97%
20%	12	99%
10%	6	100%
0%	0	100%

# What is a Good Candidate?

- Fixed-Speed (Frequent starting and stopping of motor uses a lot of energy)
  - Pumps
  - Fans
  - Blowers
  - Compressors
- Note: Variable Need



# Candidates to Identify:



## *VFD Air Compressor*

- New Compressors are costly
- Limited room (new require higher peak current)
- New may not integrate well into existing master controls
- Frequent starting and stopping of motor uses lots of energy

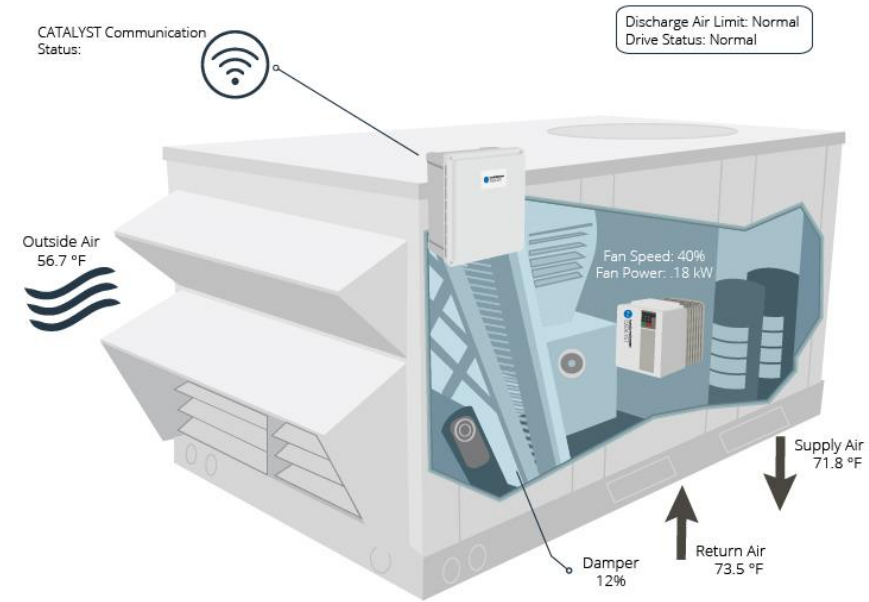
## *VFD Pumps*

- Maintain pressure
- Less water waste
- Life is much easier on the user

# Candidates to Identify:

## VFDs on RTUs

- Part of the ARC measure
- When installed as part of ARC:
  - Allows system ramp up or down instead of just off or running at full speed



# VFDs and ECMs

EQUIPMENT TYPE	SIZE CATEGORY	SUB-CATEGORY	MINIMUM EFFICIENCY REQUIREMENT	CUSTOMER INCENTIVE
<b>Electronically Commutated Motor (ECM)</b>	≤ 1 horsepower	Refrigeration application	--	\$1.00/watt
		HVAC application	--	\$100/horsepower
	> 1 hp and ≤ 10 hp	HVAC application	--	\$100/horsepower
<b>Variable-Frequency Drives (HVAC fans and pumps)</b>	≤ 100 horsepower	HVAC fans and pumps	See note 2	\$200/horsepower
<b>Green Motor Rewinds</b>	≥ 15 and ≤ 5,000 horsepower	--	Must meet GMPG Standards	\$1/horsepower



[WY\\_wattsmart\\_Business\\_Motors\\_Incentives.pdf \(rockymountainpower.net\)](#)



