

5D-Coumas

Therm Savings with Midstream Programs

Presented at the 2019 ACEEE Hot Water Forum

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Discussion



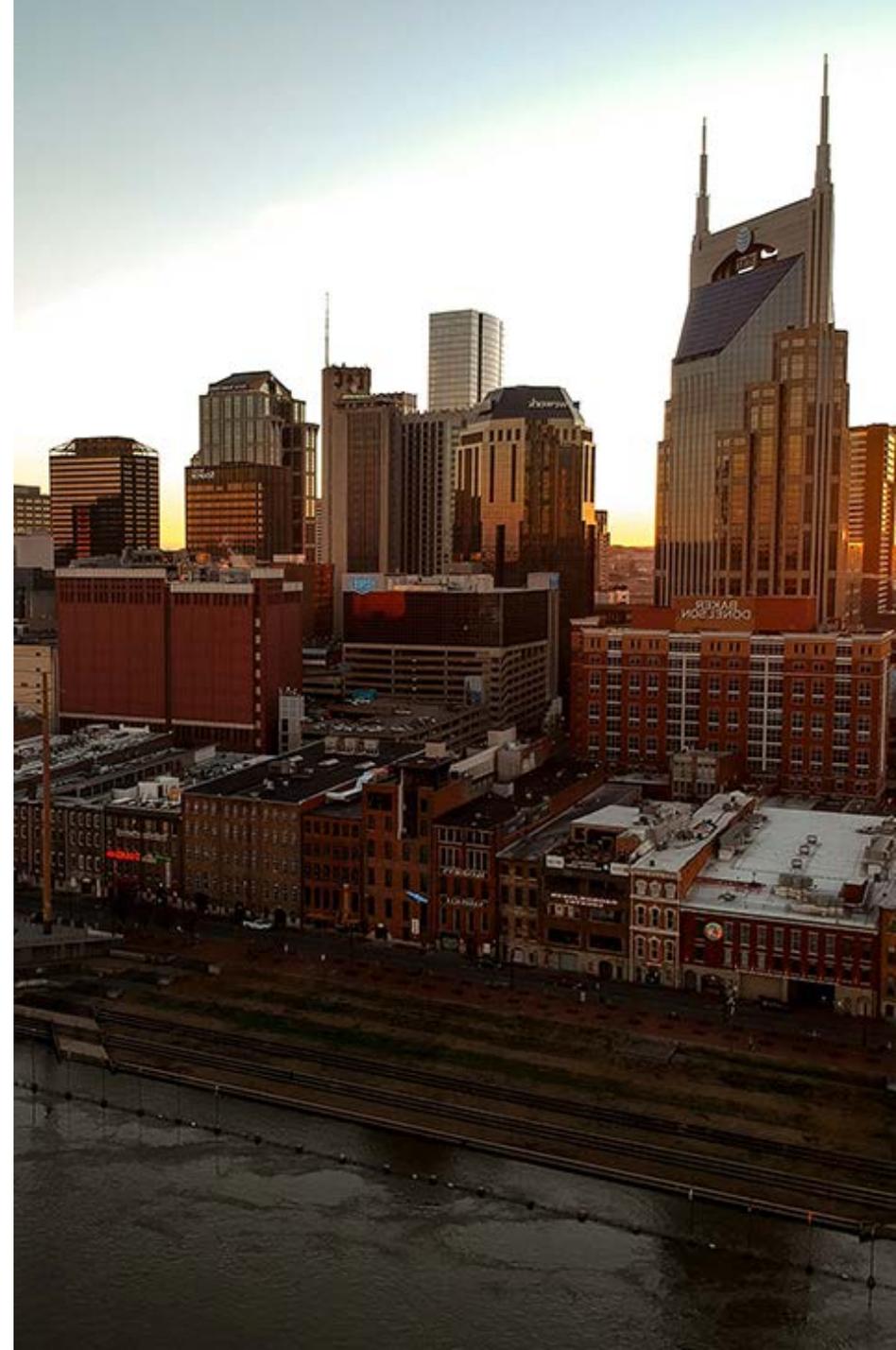
Midstream Program Design success with commercial water heaters.

For utilities with regulatory frameworks supporting efficiency, results have shown:

- Higher levels of cost-effectiveness
- Significantly increase energy savings
- Influence market transformation
- Reduce upfront cost of high efficiency

Presentation Agenda

- About Energy Solutions
- Why Commercial Water Heating
- Programmatic and Market Barriers
- Midstream Solutions
- Accomplishments
- Summary



About Energy Solutions

Our Mission: Create large-scale energy and environmental impacts by leveraging market-based solutions.

- **Offices in CA and MA**
- **Programs in 22 states**
- **First upstream program in the US**
- **Midstream programs for all types of technologies**



