



# IT'S A TANKLESS JOB

ONE UTILITY'S **TANKFUL** PERSPECTIVE.....

**KENT CROUSE**

BUILDER PROGRAM COORDINATOR

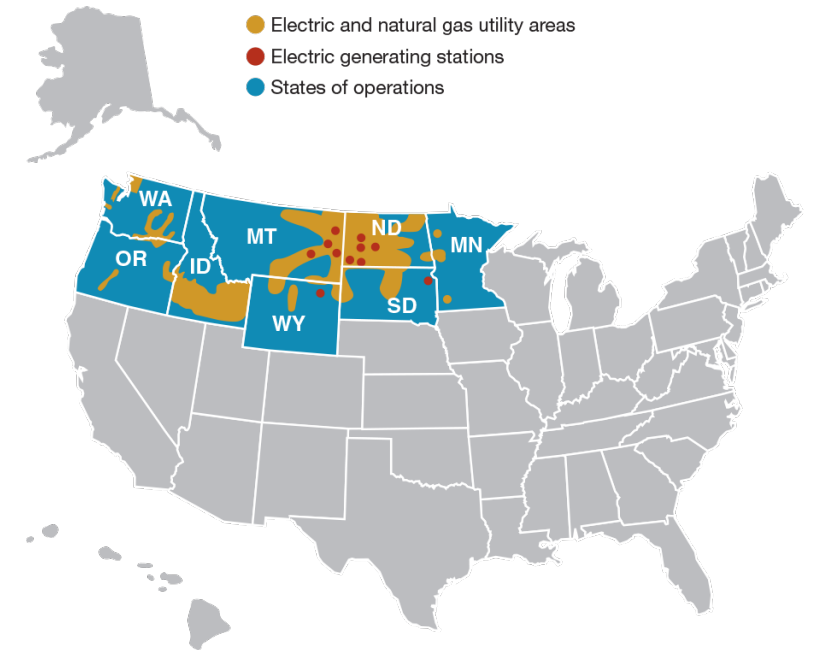
& CONSERVATION ANALYST

Presented at the 2019  
ACEEE Hot Water Forum



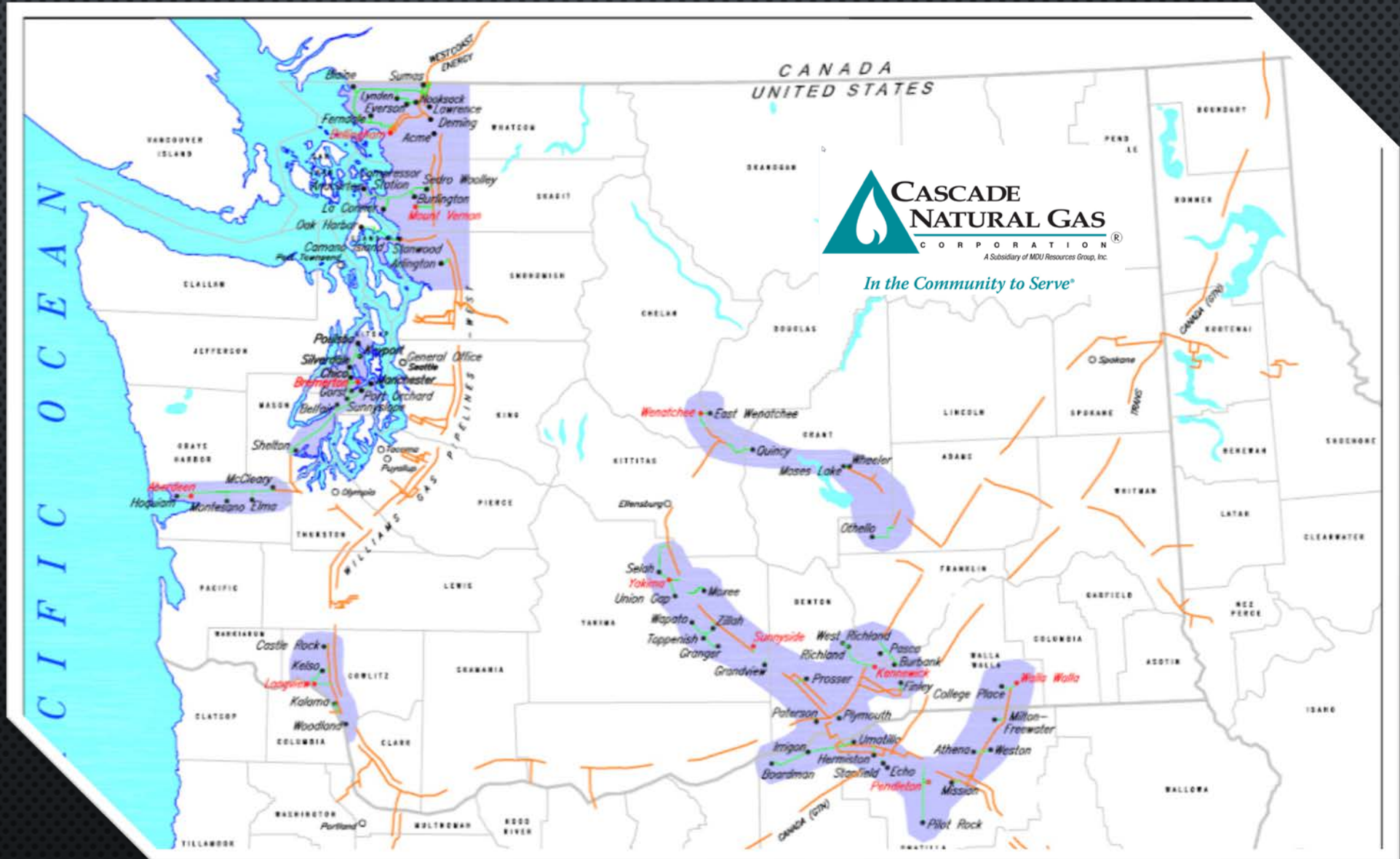
# WHO ARE WE ???