# INTERNET OF THINGS



# Connected HVAC systems



Images Courtesy of Transformative Wave & Pelican Wireless

POWERING YOUR GREATNESS

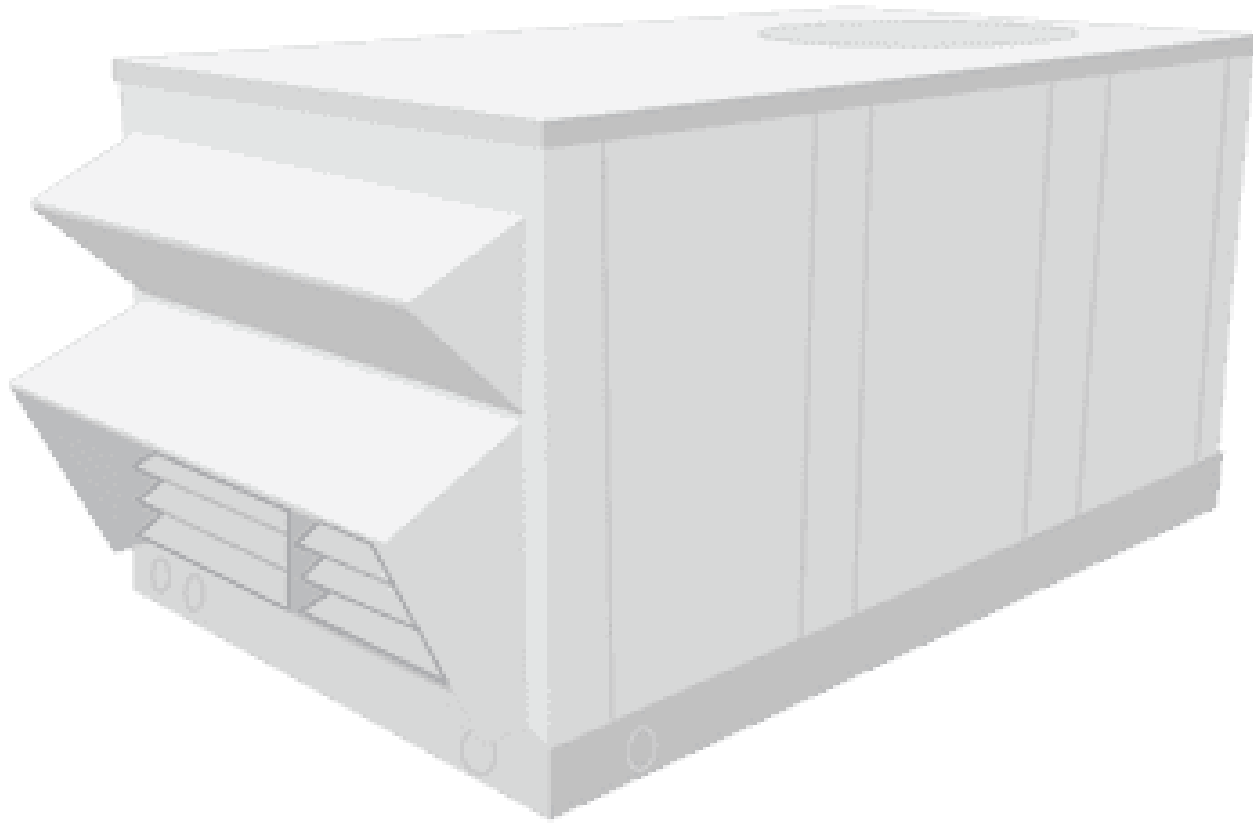


# ARC Solutions

- Save money on utilities
  - 25% - 60% in energy savings
- Fewer breakdowns and repairs
  - Better for motors
  - Economizer optimization
- Remote monitoring
  - Adjust system remotely
  - System monitoring and diagnostic alerts
- Enhanced Indoor Air Quality
  - Better CO<sub>2</sub> level control
  - Better ventilation control
- Incentives and Rebates



# Why ARC for Contractors?



- ✓ **Happy customers**
- ✓ **Be the expert**
- ✓ **Increased Sales**
- ✓ **Expand company skills and offerings**
- ✓ **Expand customer base**

# ARC Incentives

EQUIPMENT TYPE	SIZE CATEGORY	SUB-CATEGORY	MINIMUM EFFICIENCY REQUIREMENT	CUSTOMER INCENTIVE
<b>Advanced Rooftop Unit Control (Retrofit Gas-Fired RTU)</b>	≥ 5 tons and ≤ 10 tons	Must be installed on existing unitary packaged rooftop units (no split systems), ≥ 5 tons nominal cooling capacity with constant speed supply fans.	Controls must include: <ul style="list-style-type: none"> <li>• Either a supply fan VFD or multi-speed supply fan motor with controller that meets ventilation and space conditioning needs;</li> <li>• CO<sub>2</sub> or occupancy-based sensor that determines ventilation and space conditioning needs;</li> <li>• Digital integrated economizer control</li> </ul>	\$2,500
	> 10 tons and ≤ 15 tons			\$3,500
	> 15 tons and ≤ 20 tons			\$4,000
	> 20 tons			\$4,500
<b>Advanced Rooftop Unit Control (Retrofit Heat Pump RTU)</b>	≥ 5 tons and ≤ 10 tons	Must be installed on existing unitary packaged rooftop units (no split systems), ≥ 5 tons nominal cooling capacity with constant speed supply fans.	Controls must include: <ul style="list-style-type: none"> <li>• Either a supply fan VFD or multi-speed supply fan motor with controller that meets ventilation and space conditioning needs;</li> <li>• CO<sub>2</sub> or occupancy-based sensor that determines ventilation and space conditioning needs;</li> <li>• Digital integrated economizer control</li> </ul>	\$2,900
	> 10 tons and ≤ 15 tons			\$4,000
	> 15 tons and ≤ 20 tons			\$5,800
	> 20 tons			\$6,500
<b>Advanced Rooftop Unit Control (Retrofit)</b>	< 5 ton		\$0	\$500
<b>Advanced Rooftop Unit Control (New RTU)</b>	< 5 ton		\$0	\$400
<b>Advanced Rooftop Unit Control (DCV Only)</b>	< 5 ton		\$0	\$300



Significant Incentives Available!

# IoT and Thermostats

## *Smart Thermostat*

- Must be replacing non-programmable
- \$50/Thermostat



# Heat Pumps

It is **more efficient to move heat** around than it is to create it. How much more efficient? **Up to 400% in some cases.**

# Heat Pumps

## *Variable Refrigeration Flow (VRF)*

*A space that needs to heat and cool at the same time consistently.*

- *Meat Packing*
  - *Cooled spaces year round*
  - *Office space heated or cooled*
- *Production*
  - *Machinery heat needs cooling year round*
  - *Office space heated or cooled*

- *Food Production*
  - *Cooling year round*
  - *Office space heated or cooled*

# Heat Pumps

What is a typical heat pump?

- Dual fuel
- PTAC vs PTHP
  - PTACs are typically resistance heating 30A circuits for the heating load.





# Heat Pumps

## Heat Pump Water Heater

- Existing resistance heating,  
*no fuel switching!*



Image Courtesy of Hot Water Solutions

# System Optimization

*Retro-commissioning; Large customers*

- Building maintenance systems
- Central Plant
- Larger facility

• *Benefit of RX*

- Energy Savings
- Lower Operating cost
- Optimized System Operation
- Better equipment performance
- Value Adder
- Extend Equipment Life
- Improved Indoor Air Quality
- Improved Occupant Comfort

# Q&A

# Award Winners!



## Premium Vendors

- Summit Electric, LLC
- Codale Electric Supply, Inc. – Rock Springs, WY
- Virile Electric, Inc.
- Fremont Electric, Inc.
- Wired Electric



## Non-Premium Awards

- ROI Energy
- Wired Electric
- Winsupply of Rock Springs
- Crum Electric Supply Co. – Casper, WY
- Casper Electric
- Modern Electric Co.