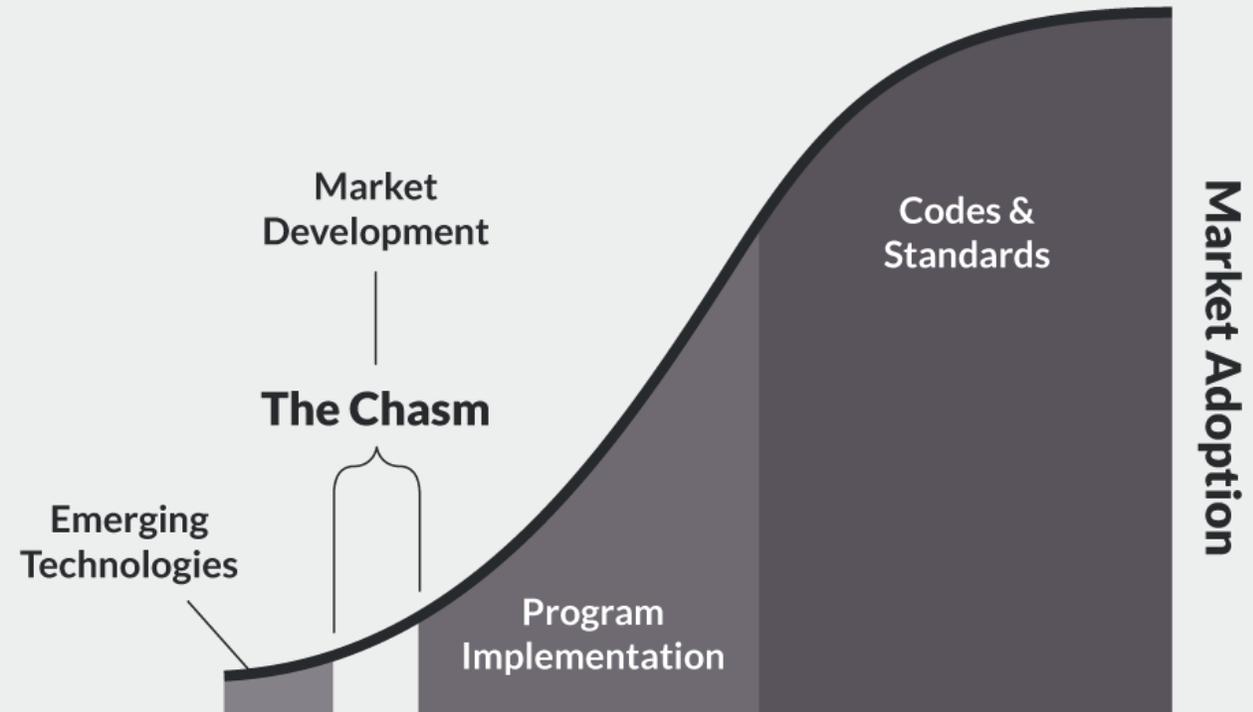
Distributed Energy
Resources



Energy Efficiency



Policy &
Ratings



Midstream Experience

Energy Solutions launched the following as the nation's first Midstream prescriptive programs:

1998

High-efficiency HVAC and Motors

2006

Lighting and Bottling

2009

Water Heaters and Mini/Multi Splits

2010

Variable Refrigerant Flow and Air-cooled + Water-Cooled Chillers

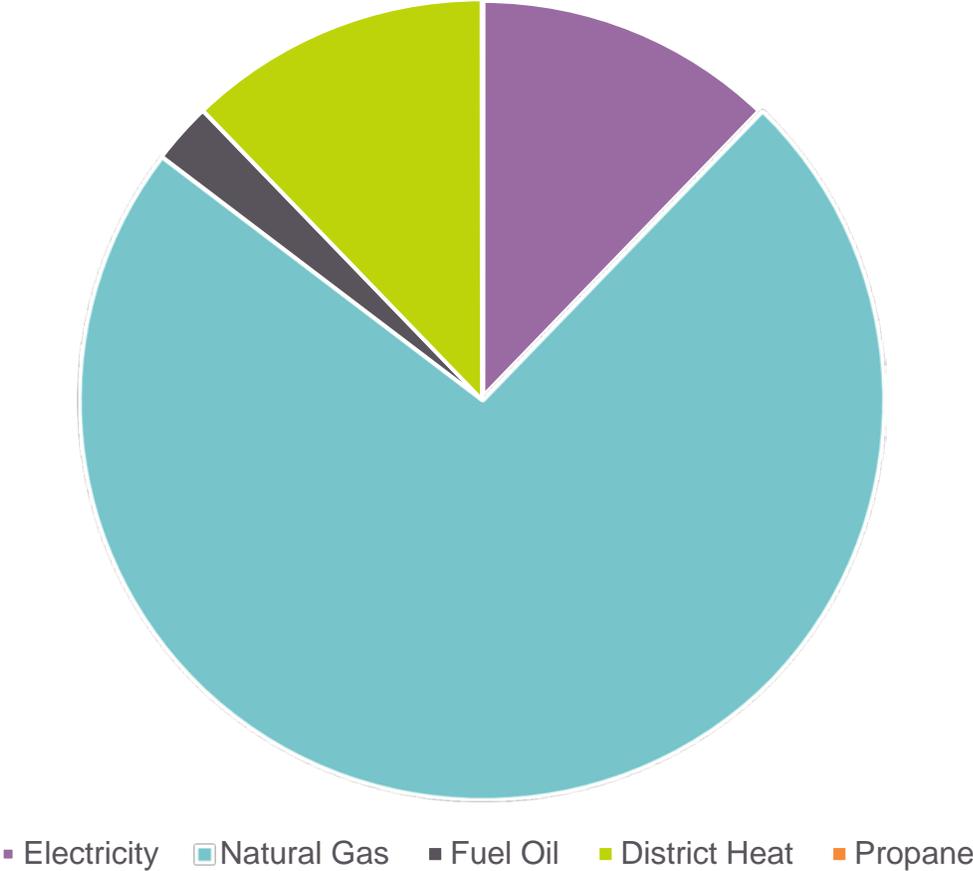
2014

Early Retirement; Residential HVAC and Auto-DR HVAC



Why Commercial Water Heating Market

Water Energy Source



**Source: Energy Information Index Commercial Buildings Energy Consumption Survey, 2012*



Key Barriers of Traditional Programs

Awareness:

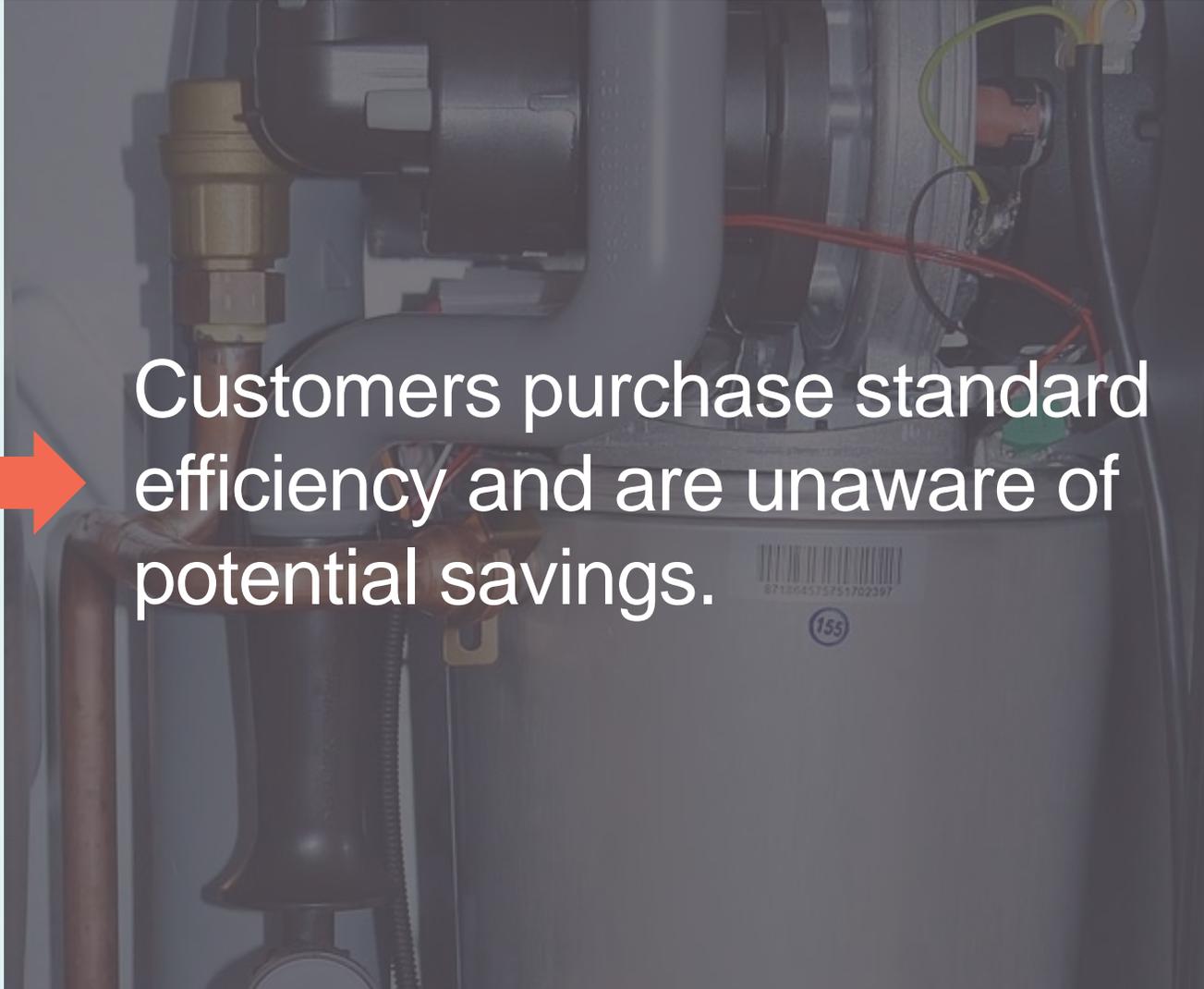
Customers unaware of incentives

Stocking:

Distributors do not stock high efficiency and customers wait weeks for the equipment

Expense:

High efficiency costs 25–80% more



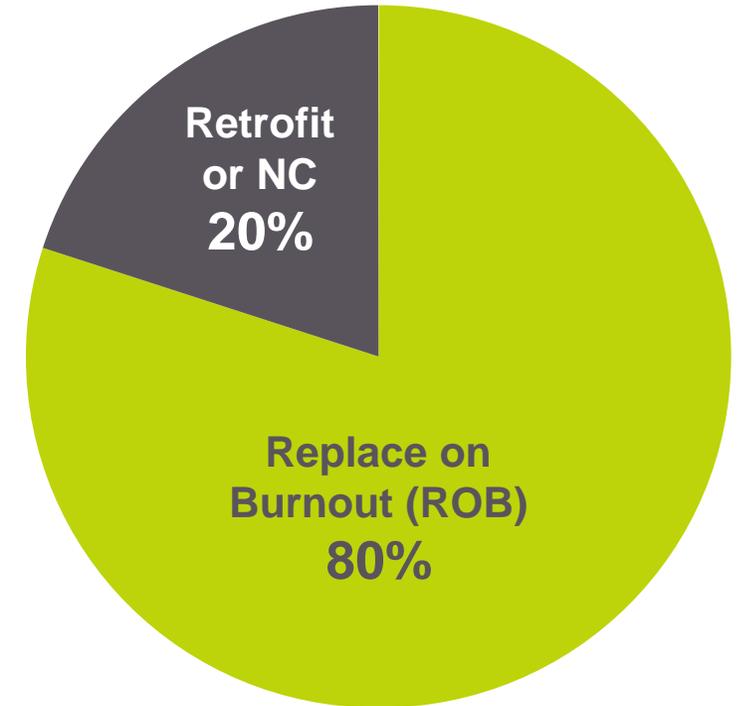
Customers purchase standard efficiency and are unaware of potential savings.

Market Sales Driver

Major driver is **equipment cost**, hence:

- Contractors do not promote energy efficiency
- Distributors stock low cost units (because they sell)

Decades of implementation have proven these points—time and time again.