- SUBSIDIARY OF **MDU RESOURCES**
  - 4 UTILITY BRANDS SERVING 8 STATES
  - 1.1 MILLION GAS & ELECTRIC CUSTOMERS
  - WBI ENERGY – PIPELINE, STORAGE, AND GATHERING FACILITIES
  
- **CASCADE NATURAL GAS** - A SMALL, GAS-ONLY UTILITY SERVING GROWING SECONDARY CITIES IN WASHINGTON AND OREGON
  - 282,000 TOTAL GAS CUSTOMERS
  - 68 WASHINGTON COMMUNITIES SERVED
  - ACTIVE PARTNER WITH NEEA & GAS TECHNOLOGY INSTITUTE



# Service Territory

- From Canadian border south of Vancouver, BC to Northern Seattle Suburbs
- Kitsap Peninsula West of Seattle/Tacoma Metro Areas
- Rapidly growing Tri-Cities Washington Area



# CASCADE NATURAL GAS WASHINGTON REBATE PROGRAMS

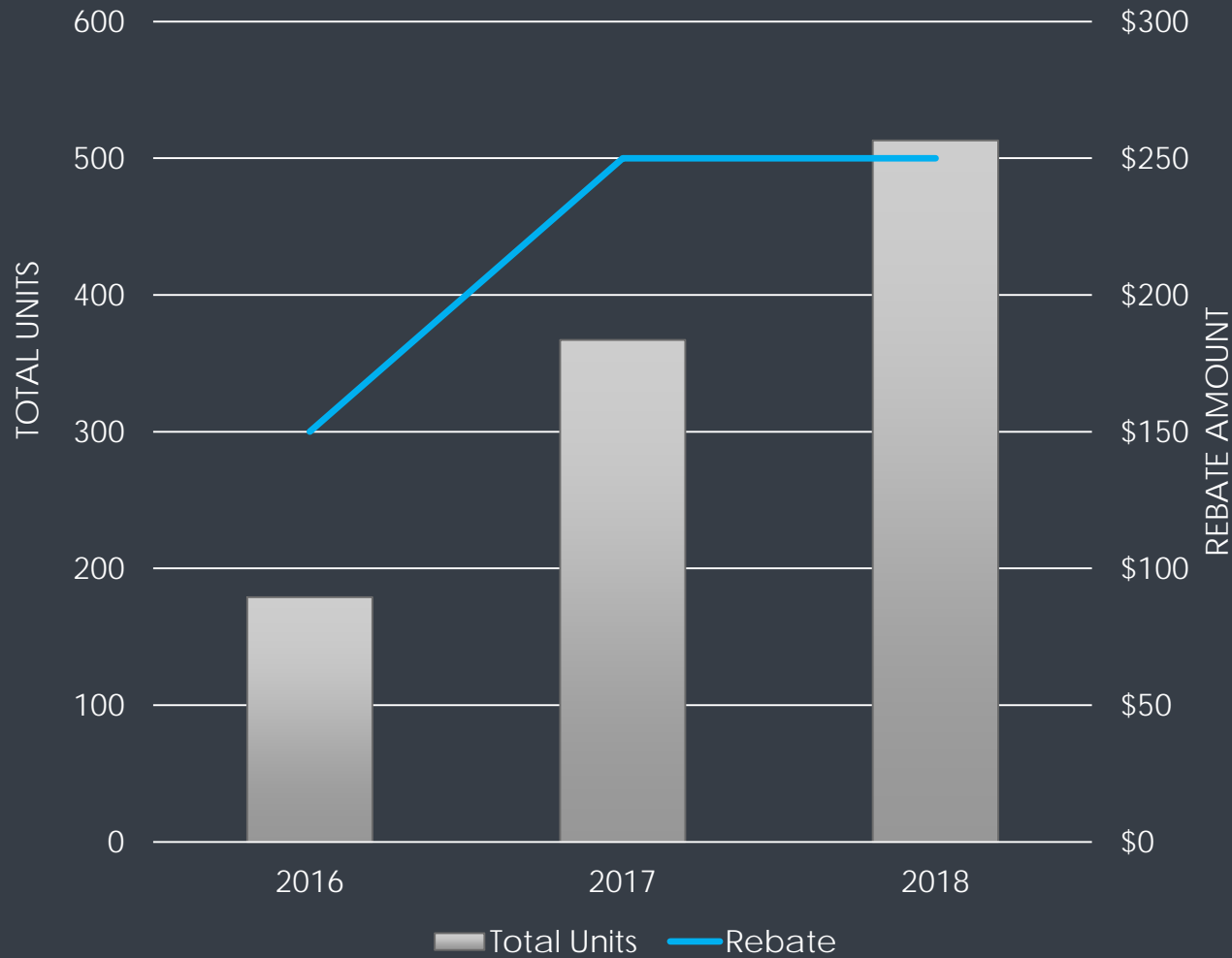
## RESIDENTIAL – EQUIPMENT INCENTIVES

*RESIDENTIAL PROGRAM BROUGHT IN-  
HOUSE IN JANUARY 2016*

- 95% AFUE FURNACES
- 95% AFUE BOILERS
- 95% AFUE/.95 UEF COMBINATION WATER & SPACE HEATING SYSTEMS
- .91EF **TANKLESS WATER HEATERS**
- 70% ENERGUIDE RATED FIREPLACES
- PROGRAMMABLE THERMOSTATS
- **TANK WATER HEATERS** - .67 EF – CANCELLED IN EARLY 2019