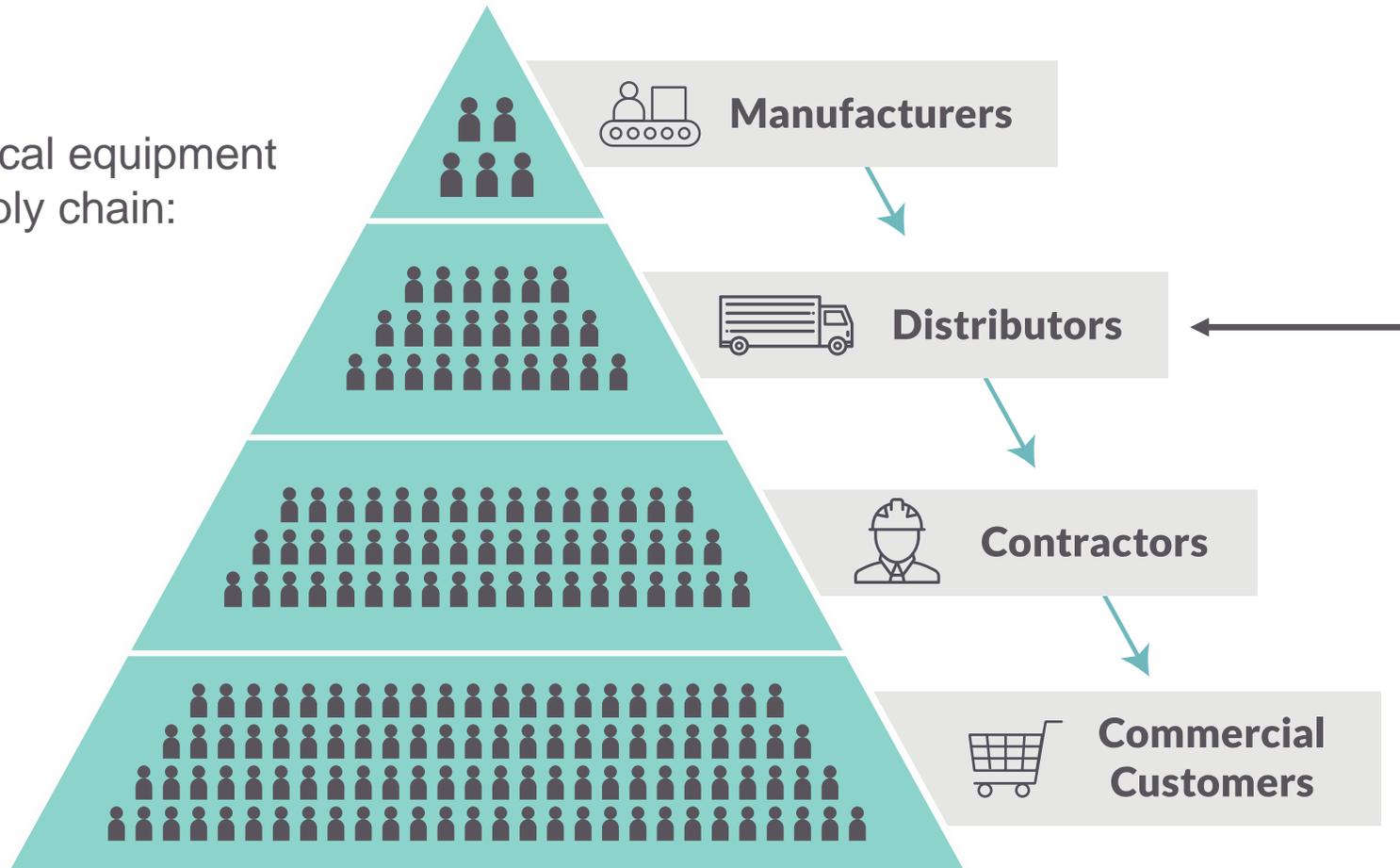
Commercial Water Heater Sales

Venting



Why Target Distributors?

Typical equipment supply chain:



81%

Buyers purchase distributors recommend*

**Source: California PUC NTG Study, September 2016*



Midstream Program Goals

Market Transformation

- **Upselling:** Convert sales from standard efficiency to high efficiency
- **Stocking:** Ensure high efficiency availability
- Distributors focus should be on trying to sell as much high efficiency as possible



How are Midstream Incentives Used?



**Stock High
Efficiency**



**Incentivize staff
to upsell**



**People price
competitive pricing**



**Educate staff on
high-efficiency**

Flexible Incentive Usage Success

“Since enrolling in the Initiative, The Granite Group has...

...increased inventory of qualifying equipment in excess of 50%.

...implemented Sales Incentives for our Regional Directors, our Branch Managers and our Sales Associates to entice them to aggressively seek out opportunities to sell and/or specify this same qualifying, high efficiency equipment

...continue[d] to make pricing concessions that narrow the gap between the qualifying, high efficiency equipment, and the standard equipment that would otherwise be installed.

...done in-house sales training and contractor training on the benefits of high efficiency equipment.

...plan[ned] to do 'Lunch and Learn' training for specifying engineers and architects.”