ADDITIONALLY, CNG OFFERS A FULL LINE OF WEATHERIZATION MEASURES INCLUDING DOORS AND WINDOWS

## Total Tankless Units Incentivized - Rebate Amount

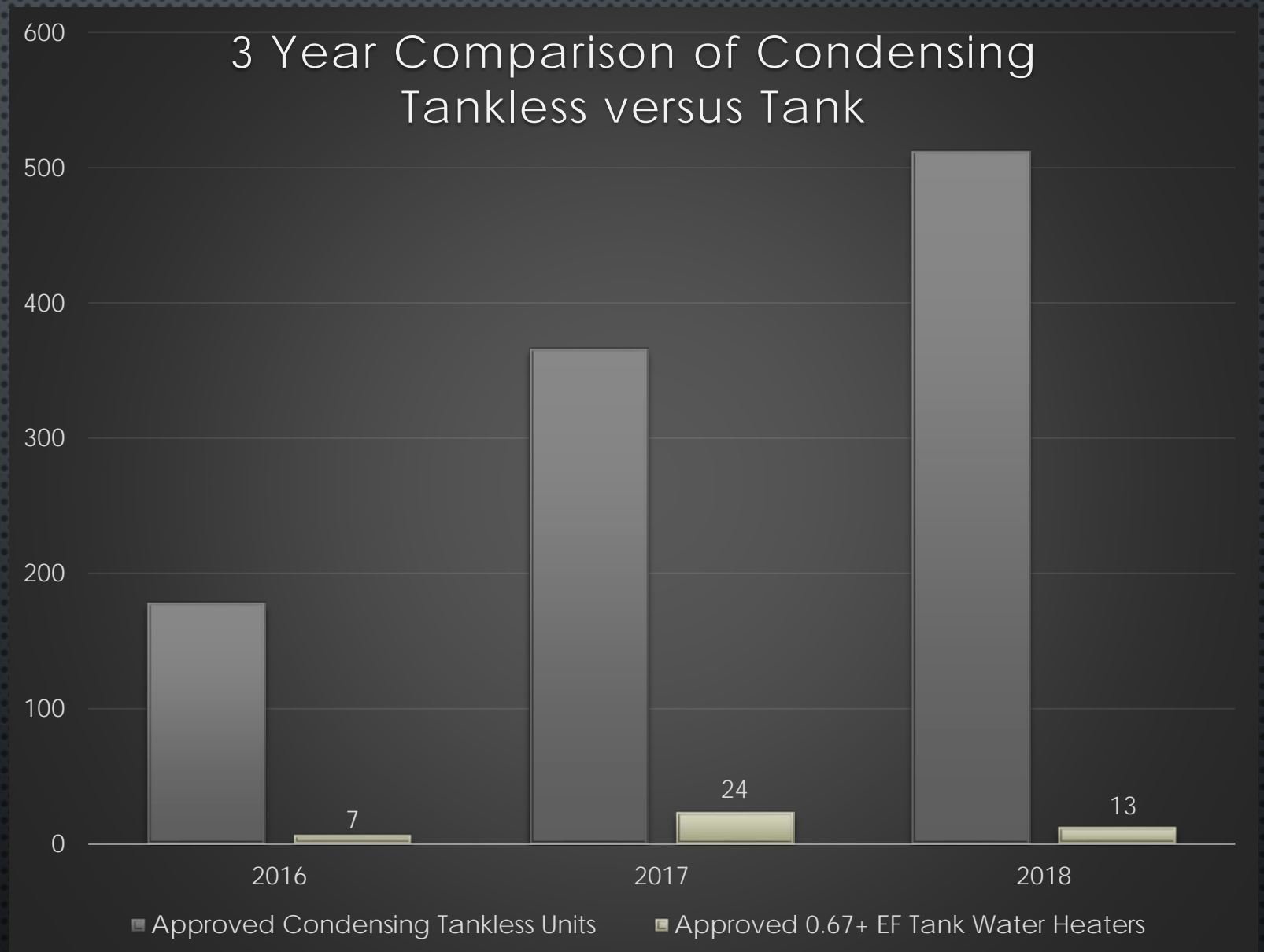


## 3 YEAR TANKLESS PROGRAM PERFORMANCE

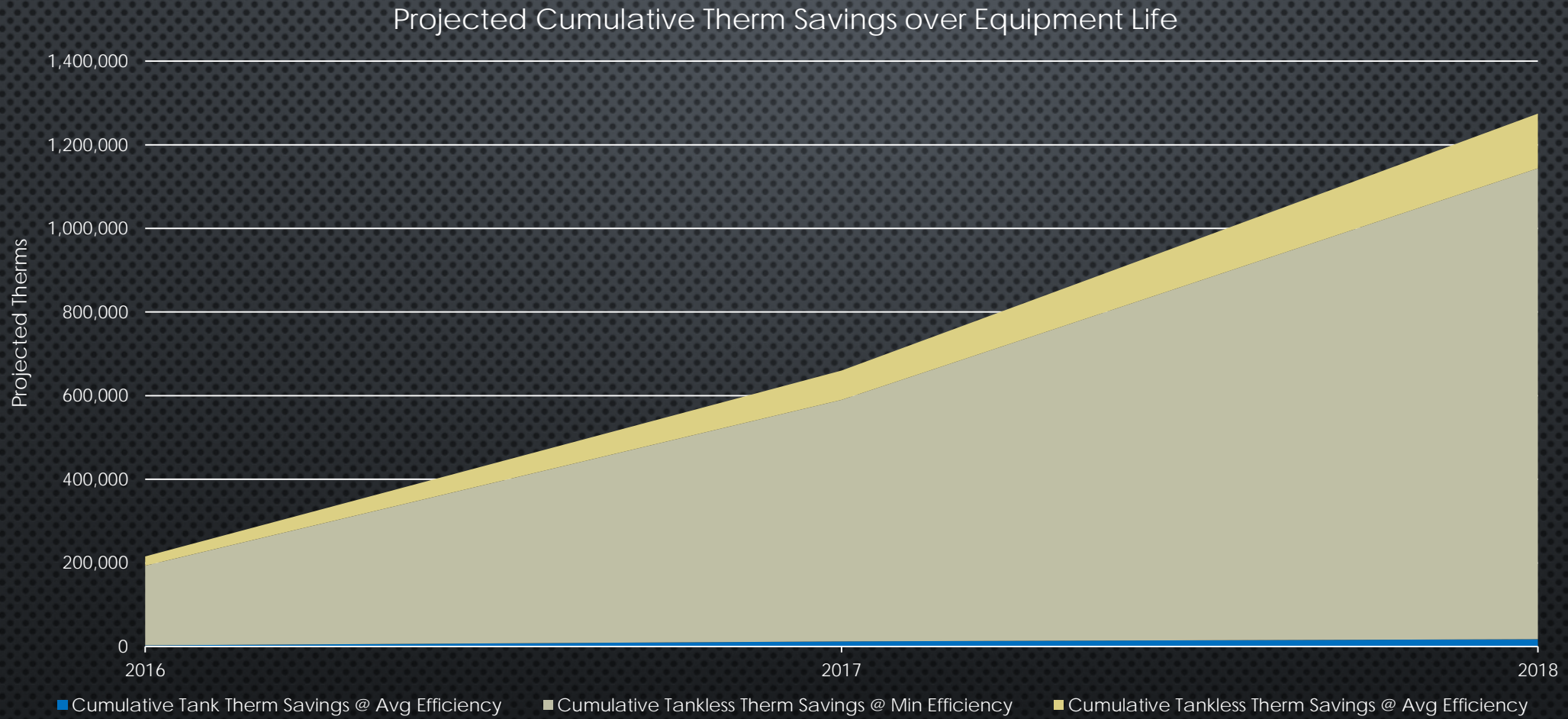
AVERAGE YEAR OVER  
YEAR TANKLESS UNIT  
GROWTH OF 69% SINCE  
STARTING IN-HOUSE  
PROGRAM IN 2016

## REASONS TO APPRECIATE TANKLESS MEASURE OFFERING

- AVERAGE CUSTOMER UPTAKE OF CONDENSING TANK VS TANKLESS IS JUST 4.3%
- 55% OF CONDENSING TANK APPLICATIONS ARE DENIED DUE TO UNIT ELIGIBILITY CONFUSION. THE OVERALL PROGRAM AVERAGE IS 5%
- OVER 100 ADDITIONAL PRE-APPLICATION PHONE DENIALS, CAUSING A POOR CUSTOMER EXPERIENCE
- CONDENSING TANK MEASURE HAS NOT PROVIDED TANGIBLE SYSTEM BENEFIT FOR UTILITY AFTER 3 YEARS



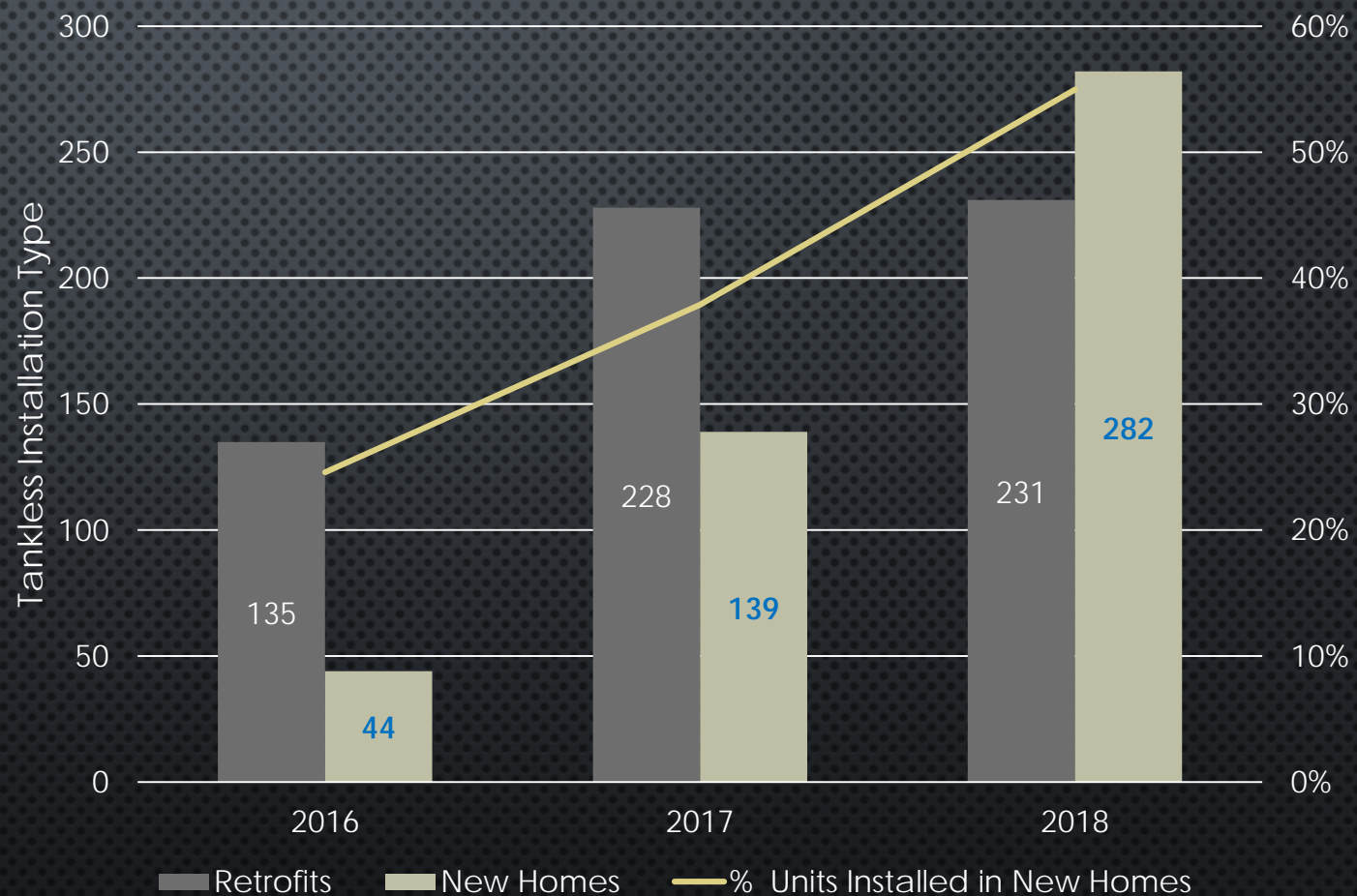
# 3 YEAR TANKLESS PROGRAM CUMULATIVE PERFORMANCE



## WHO IS INSTALLING TANKLESS

- 2016 NUMBERS ARE A BIT MISLEADING BECAUSE CASCADE DID NOT HAVE AN ACTIVE BUILDER PROGRAM UNTIL 2017
- HOWEVER, TANKLESS GROWTH IN NEW HOME MARKET FOR 2018, AND ALREADY IN 2019, IS APPARENT
- NEW HOME UNIT VOLUMES BASED ON BUILDERS WHO PARTICIPATE IN CASCADE'S BUILDER PROGRAM