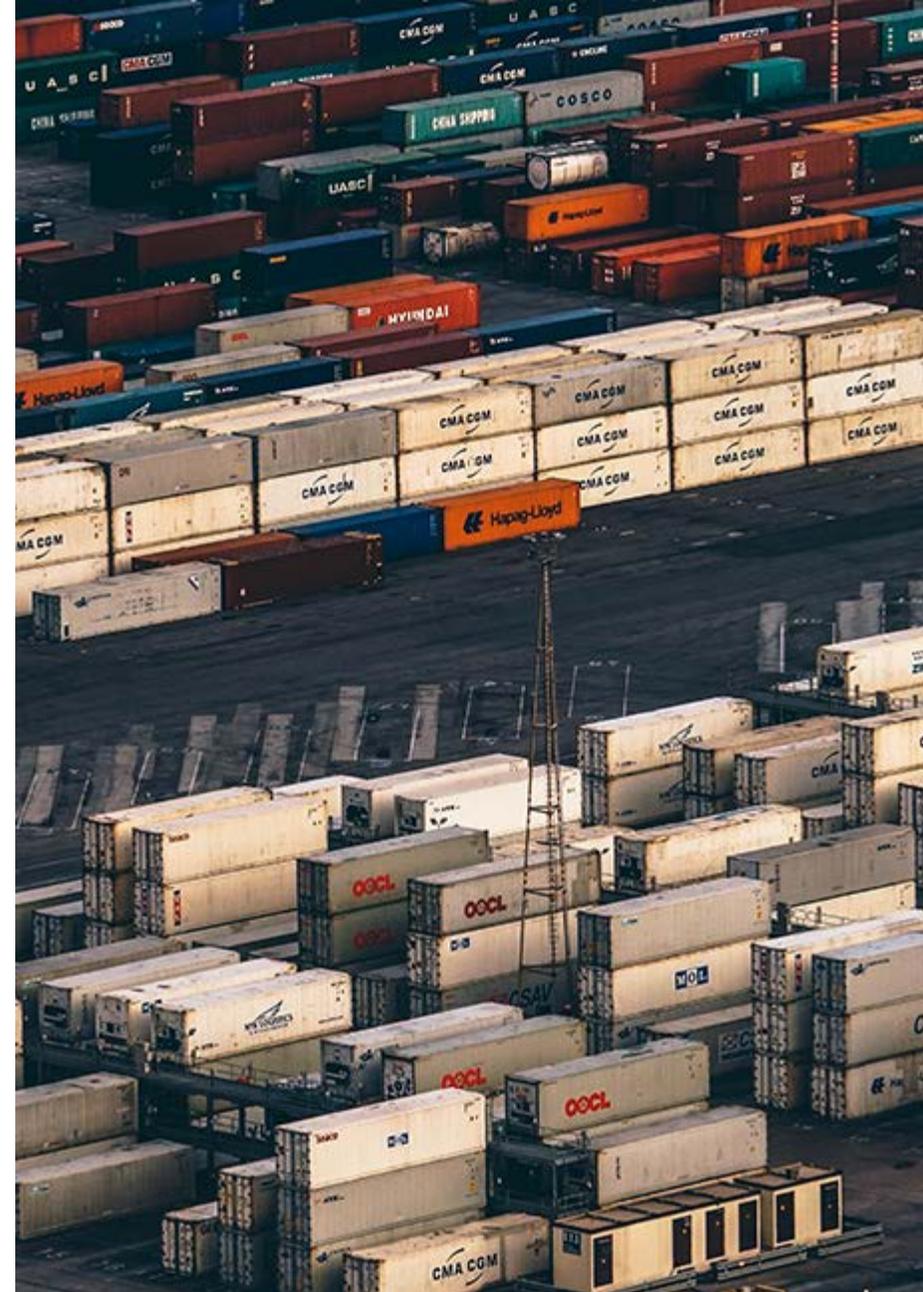
Often, it is the incentive we receive that **brings the sale from unprofitable to profitable** and brings our gross margin percentage to a positive number.”

– Kevin Cunningham, Vice President, *The Granite Group*, Northeast Distributor



Importance of Market Relationships

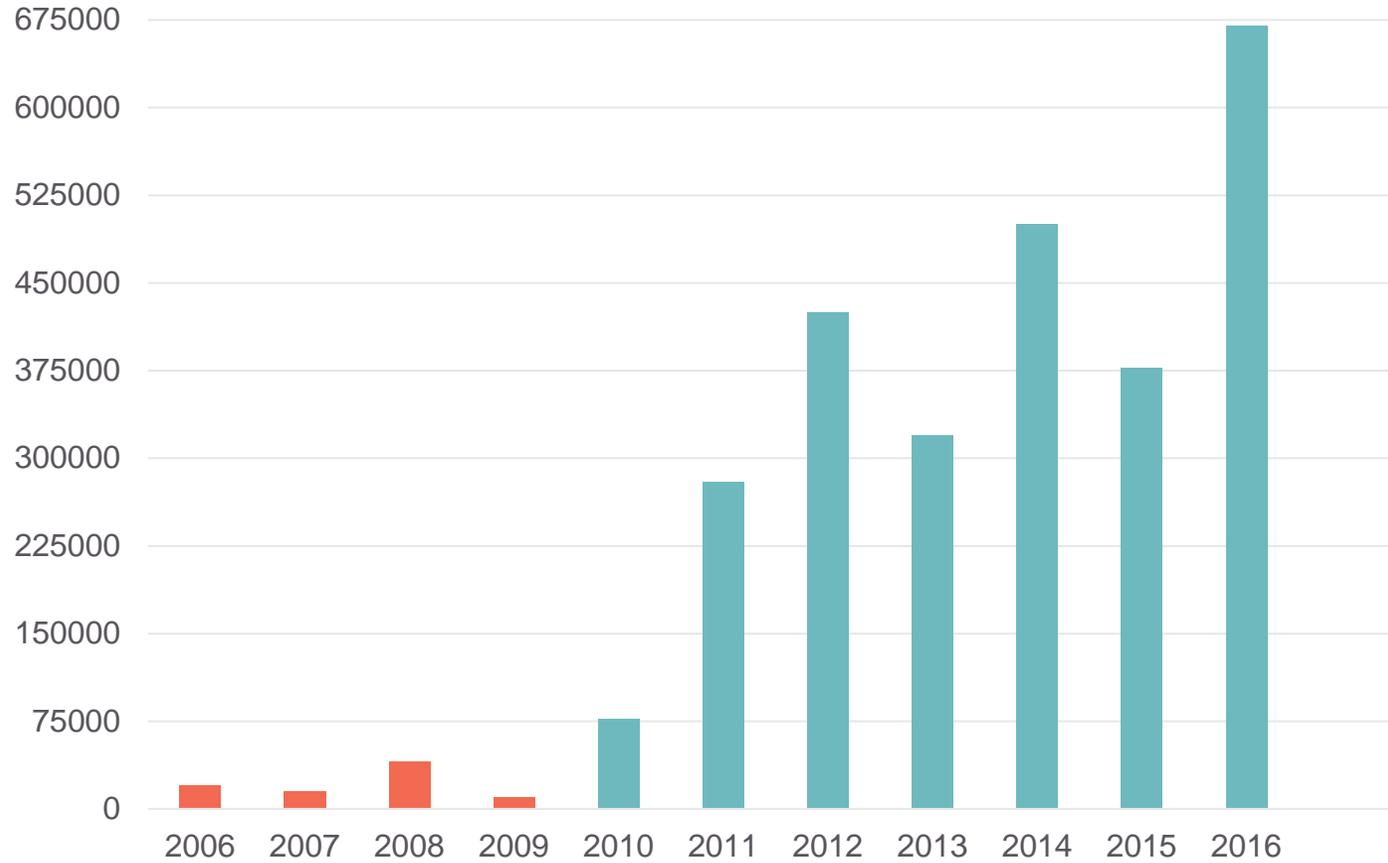
- Midstream programs rely heavily on relationships with manufacturers and distributors
- Leverage market experience to enhance programs
 - Set budgets and incentive levels
- The same supply chain and market actors supply various technologies that provide energy savings