Retrofit versus New Homesite Installations  
By Unit Applications

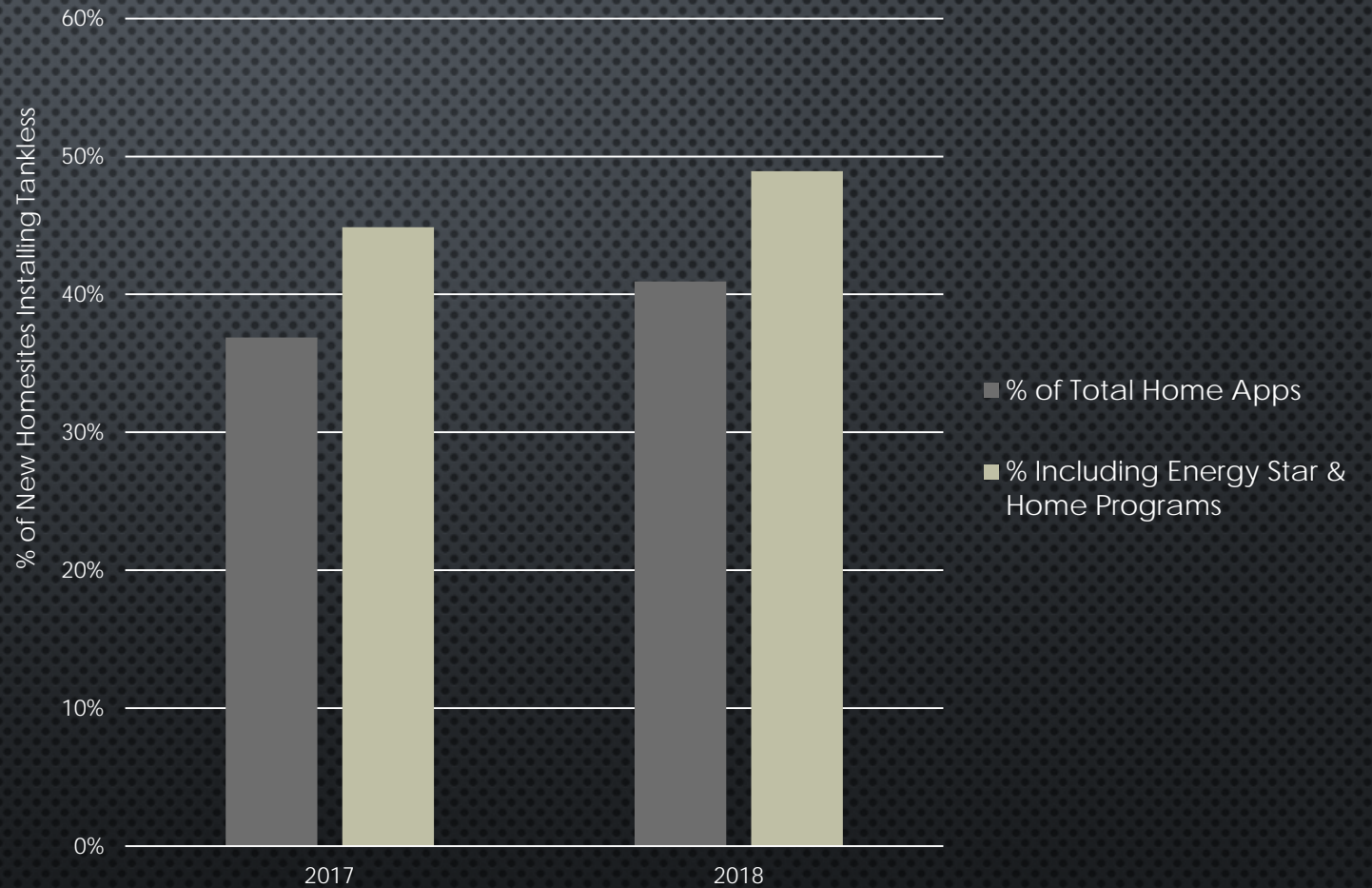




# WHAT % OF PARTICIPATING BUILDER HOMESITES ARE INSTALLING TANKLESS?

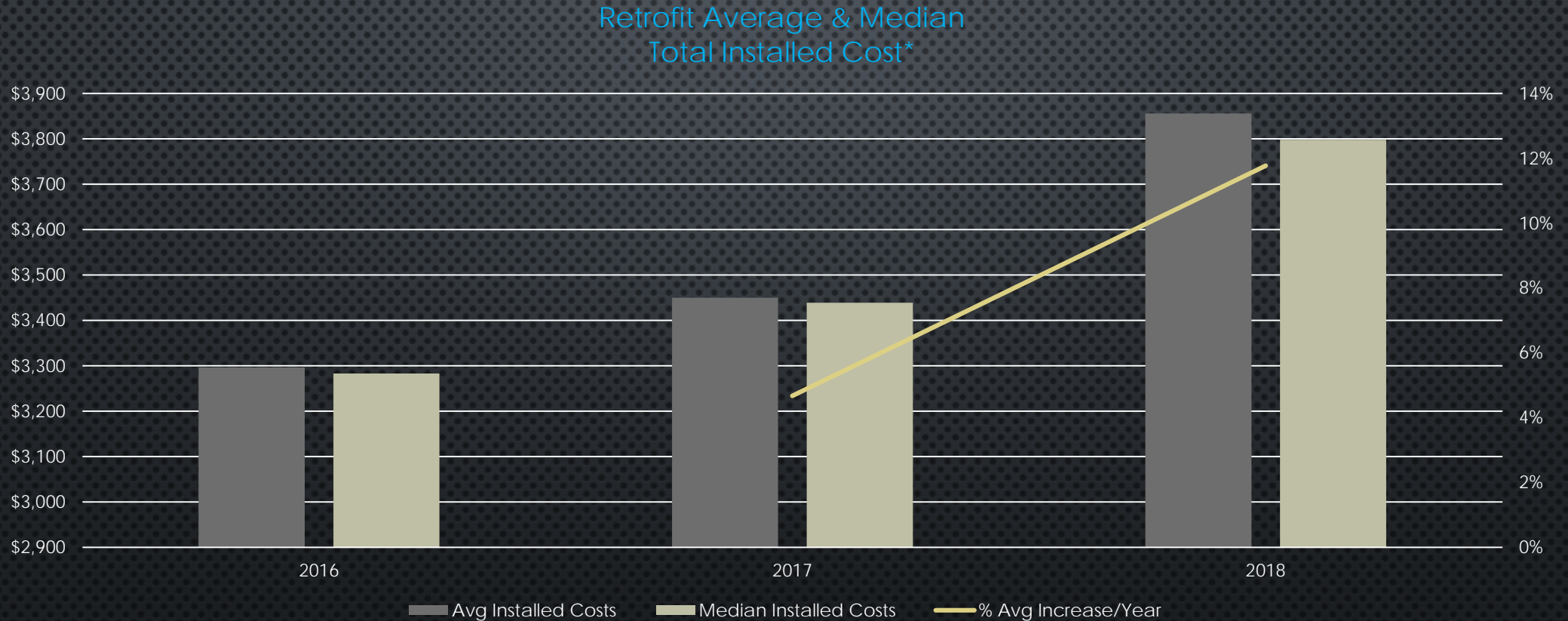
- IF TANKLESS UNITS INSTALLED UNDER NEW HOME PROGRAM MEASURES SUCH AS ENERGY STAR HOMES ARE INCLUDED, PERCENTAGES ARE ESTIMATED TO BE ROUGHLY 8% HIGHER FOR BOTH 2017-2018
- 3% OF ACTIVE NEW HOME PROGRAM BUILDERS ARE TRYING EHPWH. HALF OF THOSE ARE SWITCHING BACK.

## Participating Builder Homesites Installing Condensing Tankless Units



Basis: Qualifying tankless units submitted by active Builder Program participants

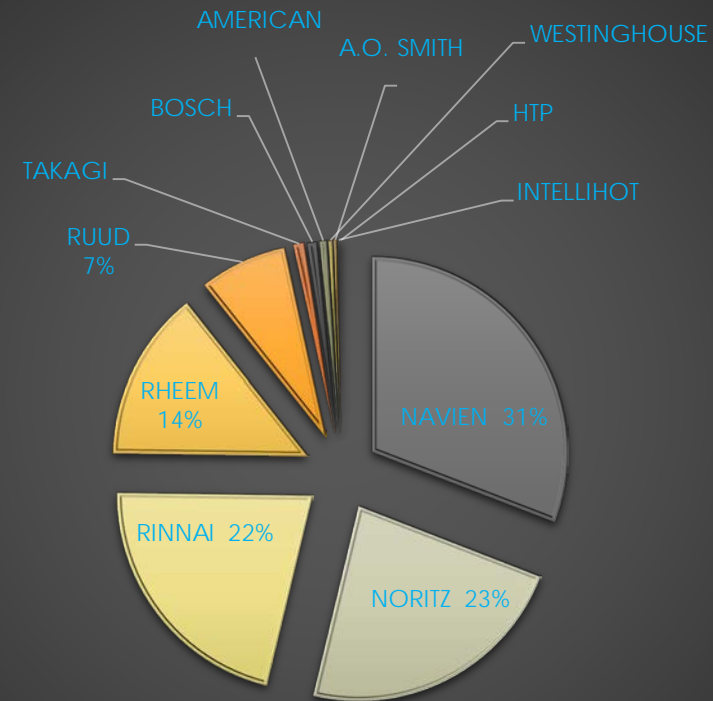
# HIGHER RETROFIT COSTS LIMIT ACCESS TO THOSE WHO CAN AFFORD THE PREMIUM



\*calculated averages include tankless unit, full installation cost, and taxes per invoices

## PROGRAM ELIGIBILITY IS BASED ON EFFICIENCY AND OPEN TO ANY MANUFACTURER MEETING THE REQUIREMENTS

- IN NEARLY 1100 CUMULATIVE TANKLESS UNITS, 12 MANUFACTURERS HAVE BEEN REPRESENTED\*
- 5 MANUFACTURERS CURRENTLY REPRESENT 97% OF TOTAL UNITS\*
- CNG IS OPEN TO MANUFACTURER & MIDSTREAM PARTNERSHIPS TO FURTHER GROW PROGRAM UPTAKE.