Midstream Accomplishments

PG&E Water Heater Results



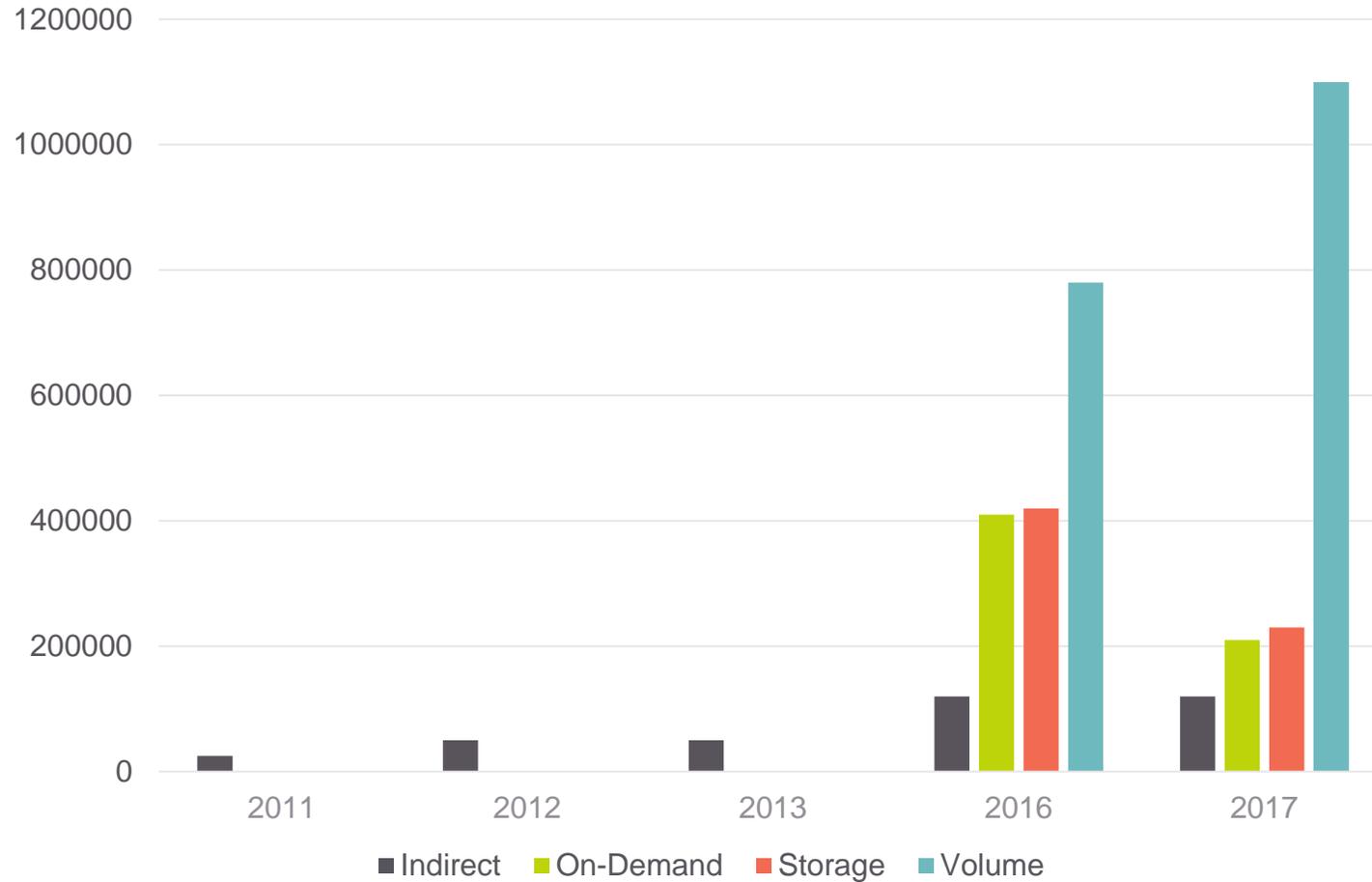
Prescriptive Years vs **Midstream Years**