Participating Manufacturers to Date

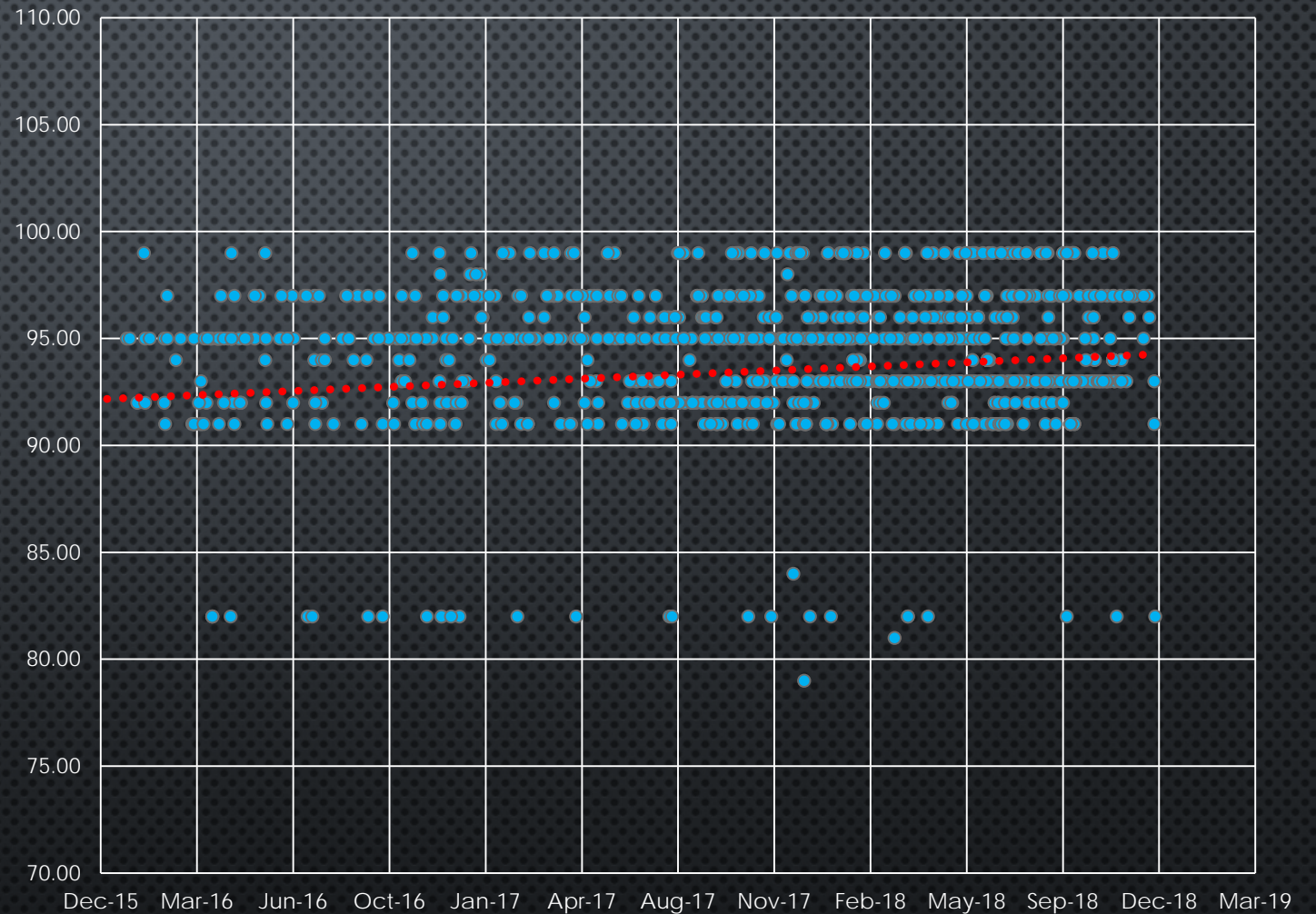
\*Per actual customer invoices for both retrofit and new homesites

## Average Efficiencies

What is happening with average unit efficiency has caught our attention.....

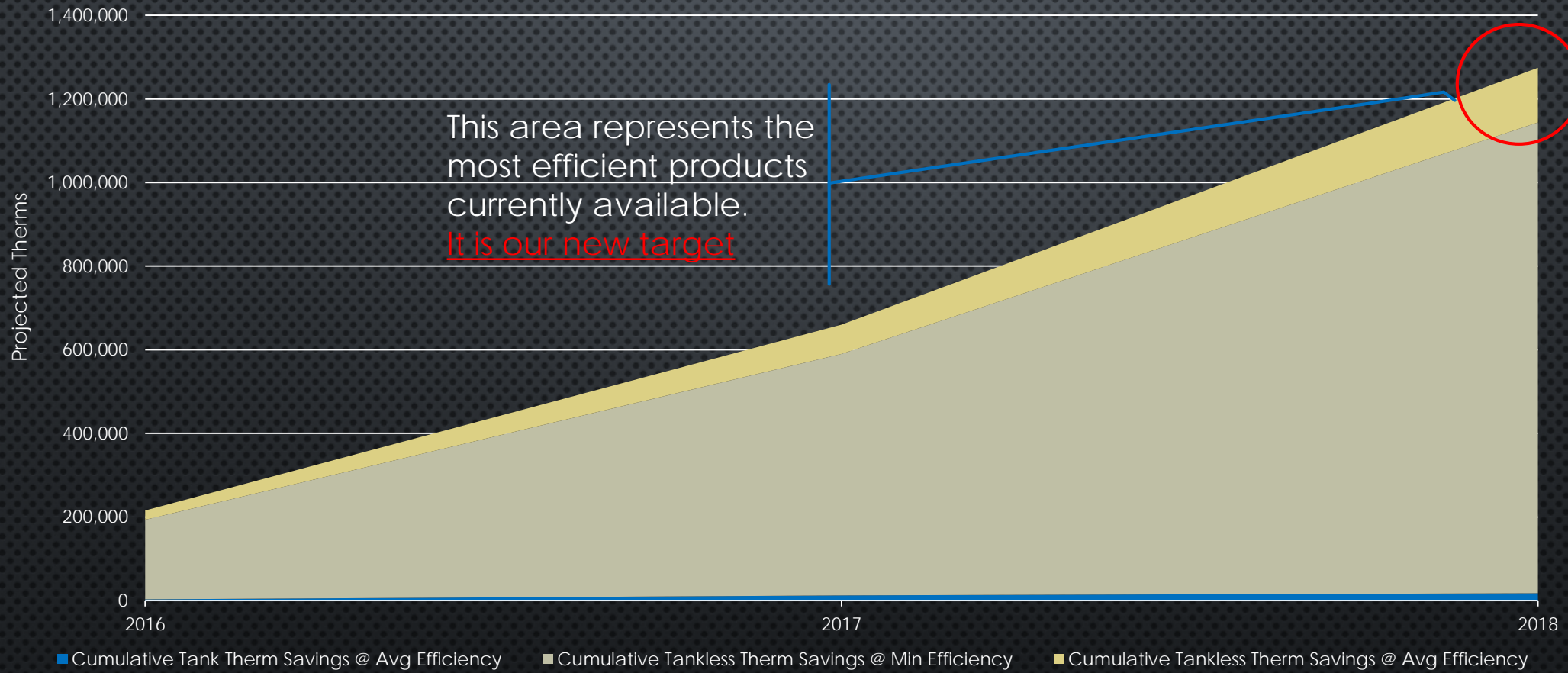
- PROGRAM ANNUAL AVERAGE UNIT EFFICIENCY RISING  $\sim 0.006\%$  PER YEAR
- AVERAGE HAS CLIMBED EVEN THOUGH PREVIOUS INCENTIVE REQUIREMENT WAS 0.91 EF
- MOST RETROFIT INSTALLATIONS GOING THROUGH OUR TRADE ALLIES WHO WERE AWARE OF THE 0.91 EF REQUIREMENT

Installed Unit EF Ratings by Installation Date – 2016 - 2018



# 2019 TANKLESS PROGRAM DIRECTION

Projected Cumulative Therm Savings over Equipment Life

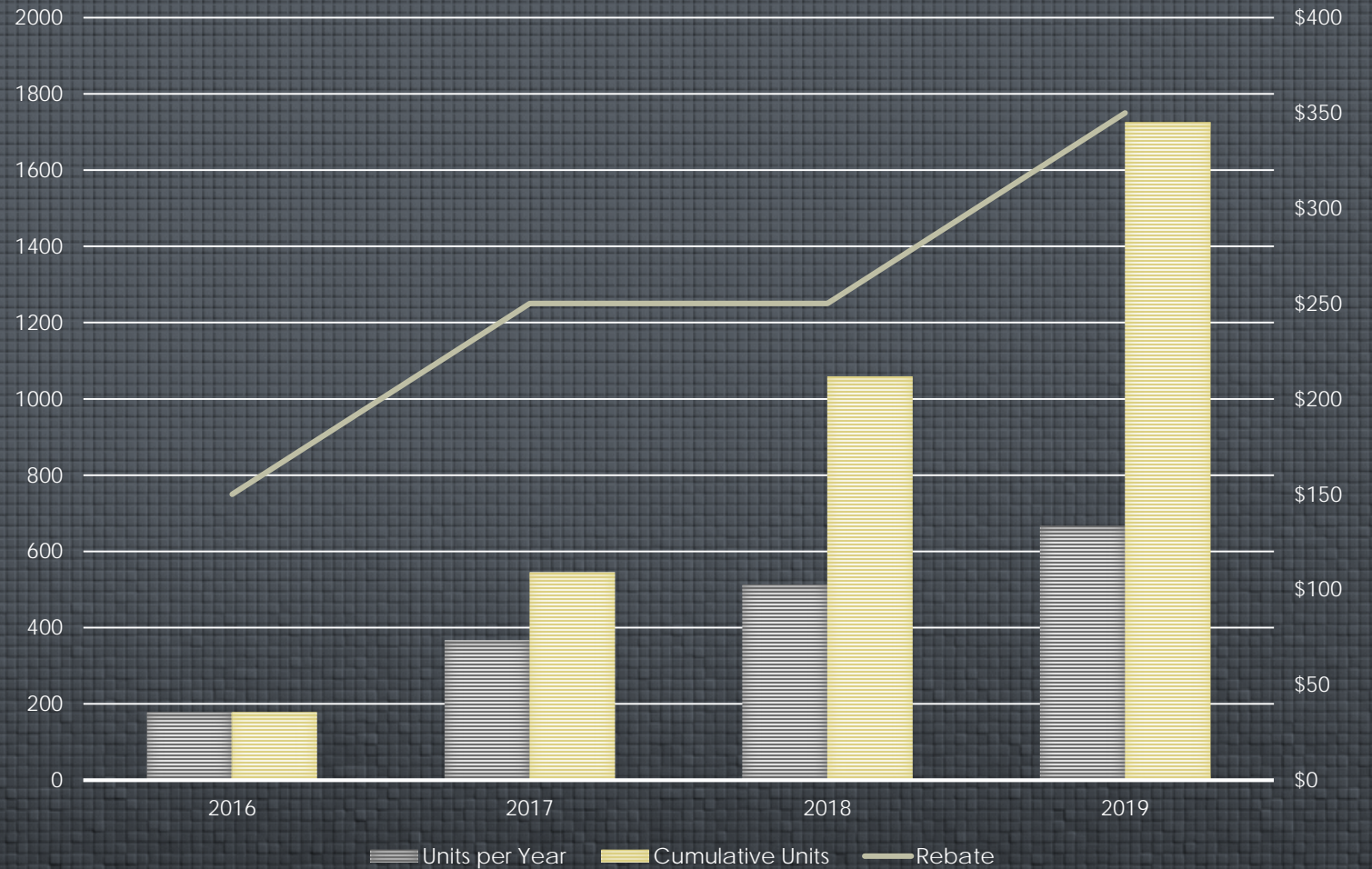


# PROJECTED 4 YEAR PROGRAM PERFORMANCE

## NEW TIERED REBATE IN PLACE FOR 2019

- 0.87-0.92 UEF @ \$250
- 0.93+ UEF @ \$350

### TOTAL TANKLESS UNITS INCENTIVIZED AND REBATE AMOUNT



THANK YOU FOR YOUR  
PARTICIPATION 😊!

QUESTIONS??

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THANK YOU TO OUR PARTNERS - NORTHWEST ENERGY EFFICIENCY  
ALLIANCE & GAS TECHNOLOGY INSTITUTE



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**ACEEE**  
American Council for an Energy-Efficient Economy