3,000%
Improvement

PG&E, 2017



MA and RI Water Heater Results

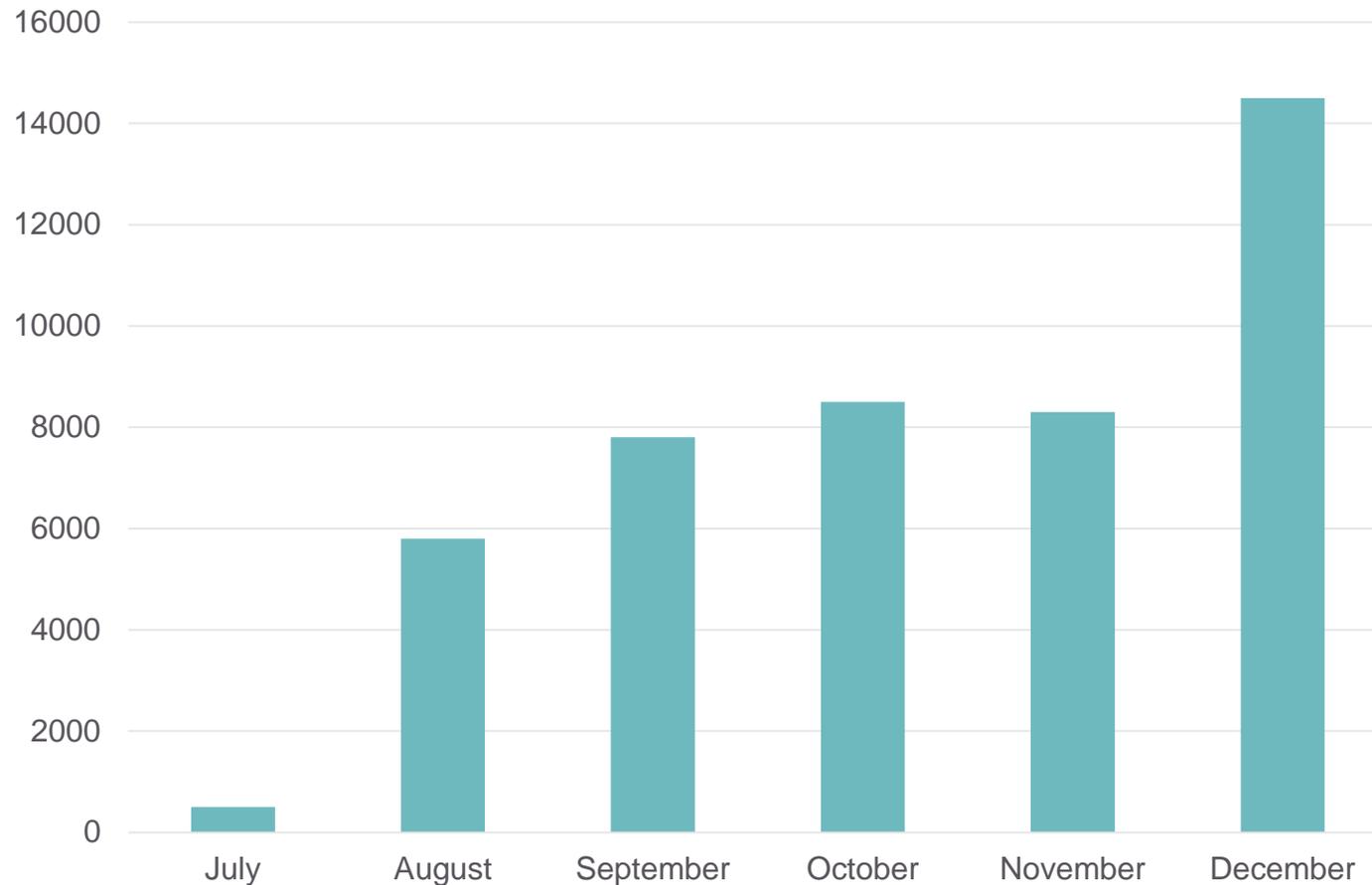


Number of Therms

Massachusetts and Rhode Island Program Administrators, 2017. Paid applications through 12/31/2017; Annualized prescriptive data.



PSE Water Heater Results



Puget Sound Energy Program Administrators, 2017. Paid applications through 12/31/2017;



Utility Midstream Awards



2010 ACEEE Exemplary Program (PG&E)



2012 ACEEE Exemplary Market Transformation Program (PG&E)



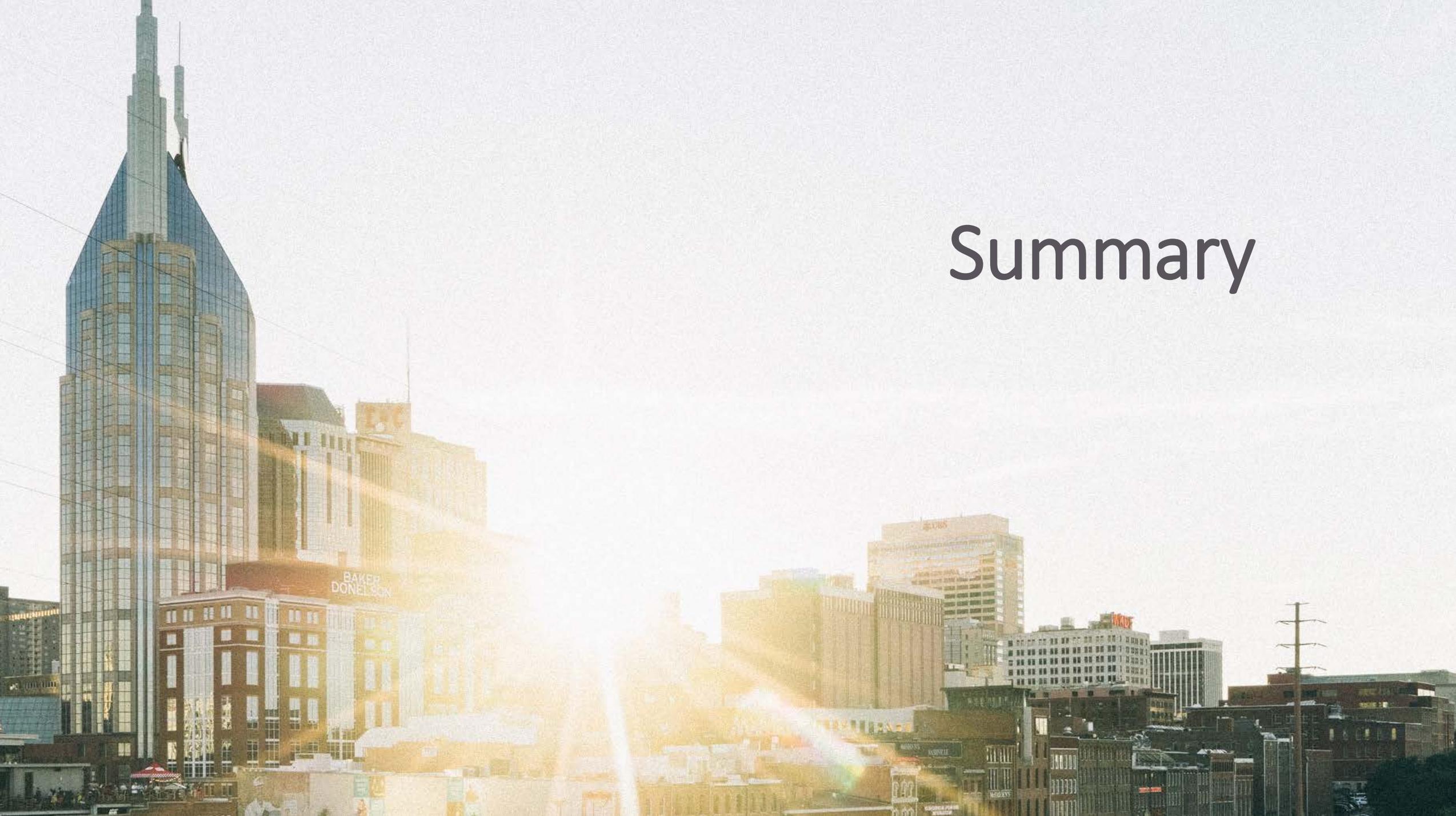
2013 AESP's Energy Award for Outstanding Achievement in Non-Residential Program Design & Implementation (SCE)

2016 DOE award for highest number of high-efficiency RTU installations (SCE)



2018 ACEEE Exemplary Program (MassSave C&I Water Heating)

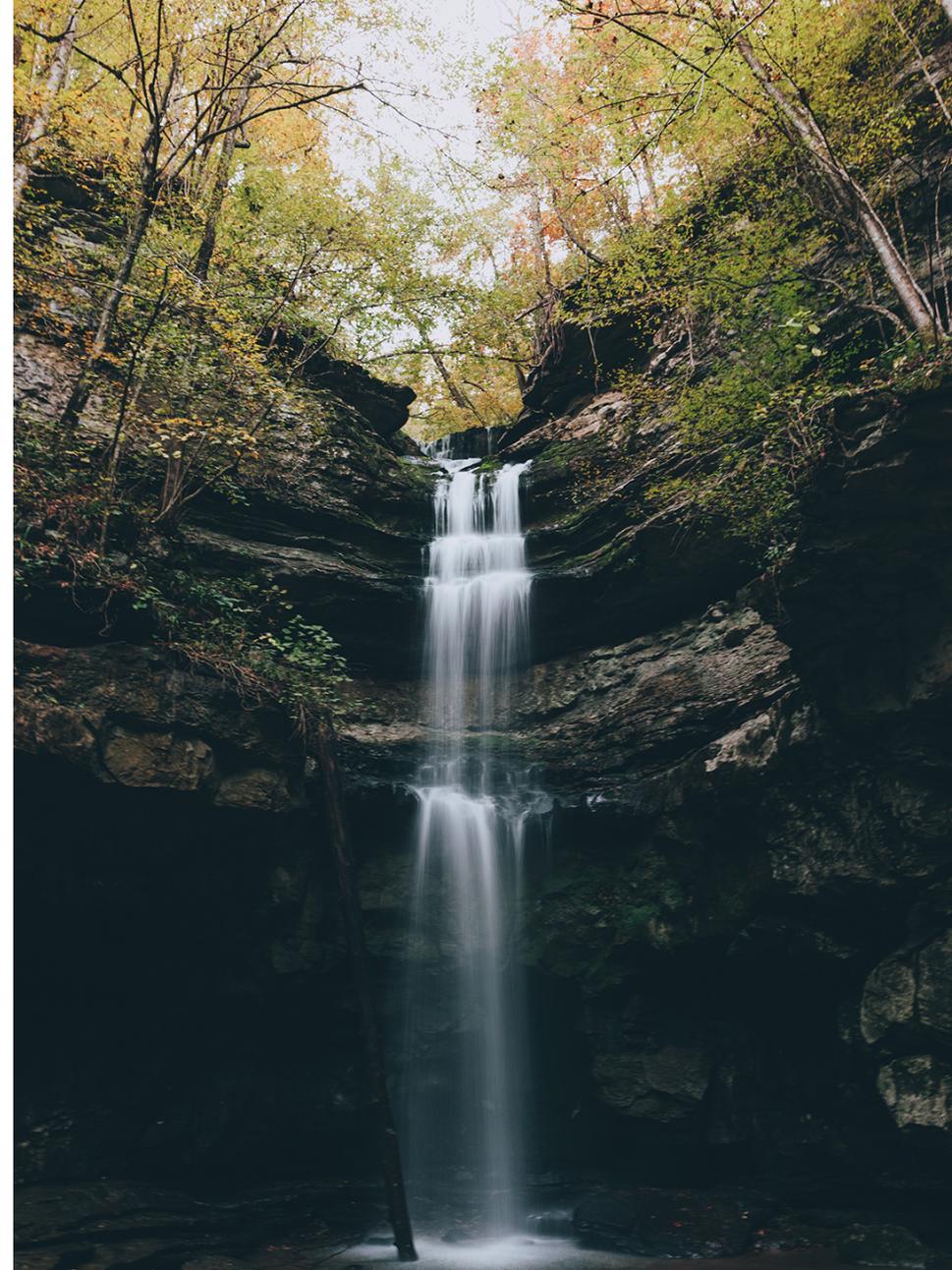




Summary

Benefits of Midstream

1. Increased impacts – 900% on average
2. Strengthened relationships with market actors
3. Reduced cost and increased availability of HE equipment to customers
4. Participation across entire service territory
5. Market transformation
 - a. Increase stock of high efficiency
 - b. Convert sales to high efficiency





Thank You

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Thank you

To the Massachusetts Program Administrators, Berkshire Gas, Columbia Gas, Eversource Energy, National Grid, Liberty Utilities, and Unitil, and to National Grid of Rhode Island for sharing the results of their Initiatives

